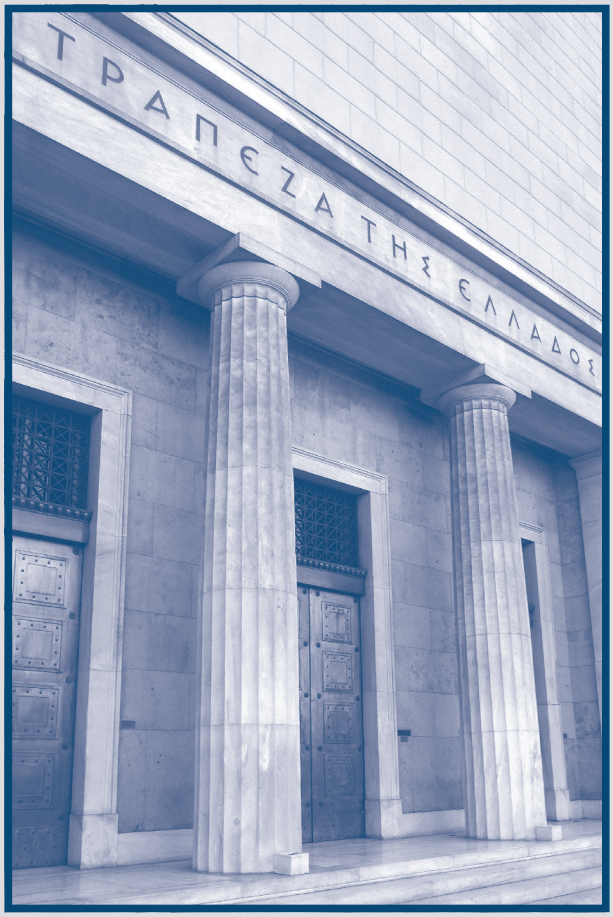
SUMMARY OF THE ANNUAL REPORT

2024



MAY 2025

BANK OF GREECE
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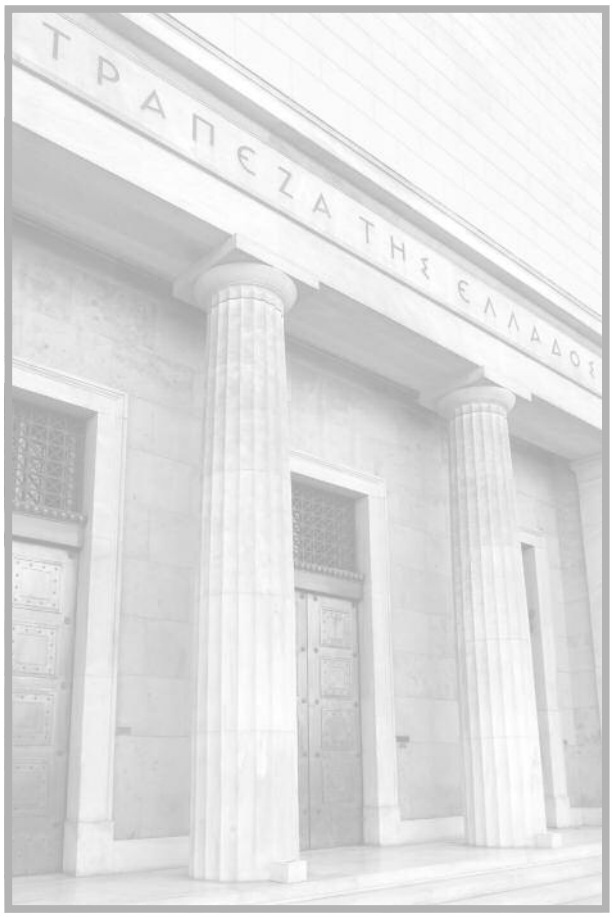
SUMMARY OF THE ANNUAL REPORT 2024

Presented to the General Meeting of Shareholders
by Governor Yannis Stournaras



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EUROSYSTEM

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FOREWORD BY THE GOVERNOR

In 2024, the world economy was faced with multiple and serious challenges. The protracted geopolitical tensions in Ukraine and the Middle East, elections in major economies, geo-economic fragmentation and rifts in global trade integration triggered by the looming imposition of new tariffs by the United States heightened uncertainty, discouraged investment and dented global economic growth. In the euro area, growth remained muted, as increased uncertainty and the generally restrictive economic policy mix weighed on expectations and economic activity. In June 2024, the Governing Council of the ECB embarked on a rate-cutting cycle, taking into consideration the marked decline in inflation as a result of the smooth and effective transmission of the single monetary policy to the euro area real economy. Interest rate cuts, which continued into early 2025, signalled a transition to a more neutral monetary environment. However, risks to the global and the European economies have increased.

The Greek economy continued to demonstrate strong resilience and record positive performance, accelerating the convergence of Greece's real GDP per capita towards the average European level. Real GDP in 2024 grew at an annual rate of 2.3%, more than double compared with the European average, driven by rises in private consumption, investment and exports of services. Headline inflation kept receding, mainly reflecting lower food inflation, while persistently high services inflation prevented a faster decline. Labour market conditions improved further, as the rise in employment quickened and unemployment dropped to a 15-year low, although growing tightness is observed in most sectors. Despite mounting uncertainty, the Greek economy is projected to continue expanding in 2025 at a solid pace well above the euro area average, while inflation is expected to further edge down slightly.

In 2024, confidence in the performance and the prospects of the Greek economy consolidated further, on the back of a prudent fiscal policy and the improving fundamentals of the banking sector. Public debt kept declining fast, while risks to its sustainability remain contained over the medium term. In the banking sector, the ratio of non-performing loans to total loans has declined to its lowest level since Greece's entry into the euro area, dividend distributions by significant banks resumed for the first time in 15 years, while the so-called "fifth pillar" was established, through capital increases in smaller banks and, above all, the merger of Pancreta Bank with Attica Bank, boosting competition among banks.

Nevertheless, amid growing challenges in the international environment, it is crucial to preserve and reinforce the favourable domestic factors supporting Greece's economic growth over the past few years, as well as to lay the groundwork for medium-term sustainable growth. Sustained fiscal credibility and adherence to the creation of adequate fiscal space over time, political stability, bolstering of institutions, acceleration of reforms, as well as effective use of available resources to increase productive investments will deliver synergies that will help mitigate risks in the short term and shield the economy against future shocks.

Monetary policy cycles in 2025 are expected to be less synchronised across major economies. In a volatile global environment, maintaining a credible monetary policy is crucial for safeguarding its efficiency and ensuring economies' stabilisation. Furthermore, immediate and coordinated action is required at the national and European levels. We need more Europe, with the adoption of joint risk mitigation and risk sharing policies across Member States in order to sup-

port economic recovery and social welfare. The promotion of a single capital market, the completion of the Banking Union and targeted fiscal interventions in key sectors, such as defence, security and the climate, will act as catalysts for a more competitive, inclusive and sustainable European economy.

The Bank of Greece in 2024 remained committed to its mandate to safeguard not only price stability, but also financial stability, by strengthening the resilience of the financial system, reducing the build-up of systemic risks and ensuring smooth liquidity conditions. Its supervisory mandate expanded, as the Bank was entrusted with the supervision of Occupational Pension Funds. This is expected to ensure greater flexibility, stability and transparency compared with the former supervisory model. Throughout the year, the Bank of Greece had been monitoring economic developments, contributing to the formulation of the single monetary policy. It continued to conduct high-level research and to disseminate statistical data and in-depth analyses to the wider public. Moreover, it invested further in the upskilling of its staff, encouraging continuous training and participation in Eurosystem research networks.

The Bank is evolving, modernising and transforming itself, in order to meet the demands of a constantly changing environment, with a focus on transparency and accountability. It has further restructured and upgraded its procedures and policies, with an emphasis on compliance and corporate governance. The Bank has completed organisational changes to its Directorates and Branch Network, with a view to increasing effectiveness, efficiency and meritocracy. Meanwhile, it adopted modern human resources management systems aiming to raise productivity and support staff development. Furthermore, it accelerated its digital transformation and launched awareness campaigns on cybersecurity, addressing present-day challenges in a responsible and credible manner. Demonstrating its strategic commitment to incorporating sustainability principles in every aspect of its operations, the Bank continued to take relevant actions, with a focus on climate change, circular economy and environmental management. Finally, it fulfilled its role in disseminating Greek culture through the activities of its Centre for Culture, Research and Documentation and continued to promote financial literacy through a series of educational programmes at the Bank of Greece Museum and by participating in similar initiatives at the national and European levels.

2025 is expected to be a challenging year, so stability and responsible economic policies become more crucial than ever. The Bank of Greece will remain true to its vision to be an effective, credible and innovative central bank, trusted by society. This vision becomes a reality thanks to the loyalty and professionalism of the Bank's staff, to whom I wish to express my gratitude for their valuable contribution, urging them to keep up the good work. Lastly, I would also like to thank the members of the General Council for their support and cooperation.

Yannis Stournaras

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THE GREEK ECONOMY ON A CONVERGENCE PATH – FISCAL CREDIBILITY, REFORMS AND TRUST IN INSTITUTIONS ARE PILLARS OF ECONOMIC STABILITY

1 INTRODUCTION

In 2024, the world economy experienced a mild slowdown in growth and a decline in inflation. Global economic activity proved resilient, despite restrictive monetary policies and geopolitical tensions, while labour markets in most economies remained strong, supporting domestic demand. Overall, the world economy fared better in 2024 than initially expected, and severe recessions were avoided in major economies.

However, the world economy appears to be entering a period of mounting uncertainty, fuelled by geopolitical tensions and rising trade protectionism. The fundamental principles that had underpinned economic stability over the past few decades are being challenged and trade conflicts are escalating, increasing the risk of slower global economic growth and tighter global financial conditions. Trade tensions between the United States and major trading partners are weighing on confidence and market sentiment, adversely affecting exports, consumption and business prospects worldwide.

Monetary policy has proved effective in reducing inflationary pressures, but in 2025 central banks are faced with increased challenges. The restrictive monetary policy stance of recent years has played a decisive role in anchoring inflation expectations and gradually bringing down inflation, without significant rises in unemployment, while worst-case recession scenarios have not materialised. In 2024, monetary policy normalisation began, with several central banks gradually lowering their key interest rates. Yet, monetary policymaking in 2025 has to confront a highly complex environment, amid divergent developments in inflation and growth across countries. Central banks need to deal with the impacts of trade tensions and tariffs on energy and goods prices. Possible setbacks in central banks' disinflationary efforts could slow or halt the cycle of policy rate cuts, thereby worsening global financial conditions, weakening growth dynamics and exacerbating uncertainty. A potential further decoupling of monetary policies among major economies could lead to sharp adjustments in foreign exchange rates and capital flows. At the same time, a prolonged restrictive monetary policy stance could affect vulnerable sectors of the economy. In this complex environment, it is crucial to preserve the credibility of monetary policy, while also maintaining the necessary flexibility and readiness to adjust its stance in a timely manner, so as to ease uncertainty and support economic stability.

In a context of heightened uncertainty, the Greek economy continues to demonstrate strong resilience and positive performance. Its growth rate has consistently outpaced the EU average since 2019, accelerating the convergence of Greece's real GDP per capita towards the average European level. Improvements are observed in the labour market, with employment rising and unemployment having dropped to a single-digit rate since mid-2024. Meanwhile, the decline in inflation, mostly food inflation, boosts real disposable income, contributing to a lower share of population at risk of poverty or social exclusion.

Since 2019, investment in Greece has been steadily increasing, covering part of the large investment gap that emerged during the debt crisis. Gross fixed capital formation in real terms grew overall by about 60% in 2024 relative to 2019, as opposed to a marginal decline (-0.4%) in the euro area. As a result, the contribution of investment to annual GDP growth has averaged 1.6 percentage points post-pandemic, well above the euro area average of just 0.3 percentage point in the same period. Importantly, there has also been a qualitative improvement

in the composition of investment. Before the debt crisis, almost half of private investment was directed towards residential construction, while productive investment remained insufficient, weighing on the long-term growth prospects. Today, however, this pattern has been reversed: four-fifths of private investment is channelled into productive capital and the remaining one-fifth in housing. If this continues and is accompanied by a further increase in the total investment volume, it could act as a catalyst in restructuring the country's productive model, boosting competitiveness and the growth momentum.

Achievements on the fiscal front have been remarkable, playing a pivotal role in Greece's successive sovereign credit rating upgrades, amid unprecedented external shocks and heightened international uncertainty. The prudent fiscal policy pursued over the past years, coupled with the efforts to combat tax evasion, is now yielding tangible results, as high primary surpluses are steadily generated without a need for restrictive measures. The public debt-to-GDP ratio continues to decline rapidly. On a cumulative basis since 2020, Greece has recorded the fastest public debt reduction among advanced economies, of over 50 percentage points of GDP in just four years. Also, with the exception of the pandemic period (2020-21), it has maintained primary surpluses for seven years – above 2% of GDP in six of those years – while consistently overachieving its fiscal targets for nine consecutive years. This performance is clear evidence of the country's responsible fiscal policy and restored credibility; it reflects the outcomes of the structural adjustment achieved over the past decade as well as of the reforms in public financial management, effectively belying earlier concerns about a potential fiscal fatigue.

In the context of the implementation of the EU's new fiscal rules, as reflected in Member States' national medium-term fiscal-structural plans (MTPs), Greece stands out as an example of fiscal resilience. The country exhibits lower adjustment needs compared with other high-risk countries. General government debt is expected to decline faster than in most European economies over the coming years, remaining on a steady downward path even in severe scenarios. This dynamics underscores the Greek economy's ability to withstand fiscal shocks, supporting the sustainability of public debt even under adverse conditions. At the same time, the consistently high primary surpluses without new measures confirm Greece's favourable structural-fiscal position and effective public financial management in recent years.

The restructuring of the domestic banking sector also made a crucial contribution to the successive sovereign credit rating upgrades, by bolstering financial stability and helping to restore market confidence. Key positive developments in the banking sector included: a drastic reduction in non-performing loans; banks' restored profitability and balance sheet clean-up; improvements in capital adequacy and in the quality of regulatory capital; high liquidity and regained full access to capital markets; the divestment of the Hellenic Financial Stability Fund (HFSF) from significant banks, which signalled their return to normality and helped attract institutional investors; and the consolidation of less significant banks, through capital increases, mergers and acquisitions, which strengthens competition and the stability of the entire financial system. These developments have resulted in a healthy, reliable and robust banking sector that can actively support the financing of the real economy and strenghten its resilience.

Alongside the strong economic performance of the past few years, it is also important to highlight the marked progress that has been achieved on the institutional front relative to the crisis period. The past few years have seen improvements in the quality of governance institutions, as reflected in several indicators that are closely monitored by credit rating agencies, and this has been an additional driver of the Greek sovereign credit rating upgrade. Enhanced political stability, a more effective public administration, improvements in the quality of the regulatory environment, democratic institutions and the rule of law, as well as progress in the fight against corruption, have underpinned market confidence in the country's ability to implement

credible policies and attract investment.[1] Institutional efficiency is also seen as an important determinant of the Greek economy's sustainable growth and stability.

In spite of this improvement, Greece's ranking remains low compared with the European average, highlighting the need for further structural reforms towards safeguarding economic stability. Greece still lags behind other European countries, particularly in areas such as the rule of law, the speed in the delivery of justice and the predictability of law enforcement, as well as in the efficiency of public administration. This stresses a need for pressing ahead with the reforms, in order to further strengthen trust in institutions and support economic prosperity.[2] A strong rule of law is fundamental to economic growth, as a stable and reliable legal system ensures equality before the law, protection of property rights, effective contract enforcement and investment safety. Thereby, it supports citizens' and investors' trust in a well-functioning economy, creating conditions of stability and predictability that are essential for attracting new investment. Moreover, trust in institutions is a critical factor for shielding the economy against future crises, as it promotes transparency, accountability and consistency of political decisions. Further improving institutional quality is necessary not only for safeguarding democracy and the institution of justice, but also for preserving social cohesion and ensuring a stable environment conducive to national economic prosperity.

In an environment of successive crises and heightened uncertainty, the continuation of reforms is a key pillar for maintaining economic stability. The implementation of structural reforms and the strengthening of the economy's competitiveness through higher productivity, coupled with adherence to responsible fiscal policies and a focus on medium-term planning, are essential prerequisites for ensuring resilience, further sovereign credit rating upgrades and faster real convergence to the European average.

2 WORLD ECONOMY

In 2024 the world economy continued to grow, albeit at a rather slow pace, and the outlook for 2025 remains positive, despite relatively subdued dynamics. According to the latest IMF projections, world GDP growth is estimated to have slowed marginally to 3.2% in 2024 (from 3.3% in 2023), falling short of its long-term average for the 2000-2019 period (3.7%). In **advanced economies**, growth remained unchanged from 2023, but with significant divergence across major economies. The US economy, despite a marginal slowdown, continued to post the highest growth rate among large economies. By contrast, the Japanese and German economies experienced mild recessions. In the euro area and the United Kingdom, growth remained muted, despite a modest pick-up relative to 2023. A marginal slowdown was recorded in **emerging market and developing economies**. In this group of countries as well, macroeconomic developments were quite uneven, with China and India losing their growth momentum, whereas in Brazil buoyant economic activity picked up further. The **outlook for 2025**, despite downward revisions, remains positive. More specifically, recovery is anticipated in Germany, the United Kingdom and Japan, while growth in the two largest economies, the United States and China, is set to decelerate further.

1 According to the World Bank's Worldwide Governance Indicators, Greece has improved its scores on: "Political Stability and Absence of Violence/Terrorism" (lower likelihood of political instability and politically-motivated violence, creating a more predictable and safer macroeconomic environment; "Voice and Accountability"(enhanced ability of citizens to participate in political processes, freedom of expression, as well as higher transparency and accountability of public authorities, with democratic control and social dialogue mechanisms in place); "Government Effectiveness" (better quality of public services and of policy implementation); "Regulatory Quality" (a regulatory environment that fosters entrepreneurship and investment); "Control of Corruption" (systematic effort to curb public sector corruption); and "Rule of Law" (reforms aimed to speed up the delivery of justice and reinforce judicial independence).

2 The introduction of digital tools, the reorganisation of first-instance courts through the New Judicial Map, as well as the upskilling of judges are reforms in this direction.

Global inflation continued to decline in 2024, amid uneven developments between advanced and emerging market economies. The fall in global inflation was mainly due to the still restrictive monetary policies and the waning impact of aggregate supply shocks, as well as the unwinding of the energy crisis. According to the IMF, global inflation dropped by about one percentage point relative to 2023, reaching 5.7%, and is expected to decline further to 4.2% in 2025. Disinflation was more pronounced in advanced economies (2.6% from 4.6% in 2023) in spite of persistently high core inflation driven by services prices in several large economies. Conversely, inflation in emerging market and developing economies remained high and broadly unchanged (at 7.8%).

Global trade rebounded strongly in 2024, supporting foreign demand, despite increased transport costs, geopolitical tensions and uncertainty. According to IMF estimates, global trade volume growth strengthened markedly to 3.4% (from 0.7% in 2023), exceeding initial forecasts and offsetting weak domestic demand in several economies. Nevertheless, projections for 2025 suggest that world trade growth will moderate somewhat (to 3.2%), remaining significantly below its long-term average for the 2000-2019 period (4.9%).

International energy prices kept falling in 2024, despite fluctuations due to geopolitical developments, whereas non-fuel commodity prices rose. In particular, the international price of **natural gas** of all types dropped by 15% compared with 2023, showing high volatility during the year. The average international price of **crude oil** fell by 1.9% in 2024 in annual terms according to the IMF, as weak global demand and the economic slowdown in China and India led to lower prices towards the end of the year, despite geopolitical tensions and temporary price hikes owing to developments in the Middle East. For 2025, energy prices are projected to decline further, as a result of reduced demand by China and increased supply by non-OPEC+ countries. On the other hand, the average international price of **non-energy commodities** rose by 3.4% and is projected to move upwards in the current year, reflecting the impacts of climate change on global production.

Fiscal policies in 2024 turned contractionary in advanced economies and expansionary in emerging market and developing economies. Government debt increased slightly in both groups of countries, remaining above pre-pandemic levels, at 109% of GDP in advanced countries and 70% of GDP in emerging market and developing economies. For 2025, tight fiscal policies are expected in most countries, aimed to rein in government debt and mitigate medium-term fiscal risks.

Monetary policy in advanced economies turned gradually less restrictive in 2024, on the back of easing inflationary pressures. In the course of the year, central banks decided to gradually lower their policy rates, taking into account the decline in inflation, waning wage pressures and, in certain cases, subdued economic activity. Still, despite a gradual normalisation, monetary policy in advanced economies remained restrictive. Overall, the monetary policy transmission mechanism proved to be effective, containing inflation expectations with limited impacts on growth and the labour market.

The euro area economy continued to expand at a subdued pace in 2024. Euro area real GDP grew by a mere 0.9% (compared with 0.4% in 2023), supported by rising consumption and easing financial conditions, while the strengthening of global trade also made a positive contribution. Conversely, persistently high uncertainty about international geopolitical and domestic political developments acted as a drag on growth, leading to a recession in Germany and a decline in investment. Services, especially tourism-related, were a driver of growth, unlike manufacturing that was weighed down by weak demand and increased regulatory burden. Economic activity in 2025 is expected to be supported by rising real incomes and consumption on the back of a further decline in inflation and wage increases, as well as by a recovery in investment largely thanks to improved credit conditions and utilisation of NextGenerationEU (NGEU) funds.

On the other hand, net exports are expected to make a negative contribution to GDP growth. According to the ECB staff projections (March 2025), the growth rate is expected to remain unchanged at 0.9% in 2025.

The euro area labour market remained resilient, with employment rising further, albeit at a slower pace, and unemployment hovering at historically low levels. Euro area employment growth moderated to 1.0% in 2024 (from 1.4% in 2024), while for 2025 it is projected to decelerate further to 0.4%. Weaker employment dynamics reflects the waning of the cyclical factors that had boosted labour demand in past years. The unemployment rate dropped further to 6.4% (from 6.5% in 2023), with a marginal decline to 6.3% expected for 2025.

During 2024, both headline and core inflation in the euro area declined markedly, although domestic inflationary pressures remained strong. Headline HICP inflation dropped by 3 percentage points to 2.4% (from 5.4% in 2023), driven down by: lower energy and food prices; the still restrictive monetary policy stance, which was instrumental in anchoring inflation expectations around 2%; and the economic slowdown (or even recession) in certain economies, such as Germany, which dampened aggregate demand. On the other hand, wage growth contributed to sustained upward pressures on prices, mainly in the services sector, where inflation remained high. **Core inflation** declined to 2.8% (from 4.9% in 2023), due to sluggish economic activity and slower unit labour cost growth. Profit growth weakened, partly buffering the pass-through of labour costs to prices. According to the March 2025 ECB staff projections, headline inflation is expected to moderate only marginally to 2.3% in 2025, largely reflecting developments in food inflation, while the withdrawal of energy-related support measures will exert temporary upward pressures on energy inflation. Core inflation is projected to drop to 2.2% in 2025.

Global financial conditions eased in 2024, as investors priced in expectations of interest rate cuts by major central banks. In the euro area, short-term bond yields declined and stock prices rose amid lower inflation expectations, with investors increasingly anticipating further interest rate cuts by the ECB within 2025. Conversely, inflation expectations in the United States rose significantly after the Fed's first interest rate cut in the third quarter of 2024, driving up US federal bond yields. More generally, expectations regarding the economic outlook and the path of policy rates are quite different between the United States and the euro area. This also reflects the uncertainty about the impacts of the US tariffs imposed on its major trading partners. Despite the initial interest rate cuts by the ECB and the Fed, investor expectations about US interest rates were revised upwards at the end of 2024. The subsequent rise in US bond yields also drove up the yields of euro area government bonds. All in all, although financial conditions are now more favourable compared with one year earlier, heightened geopolitical and economic uncertainty is causing market volatility, weighing on investment flows and on bond and stock market valuations globally.

3 THE SINGLE MONETARY POLICY

The interest rate policy of the Eurosystem in 2024 was based on a dynamic assessment of economic conditions, following a meeting-by-meeting and data-dependent approach. At each monetary policy meeting, the Governing Council of the ECB assessed all incoming economic and financial data for the euro area and decided accordingly. In particular, the Governing Council stressed that its decisions depended on three main factors: the inflation outlook; the dynamics of underlying inflation; and the strength of monetary policy transmission to the real economy. Since April 2024 the Governing Council has made clear that it was not pre-committing to a particular rate path.

In June 2024, the Governing Council of the ECB began to gradually lower its key interest rates, judging that the disinflation process remained well on track. After nine months of holding rates

steady, it was seen as appropriate to moderate the degree of monetary policy restriction, in line with increased confidence that inflation was converging towards the 2% target in a timely and sustained manner. Against this backdrop, the first rate cut of 25 basis points occurred in June 2024, as inflation had declined visibly compared with September 2023 and inflation expectations had been revised downwards. Financing conditions remained restrictive, given that the past monetary policy tightening continued to be transmitted to the financing costs of the euro area real economy. In September, October and December 2024, the ECB lowered again interest rates by 25 basis points each time, in response to signs of a sustainable decline in inflation and weakening economic activity. The Governing Council reiterated that monetary policy would remain adaptable to economic developments, while committing to the objective of price stability and ensuring the smooth transmission of monetary policy to the euro area real economy.

Interest rate cuts continued into early 2025, marking a transition to a more neutral monetary environment. In January and March 2025, the Governing Council cut policy rates by 25 basis points at each meeting, continuing to moderate monetary policy restriction. At the end of March 2025, the deposit facility rate stood at 2.5%, down from 4% in September 2024. Financial conditions are gradually easing, as policy rate cuts have started to translate into lower borrowing costs for firms and households, but remain restrictive, while still high debt servicing costs continue to reflect past interest rate hikes. The ECB remains cautious, noting that its decisions will continue to be based on the available incoming data and on inflation developments, ensuring a smooth adjustment of the euro area economy to the new monetary reality. According to the latest assessment, inflation is expected to converge towards its 2% target by the end of 2025.

At the same time, in 2024 the ECB started to gradually reduce reinvestments under the Pandemic Emergency Purchase Programme (PEPP), intended to be discontinued by the end of the year. More specifically, in the second half of 2024, the size of the PEPP portfolio was reduced by a monthly average of EUR 7.5 billion, as only part of the maturing securities was reinvested, and by the end of the year reinvestments had ceased. This process aimed at a gradual normalisation of monetary policy, through the contraction of the Eurosystem balance sheet.

The Governing Council of the ECB noted that, despite the resilience of euro area banks, risks to financial stability remained elevated. In this context, in June and December 2024, it conducted an in-depth assessment of the interaction between monetary policy and financial stability. The findings suggested that, although financial stability had benefited from an improving economic outlook, rising geopolitical tensions could pose considerable downside risks. Furthermore, the Governing Council stressed that macroprudential policy remained the first line of defence against the build-up of financial vulnerabilities.

In March 2024, the Governing Council of the ECB decided on changes to the operational framework for implementing monetary policy, to ensure that it remains appropriate as the Eurosystem balance sheet normalises. In particular, it determined the core principles and key parameters that will guide monetary policy implementation and liquidity provision to banks, as excess liquidity gradually declines from very high levels. Moreover, the Eurosystem deposit facility rate (DFR) was recognised as the key interest rate through which the ECB steers the monetary policy stance.

The ECB posted losses for the second year in a row, as a result of past monetary policy measures that were adopted in order to ensure price stability in the euro area. The losses are expected to have a negative effect on profit distribution to euro area national central banks. It should be pointed out though that central banks are public institutions, with the specific mandate of ensuring price and financial stability, and are not profit-oriented. Such losses are expected to be temporary and to be offset by future profits. Besides, the losses are undeniably lower than the macroeconomic cost that would have arisen if the ECB had not taken resolute action against price stability challenges and recession risks. The credibility of central banks mainly hinges on

their ability to achieve their primary objective and contribute to macroeconomic and financial stability, while any temporary losses do not prevent them from fulfilling their mandate.

In the money market, excess liquidity in the banking system continued to decline in 2024, although remaining elevated overall. The decline was mainly due to the full repayment of TLTROs, as well as to maturing securities which were acquired by the Eurosystem under the asset purchase programmes.

4 THE GREEK ECONOMY: DEVELOPMENTS AND PROSPECTS

Macroeconomic environment

The Greek economy expanded at a satisfactory rate in 2024, well above the euro area average for the fourth consecutive year. Annual GDP growth in real terms stood at 2.3% in 2024 (the same level as in 2023) and was around 2.5 times higher than the respective euro area figure. The main drivers of GDP growth were private consumption, investment and exports of services. In greater detail, **private consumption** increased at an accelerating pace, supported by the rise in household disposable income. In particular, dependent labour income rose markedly, on the back of higher compensation per employee and stronger headcount employment, reflecting the positive dynamics of the labour market and rising wages. The downward trend in inflation also contributed to a strengthening in real incomes. **Investment** continued its upward path in 2024, especially in machinery equipment. As a percentage of GDP, investment reached its highest level since 2010, pointing to a gradual narrowing of the investment gap that emerged over the past decade. By contrast, the contribution of net trade was negative, as **exports** of goods grew modestly, dragged down by a worsening international environment, while **imports** of goods and services increased sharply. A negative contribution to economic growth also came from lower **government consumption. Activity indicators** in the industrial sector, construction and services recorded positive yet decelerating rates of change, whereas the volume of retail sales edged downwards slightly. Business **confidence** remained high, as opposed to consumer confidence, which stabilised at low levels.

Household savings shrank further, as consumer spending remained solid in 2024. Despite the inflation-induced loss in purchasing power in the past few years, consumer demand continued to be strong. This resulted in a gradual reduction in savings accumulated during the pandemic period, with the saving ratio falling back to pre-pandemic levels. However, this trend bottomed out and, in the third quarter of 2024, a marginally positive saving ratio was seen for the first time after two years of continuous decline. At the same time, the withdrawal of the pandemic and energy-related support measures, the ongoing release of pent-up demand and repayments of loan and tax obligations also weighed heavily on household savings.

Headline inflation declined further in 2024, but persistently high services inflation prevented a faster disinflation. Core inflation started receding for the first time in two years, as inflation of non-energy industrial goods (NEIG) slowed markedly. Headline **HICP inflation** fell to 3% in 2024 (from 4.2% in 2023), compared with 2.4% for the euro area average. This was mainly driven by: (i) the downward path of **food** inflation (+2.8%, marginally below the euro area average); (ii) a moderation in **NEIG** prices (+1.7%); and (iii) **energy goods** deflation (-1.4%), mainly reflecting the fact that international oil prices remained at relatively low levels. Conversely, **services** inflation was high in annual terms (4.4%), without significant changes from the two previous years. Persistently high services inflation reflects increases in unit labour costs, strong foreign demand, as well as the upward effect of indirect tax hikes in food and accommodation services during 2024. Rising services inflation in the second half of the year sustained core inflation to levels above the headline index. For the year as a whole, core inflation fell by 1.7 percentage points relative to 2023 and stood at 3.6%.

The labour market remained robust in 2024, with unemployment falling further and labour force participation increasing. Total **employment** grew by 2% in 2024 (2023: 1.3%). The share of part-time employment dropped further to 6.6% (from 7.5% in 2023). Importantly, **labour force participation** in 2024 rose to a post-2011 high, supporting the sustainability of the social security system given the challenges posed by population ageing. It should be noted that the rise in employment was stronger for women and for the 45-65 age group, increasing their respective shares in total employment. The **unemployment rate** fell further to 10.1% (from 11.1% in 2023), reaching a post-2010 low, while the long-term unemployment rate declined considerably. Nevertheless, labour market **tightness** has increased relative to the pre-pandemic period. Many firms, especially in tourism, professional services, construction and manufacturing, are facing difficulties in meeting their staffing needs, even after the strong wage growth in 2024. The only sector with a lower job vacancy rate year-on-year was the ICT sector.

Wage growth in 2024 was significantly higher than in 2023, boosting households' disposable income. In particular, total compensation of employees grew at an annual rate of 7.4% (2023: 5.3%), while compensation per employee rose by 6% (2023: 3.7%). Wage growth in 2024 was driven by: (i) the rise in public sector salaries; (ii) the reinstatement of seniority-based benefits for private sector employees; and (iii) the increase in the minimum wage. At the same time, annual growth in productivity per employee was unchanged from the previous year (1%), while unit labour cost growth quickened markedly compared with 2023 (4.9%, against 2.5% in 2023).

Corporate profitability declined between January and September 2024, as wage costs grew faster than gross value added. As a result, the net profit share (which reflects the performance of the business sector in terms of operating profits) slightly decreased; however, it still remains significantly higher than the average of the pre-pandemic period 2017-19, confirming that the solid expansion of the Greek economy helped maintain high profits despite elevated labour costs.

In 2024, the Greek tourism sector hit new records in travel receipts and tourist arrivals, but faced challenges due to reduced average expenditure per trip and staff shortages. Travel receipts from non-residents came to about EUR 21.6 billion (+4.8% on an annual basis), exceeding the levels seen in previous years, while international passenger traffic increased considerably. Still, average expenditure per trip decreased, as a result of lower household disposable income globally amid inflationary pressures, as well as higher numbers of visitors staying for shorter periods. On the supply side, although the shares of tourism-related activities in GDP and employment increased, the job vacancy rate in Greece was the highest in the EU, posing significant challenges to the operation of the sector.

After a visible improvement over the past few years, the international competitiveness of the Greek economy showed a small deterioration in 2024. The appreciation of the euro had an adverse effect on the **price competitiveness** of the Greek economy, outweighing the gains from a favourable inflation differential vis-à-vis Greece's main trading partners. **Unit labour cost competitiveness** also worsened in 2024 (after a slight deterioration in 2023). This was due to slower unit labour cost growth in the euro area, as a result of lower wage increases and higher labour productivity growth relative to Greece. In terms of **structural competitiveness**, Greece's ranking in the relevant composite indicators remained broadly unchanged at rather low levels in 2024. Gaps in digitalisation, innovation and productive investment as a percentage of GDP persist, and so does Greece's distance from most other advanced economies in global competitiveness scores.

The current account deficit widened in 2024 (to 6.4% of GDP from 6.2% of GDP in 2023). This development mainly reflected deterioration in the non-fuel goods balance, as imports outpaced exports; the fuel balance, as exports fell more than imports; and the primary income account. These were partly offset by a higher surplus in the services balance, mainly due to increased travel receipts and, to a lesser extent, a slightly higher surplus in the sea transport balance; and an improvement in the secondary income account. **Foreign direct investment**

(FDI) rose strongly, coming to EUR 6 billion or 2.5% of GDP (2023: EUR 4.4 billion or 1.9% of GDP), the second highest level in the past 20 years. This rise was chiefly due to investment in new equity and real estate, with the real estate sector absorbing more than 45% of total FDI inflows. Meanwhile, sectors such as manufacturing, transportation and storage, communication and financial activities continue to attract foreign investor interest. Overall, FDI was supported by the improved business environment after the recent credit rating upgrades of the Greek economy, as well as by the completion of privatisation projects.

In 2024, the real estate market continued to attract interest from domestic and foreign investors, and property prices moved further up. Investor demand was broadly based across all property uses, with an undersupply of properties meeting modern standards. The **housing** market remained buoyant, with a particular focus on investment housing, where prices rose sharply. Residential construction activity increased markedly, and positive construction confidence improved moderately relative to 2023. Residential investment, although on an upward trend, remains low as a percentage of GDP, while building activity has not yet returned to pre-crisis levels. The overall cost of building new residential properties rose further in 2024, albeit at a slower pace. Turning to the **commercial real estate** sector, property prices kept on rising, especially in the prime segment. Total construction activity for commercial properties continued to record positive growth rates.

Fiscal developments

In 2024, fiscal stability was significantly enhanced. The fiscal stance is estimated to have remained contractionary in 2024, for the third year in a row. Key developments included further improvements in public finances, continued reforms and implementation of targeted measures to support vulnerable households and businesses, while at the same time safeguarding public debt sustainability. Fiscal measures focused on three key areas: (i) social policy interventions aimed at raising citizens' disposable income; (ii) actions to combat tax evasion, coupled with a strengthening of electronic governance and digital payments; and (iii) an increase in government investment.

Efforts to combat tax evasion are bearing fruit, leading to consistent overperformance of tax revenue in recent years, a broadening of the tax base and enhanced tax fairness. Tax revenue continued to exceed budget targets in 2024, enabling the financing of additional public expenditure on investment and on support to vulnerable social groups. Improved incomes, increased corporate profitability and strong employment growth underpinned the overachievement of fiscal targets. Recent reforms, such as the interconnection of cash registers with POS terminals, the digitalisation of business transactions and financial data by the Independent Authority for Public Revenue through the myData platform, as well as the newly introduced presumptive taxation of the self-employed, have enhanced tax compliance, demonstrating the effectiveness of policies to curb tax evasion. Besides, revenue overperformance, as a result of reduced tax evasion and the associated lasting increase in tax revenue, has made possible an upward adjustment of Greece's net primary expenditure growth ceiling for 2024, thus creating extra fiscal space for additional discretionary measures during the year without jeopardising fiscal sustainability or compliance with fiscal rules.

Taking into account all latest data about the evolution of tax revenue, it is estimated that annual budgetary targets have once again been overachieved. According to the revised projection of the Bank of Greece, the general government **primary balance** in 2024 is expected to turn out at a surplus of 3.5% of GDP, significantly higher than projected in the MTP 2025-2028 (2.4% of GDP) and the 2025 Budget (2.5% of GDP).

In 2024, public debt declined markedly not only as a percentage of GDP, but also in absolute terms. Debt reduction was driven by a higher primary surplus, the further early repayment of

official sector loans and the continued expansion of the Greek economy. Specifically, the general government debt ratio is estimated to have declined by 10.1 percentage points of GDP compared with 2023, reaching a post-2010 low of 153.8% of GDP. Moreover, the absolute size of public debt is estimated to have decreased for the first time since 2019 and for just the fourth time in the 29-year period for which national accounts data are available. Thus, Greece has outperformed most euro area member countries for yet another year, despite an upward revision of its debt under Eurostat's new methodology for the statistical treatment of deferred interest.

The public debt management strategy in 2024 focused on reducing borrowing costs, maintaining high cash reserves and enhancing liquidity in the Greek government bond market, while at the same time limiting risks to the debt portfolio. New debt issues had lower yields compared with respective past issues, as well as high oversubscription ratios. In the course of the year, the Public Debt Management Agency (PDMA) also reopened past bond issues, with lower yields relative to the original launches, further increasing the liquidity of the bond market and confirming investors' strong demand for Greek medium-term debt securities. Overall, the PDMA raised EUR 9.6 billion at a lower weighted average cost and with a longer weighted average maturity relative to 2023, thereby supporting public debt sustainability.

The absorption of funds from the Recovery and Resilience Facility (RRF) is well on track. By the end of 2024, Greece had received EUR 18.2 billion or 51% of its total allocation, having completed 28% of the agreed milestones and targets. Concerning the RRF loan component, there has been substantial progress in the signing of loan agreements. Disbursements to final beneficiaries account for 32% of total loan amounts received, as loans are disbursed gradually, according to project implementation, over a three-year horizon. In the grant component, disbursements to final beneficiaries have accelerated significantly (estimated at 77% of total grant funding received up to December 2024), increasing the contribution of public investment to economic growth.

Fiscal responsibility and policy credibility have been acknowledged by all international credit rating agencies in their assessments of the Greek economy and its outlook. Their improved assessments reflect rating agencies' expectations of further declines in the debt-to-GDP ratio in the years ahead, as well as the systematic overshooting of the primary surplus targets in the past few years.

Financial developments

Greece's return to investment grade was confirmed by all major rating agencies, attesting to the robust performance of the economy and restored confidence. During 2024, Standard &Poor's, Morningstar DBRS and Moody's changed the outlook on the Greek economy from stable to positive, while in December Scope Ratings upgraded Greece's sovereign credit rating to BBB (from BBB-), one notch above the investment grade threshold, with a stable outlook. In March 2025, Morningstar DBRS also upgraded Greece's creditworthiness to BBB, changing its outlook to stable. In the same month, Moody's assigned investment grade status (at Baa3) to the Greek sovereign for the first time in 14 years. Thus, all ECB-recognised credit rating agencies have now assigned investment grade status to the Greek economy, signalling the country's return to European normality.

Greek government bond yields declined significantly in 2024, influenced by euro area trends as well as favourable domestic developments. Initially, they mirrored the general downward path of euro area government bonds; subsequently, however, they fell stronger than their euro area counterparts, largely thanks to Greece's upgrade to investment grade. From the third quarter onwards, yields edged up, in line with global trends, although their increase was weaker than elsewhere. The favourable domestic economic developments and the successive credit rating upgrades eased upward pressures on Greek government bond yields; at the same time, other factors such as strong fiscal performance, a reinforced banking sector, faster economic

growth compared with the euro area average, political stability and continuation of the reform effort bolstered investor confidence. The positive assessments of rating agencies regarding the prospects of the Greek economy led to increased investor participation in the new issues of Greek government bonds, helping to keep their yields contained, thus cushioning the impact of international developments and bringing down yield spreads vis-à-vis the other euro area countries. As a result, the spread between Greek and other euro area sovereign bond yields is now comparable with the levels prevailing before the debt crisis, confirming the role of positive domestic developments as a counterbalance to heightened international uncertainty.

Greek corporate and bank bond yields trended downwards, contributing to lower funding costs for firms and financial institutions. Greek banks, having already met their MREL targets, continued to issue bonds in international markets on favourable terms, as the yields on new issues declined despite the recent upward trend in European bank bond yields. This can be explained by banks' credit rating upgrades. Bond issuance by non-financial corporations (NFCs) also increased, as the improved sovereign credit rating and expectations of interest rate cuts resulted in lower financing costs. After a rise observed in the first half of 2024, Greek NFC bond yields trended down, eventually converging with the yields on European bonds with ratings close to the investment grade threshold.

In 2024, the Greek stock market remained buoyant, with reduced volatility and increased investor interest. Banks, the industrial sector and consumer goods firms were the main drivers of the rise in the Athens Exchange composite share price index (Athex), reflecting the momentum of the Greek economy. International investors' strong demand for Greek shares considerably facilitated the disinvestment of the HFSF from systemic banks, further boosting the stock market. Meanwhile, trading activity grew markedly.

Banking sector

Bank lending rates in 2024 edged downwards in most loan categories, with varying degrees of adjustment depending on the borrower sector and the type of financing. More specifically, bank borrowing costs for non-financial corporations (NFCs) declined, in line with monetary policy rate cuts and lower interest rates in the euro interbank market. This was also due to the fact that NFC loans as a rule carry variable rates. As a result, the weighted average interest rate on **loans to NFCs** stood at 5.5% on average, down by 32 basis points relative to 2023. For small and medium-sized enterprises (SMEs), bank lending rates remained almost unchanged in average annual terms, standing at slightly higher levels than for the average of total NFCs, mirroring increased risk management requirements. However, borrowing terms and conditions for NFCs, particularly for SMEs, were in fact more favourable than what is suggested by bank interest rate statistics, owing to the supply of low interest rate loans through the financing tools of the European Investment Bank (EIB) Group and the Hellenic Development Bank (HDB), as well as through the RRF loans. Turning to **households**, the pass-through of policy rate cuts to bank lending rates has been more limited than for NFCs. Besides, a significant part of new loans to households were fixed-rate loans. The weighted average interest rate on loans to households was 6.1% on average in 2024 (against 6.2% in 2023), more than 0.5 percentage point higher compared with loans to NFCs. In greater detail, interest rates on **housing loans** remained broadly unchanged relative to 2023, averaging 4.1%, as reductions in variable rates in 2024 offset to a great extent the past increases of the policy rate hiking cycle. Conversely, the weighted average interest rate on **consumer loans** with a fixed maturity declined by around 0.5 percentage point in 2024 to 10.8%. In real terms, bank lending rates in 2024 increased slightly year-on-year. Moreover, the differential in lending rates between Greece and the euro area narrowed further in 2024 for both sectors (NFCs and households).

During 2024 bank deposit rates followed a downward trend, though remaining higher on average relative to 2023. More specifically, interest rates on NFCs' time deposits tracked the

Eurosystem policy rate cuts, while the adjustment in the respective interest rates for households was slower and more limited. This relative stickiness in household deposit rates is attributed to banks' efforts to maintain a strong deposit base, particularly after the repayment of ECB financing, as well as to depositors' shift towards alternative investment options, such as Greek Treasury bills. Despite their downward trend, on average in 2024 the weighted average **interest rates on time deposits** stood at higher levels than in 2023. In particular, the weighted average interest rate on households' time deposits came to 1.8% on average (against 1.4% in 2023) and the respective interest rate for NFCs reached 3% (against 2.3% in 2023). On the other hand, **interest rates on overnight deposits** remained almost unchanged relative to 2023 (0.03% for households and 0.18% for NFCs).

The annual growth rate of bank credit to the private sector as a whole accelerated markedly in 2024 (6.2%) compared with 2023 (3.2%). This development reflects an increase in bank credit to both firms and households.

Credit expansion to firms quickened considerably, with particularly enhanced credit support to SMEs. The growth rate of bank credit to NFCs rose to 9.5% on average in 2024 (from 6.5% in 2023). The rise in economic activity, coupled with a gradual decline in bank lending rates, contributed to stronger demand for new loans, while banks, enjoying ample liquidity and having reduced their reliance on the Eurosystem, raised credit supply. Manufacturing, trade, energy and tourism had the highest shares in the total flow of business loans. Developments in new bank loans to businesses in 2024 were mostly driven by the contribution of credit to large firms. Nevertheless, it should be noted that the average monthly gross flow to SMEs increased substantially (25%) relative to 2023. In addition, the co-financing and loan guarantee schemes of the HDB and the EIB Group as well as the RRF loans further boosted credit to firms (SMEs in particular), increasing their shares in the total outstanding amount of business loans.

Bank credit to households continued to contract, albeit at a weaker pace than one year earlier, reflecting a pick-up in consumer credit growth and a slower decline in housing loans. More specifically, the outstanding amount of bank loans to households shrank by 1% in annual terms, against a decrease of 2.4% in 2023. The average annual growth rate of **consumer credit** edged up to 5.5% (from 2% in 2023), while the rate of decline in the outstanding amount of **housing loans** moderated to -2.9% (from -3.7% in 2023). Meanwhile, gross flows of both consumer and housing loans increased markedly. The rise in consumer credit was associated with households' higher consumer spending, while the full impact of lower interest rates on housing loans had not yet been reflected in demand for housing loans, owing to the high share of new fixed-rate loans.

Bank deposits by the private sector continued growing in 2024, at a faster pace than in 2023. Overall, a cumulative increase of EUR 8.6 billion was recorded (2023: EUR 5.8 billion), bringing the stock of deposits to EUR 204 billion, the highest level since February 2011. Domestic private sector deposits accounted for 85% of GDP, surpassing the 2003-2008 period average. Still, the bulk of banks' deposit base continues to consist of liquid assets held in overnight accounts (75% of private sector deposits).

The increase in deposits was primarily driven by firms. Corporate deposits grew substantially, reflecting stronger credit growth to NFCs and higher turnovers. A more moderate increase was observed in **deposits held by households**, which shifted towards alternative investment options, such as Greek Treasury bills and mutual fund units/shares, which offer higher returns.

In 2024 the shift from overnight deposits to time deposits halted, as the interest rate differential between them narrowed. The annual growth rate of time deposits slowed considerably, with time deposits held by firms rising only marginally and those held by households increasing much less compared with 2023. By contrast, overnight deposits grew markedly for both firms and households, reversing the previous year's decline.

In 2024 Greek banks' fundamentals strengthened further, as profitability and capital adequacy ratios increased, liquidity remained high and loan portfolio quality improved. Positive developments in banks' fundamentals are attributable to the strong growth rate of the Greek economy, upgrades in Greece's sovereign credit rating and in the ratings of Greek significant banks, the continuously improving quality of their loan portfolios and the restructuring of less significant banks. **Profitability** grew, supported by a further increase in net interest and fee income. Greek banks' **capital adequacy ratios** improved significantly, converging towards the respective European ratios, as the increase in regulatory capital through internal capital generation and issuance of bonds accounted for as equity more than offset a rise in risk-weighted assets. In particular, the Common Equity Tier 1 (CET1) ratio rose to 15.9% in December 2024 (euro area[3]: 15.9%), from 15.5% in December 2023, and likewise the Total Capital Ratio (TCR) came to 19.6% (euro area: 20%), against 18.8% in December 2023. **Liquidity ratios** remained broadly unchanged relative to end-2023, still well above prudential requirements and the respective euro area averages, despite the full repayment of the Eurosystem's TLTROs. The aggregate **non-performing loan (NPL) ratio** fell significantly year-on-year, moving closer to the European average. According to the latest available data, NPLs dropped further to 3.8% of total loans in December 2024 (from 6.7% in December 2023), compared with a euro area average of 2.3%.

The restructuring of less significant banks added to the stability of the financial system. The merger between Pancreta Bank and Attica Bank with a capital increase and the participation of a private investor, as well as the resolution of two cooperative banks in Northern Greece, with no impact whatsoever on financial stability, signalled the consolidation of the Less Significant Institutions (LSI) sector as well, thereby enhancing competition in the banking sector and increasing the availability of financing options to SMEs.

Greek banks' credit rating upgrades continued throughout 2024 and into early 2025, reflecting improvements in their fundamentals and enhancements in the institutional framework. The upgrade of three significant banks by S&P in January 2025 is seen as an important development, with two of those banks now rated to investment grade category (BBB-) with a stable outlook. Subsequently, in March 2025 Moody's upgraded the ratings of all four systemic banks. These upgrades are associated with the introduction of macroprudential borrower-based measures that bolster the stability of the financial system, as well as with positive spillovers from the sovereign credit rating upgrade.

Private insurance undertakings

The domestic private insurance market has proved its resilience, successfully addressing multiple challenges in recent years. Such challenges included interest rate changes, inflationary pressures, the consequences of weather extremes like storm Daniel, as well as consolidating past mergers and acquisitions. In January-September 2024, **gross written premiums** across the main market segments increased year-on-year, by 17% for life insurance and by 9% for non-life insurance.

Over the same period, the balance sheets of insurance undertakings improved compared with end-2023, posting increases in their assets, liabilities and own funds. In greater detail, total assets of supervised insurance undertakings grew by 3%, mainly on account of a rise in investments linked to insurance whose investment risk is borne by policyholders. Total liabilities increased by 2%, with life insurance accounting for their bulk, while total own funds rose by 5%. The sector's capital adequacy remained elevated, as 92% of eligible own funds rank in the highest quality class (Tier 1), while all supervised insurance undertakings maintain solvency

3 Banking groups in the Banking Union directly supervised by the ECB.

capital requirement coverage ratios above 100%, despite macroeconomic challenges and financial market volatility.

In 2024 and in early 2025, the institutional framework for private insurance in the EU was significantly enhanced through legislative and regulatory actions. The revised "Solvency II" Directive and the new Insurance Recovery and Resolution Directive were published in January 2025, with a view to ensuring the robustness of the insurance sector and to strengthening its resilience and supervision. At the national level, the Bank of Greece issued new Executive Committee Acts regarding the submission of supervisory reports on Pan-European Personal Pension Products (PEPP); audit procedures concerning solvency and financial condition reports; and adjustments in the minimum amounts of compulsory insurance cover against civil liability for insurance intermediaries. These interventions aim to enhance the transparency, supervision and smooth functioning of the insurance market.

Projections

The Greek economy is projected to continue expanding in 2025 at a steady rate, well above the euro area average. According to Bank of Greece estimates, economic activity is projected to expand by 2.3% in 2025, with private consumption and investment remaining the key drivers of growth this year as well. In more detail, **private consumption** (+2%) is expected to continue its upward path, supported by households' higher real income. The projected further rises in employment and wages, coupled with a decline in inflation and the implementation of targeted fiscal measures, are set to boost disposable income. **Investment** (+6%) should continue growing at relatively high rates, backed by European resources, which, along with the banking sector's high liquidity and the continued upgrades of the Greek economy, will attract new private funds. **Exports** (+3.8%) are expected to rise further, reflecting the recovery of foreign demand and the improved competitiveness of Greek exports. However, the contribution of net trade to GDP growth will be negative overall, as buoyant investment activity and strong consumption will considerably raise **imports** (+3.5%).

The prospects of Greek tourism appear to be favourable for 2025 as well. Leading indicators of tourism activity, such as seat scheduling in incoming international flights, international tourist arrivals and investment in the tourism industry, are encouraging signs for demand, confirming the positive outlook.

The outlook for the labour market remains favourable in 2025, with a rise in employment and a further decline in unemployment. An increase in employment (+1.3%) and a drop in the unemployment rate (to 9.9%) are associated with the sustained growth momentum of the economy, which supports job creation.

Disinflation in 2025 is expected to be limited, while core inflation should remain unchanged. More specifically, HICP headline inflation is projected to slow marginally to 2.9%, while core inflation is expected to remain at 3.6%. Upward pressures will be exerted by energy inflation returning to positive territory and an expected rise in services inflation. By contrast, food inflation and NEIG inflation are projected to decline.

The sustained growth momentum of the economy is expected to have a (marginally) positive effect on labour productivity, while easing wage growth should favour competitiveness. In particular, productivity growth is projected to remain muted in 2025 (at 1%, same as in 2024). On the other hand, total compensation, as well as average earnings and unit labour costs should continue growing, also reflecting the increase in the minimum wage, albeit at a slower pace than in 2024. According to Bank of Greece estimates, in 2025 **total compensation** is expected to grow by 5.6% (2024: 7.4%), **average earnings** by 4.5% (2024: 6%) and **unit labour costs** by 3.4% (2024: 4.9%).

The current account deficit is projected to narrow to 5.7% of GDP in 2025 (against 6.4% of GDP in 2024). Underlying this improvement will be the following: (i) **Exports** of goods, despite their weak growth in 2024, did not lose a sizeable market share, which augurs well for the years ahead. (ii) A higher surplus in the **services balance** is anticipated, as **travel receipts** are expected to rise further – albeit moderately – in 2025, mainly on the back of an extended tourist season, the promotion of alternative forms of tourism and a stronger cruise industry. The prospects of **sea transport receipts** are relatively positive, owing to an estimated – slight – increase in global demand and a moderate growth in the world fleet. (iii) The expected downward course of interest rates, coupled with the impact from the Greek economy's successive upgrades, is set to contribute to lower interest payments, improving the **primary income account**. (iv) **EU funding**, when provided in the form of grants (e.g. NGEU resources), should improve the primary and secondary income accounts. On the other hand, needs for **imports of intermediate and investment goods** are expected to weigh on the current account deficit. **Foreign direct investment** is projected to maintain its momentum, reflecting an improved business climate.

The outlook of the Greek real estate market remains positive in 2025. Limited supply and high demand for houses, particularly for investment purposes, should continue to push property prices upwards, but at a weaker pace than before.

Monetary policy is expected to become gradually less restrictive in 2025, as policy rates will continue to decline. Inflation at the euro area level has fallen and is now much closer to the 2% target, with the ECB's projections suggesting its sustainable return to levels consistent with price stability. Against this backdrop, there is room for further monetary policy normalisation, with additional policy rate cuts during 2025.

The fiscal stance is projected to turn expansionary in 2025, due to increased RRF-backed public investment. Net of this impact, the fiscal stance is estimated to be neutral and therefore consistent with monetary policy objectives.

Thanks to the country's favourable fiscal position, adjustment needs under the new EU economic governance framework are limited. According to the MTP, the cumulative fiscal adjustment (in terms of structural primary balance) that is required over the 2025-2028 period in order to meet all sustainability criteria of the new fiscal rules is estimated at just 0.4 percentage point of GDP (or 0.1 percentage point of GDP per year). So as to achieve this small adjustment, the average annual growth rate of nationally financed net primary expenditure must not be higher than 3.4% (2025: 3.7%; 2026: 3.6%; 2027: 3.1%, and 2028: 3.0%).

Fiscal aggregates are expected to remain robust in 2025. Based on available data and the policy measures announced so far, the Bank of Greece forecasts a **primary surplus** of 2.6% of GDP and a **budgetary deficit** of 0.4% of GDP, well below the 3% benchmark under the Stability and Growth Pact. This forecast has taken into account fiscal measures aiming to strengthen disposable income, reduce social inequalities and address social issues, such as adverse demographics and the housing crisis, as well as the impacts of natural disasters. At the same time, account has been taken of a projected increase in revenue from taxes and social security contributions, reflecting continued economic growth and a new increase in the minimum wage, as well as a moderation in primary expenditure growth (within the limits that ensure compliance with the new EU fiscal rules).

Public debt is projected to continue declining, although at a weaker pace. The public debt-to-GDP ratio is estimated to decrease further to 144.4% of GDP in 2025, supported by the ongoing recovery of economic activity, which should maintain the strong dampening effect of nominal GDP. However, the rate of decline in public debt is expected to weaken (9.4 percentage points of GDP) compared with the past years, because of an anticipated smaller primary surplus and a reduced use of cash reserves, which offset the slight acceleration in the GDP deflator. In

the medium term, provided that fiscal targets are met and EU funding is effectively utilised, public debt should continue its steady downward path, declining by a cumulative of 12.1 percentage points of GDP in 2026-2027. These forecasts satisfy the sustainability criteria of the new fiscal framework with a safe margin, overshooting by a wide mark the minimum average annual reduction (1 percentage point) required for countries with a debt above 90% of GDP.

In 2025 bank borrowing costs for the domestic private sector are expected to decline further, as a result of the ongoing pass-through of policy rate cuts. This positive development is supported by the improved fundamentals of domestic (significant and less significant) banks and the Greek economy's favourable outlook. On the other hand, increased demand for lending and a possible rise in medium-term bond yields are set to push up bank interest rates, partly limiting the gains from lower policy rates.

The outlook for bank credit to the private sector for 2025 is positive. The expected further decline in key ECB interest rates along with the robustness of the Greek economy should gradually boost demand for new loans by firms and households. At the same time, bank credit supply should strengthen through the co-funded schemes of the NSRF (2021-2027), the RRF, as well as the financing tools of the EIB Group and the HDB.

In parallel, deposit demand is expected to evolve in lockstep with GDP and household disposable income growth. However, depositors' shift towards alternative investments should keep denting bank deposit growth, especially if the differential between the returns on these assets and bank deposit rates widens.

The outlook for the Greek banking sector remains favourable, owing to the upgrade of banks' credit ratings and improvements in bank fundamentals. The further upgrade of Greece's sovereign credit rating to levels above the investment grade threshold, paired with a resilient domestic economy, contributes to positive ratings for the banking sector. Greek banks' improved loan portfolio quality, stronger capital adequacy and profitability, as well as sustained high liquidity levels work in the same direction. On the other hand, further reductions in interest rates are estimated to have a limited impact on bank profitability.

5 SOURCES OF RISK AND UNCERTAINTY

Risks to the global economy in 2025 remain significant, enveloping the outlook for growth and inflation with further uncertainty. The ongoing geopolitical tensions, military conflicts, geoeconomic fragmentation and rising trade protectionism, spearheaded by US tariff policies and major trading partners' retaliatory measures, are adding to uncertainty about the future path of the world economy. These developments threaten economies' resilience, dampening global trade and investment, and heighten the risks of a resurgence in inflationary pressures and a global economic slowdown. As a result, the current projections for the world economy are surrounded by a high degree of uncertainty, as it is not yet possible to fully assess the impacts of recent developments.

Geopolitical tensions and uncertainty about the trade policies pursued by major economies compound the risks to global trade. Since the first quarter of 2025 the United States have imposed tariffs on major trading partners, including Canada, Mexico, China and the EU, forcing the affected economies to retaliate. In the event of a further escalation, major challenges include possible global supply chain disruptions, reduced trade flows, increased economic uncertainty and a global economic slowdown.

Fiscal policy worldwide is facing severe challenges. Over the medium term, despite the need for increased public investment in critical sectors – such as the green and the digital transition,

national security and productivity growth – many economies are required to implement fiscal adjustment policies with a view to ensuring the sustainability of public debt and the build-up of fiscal buffers against possible future crises. At the European level, the implementation of structural reforms and the stimulation of productive investment in research and innovation are vital if productivity growth and competitiveness are to increase. In the same vein, adherence to multilateral cooperation and international trade rules are crucial for effectively addressing global challenges and bolstering stability.

In 2025, monetary policies globally will be affected by a varied and volatile economic environment, in which central banks are called upon to strike an appropriate balance between the need to maintain their credibility and the need to support economic activity. Cross-country divergence of inflation and growth prospects adds to economic uncertainty and complicates monetary policymaking. There is a growing divergence in the monetary policy outlook between the euro area and the United States, as investors expect more interest rate cuts by the ECB than by the Fed in 2025. Against this background, global monetary policy cycles are expected to be less synchronised, as central banks need to balance the pursuit of their inflation targets against the management of the impact on energy costs and import prices from trade tensions and the imposition of new tariffs. The risk of a resurgence in inflation or inflation expectations could slow or reverse the process of monetary policy normalisation, with negative implications for fiscal sustainability and financial stability. On the other hand, a prolonged restrictive monetary policy stance weighs on vulnerable sectors of the economy. In addition, geopolitical tensions and heightened volatility in financial markets are posing new challenges, while the rise in euro area bond yields makes financing conditions even tighter. In this increasingly complex environment, in order to remain credible, monetary policy needs adequate flexibility and agility, so as to ease uncertainty and bolster macroeconomic stability.

Mounting uncertainty about monetary policy, especially in the United States, increases market volatility and creates an unstable international financial environment. The upward revision of investors' inflation and interest rate expectations in the United States has led to a significant increase in US federal bond yields, dragging along government bond yields in the euro area, despite the ECB's interest rate cuts. Meanwhile, weak growth prospects and persistently high fiscal deficits in some European economies make their borrowing conditions more vulnerable to market developments. Recent geopolitical and trade tensions, such as tariff announcements by the United States, caused large swings in equity markets, revealing the sensitivity of investor sentiment. Although financial conditions have improved, they are still sensitive to adverse developments that could compromise the euro area economic outlook. Increased volatility and asset overvaluation in a number of sectors exacerbate the risk of sharp market swings, underscoring the uncertainty surrounding investor expectations.

The mutable environment related to US, Chinese and EU trade policies is expected to add to exchange rate volatility in 2025. Geopolitical and trade tensions, compounded by limited import substitution for raw materials and intermediate goods, will affect exchange rates by provoking relative price divergences depending on the composition of trade in each economy.

The euro area economy is facing a number of upside and downside risks to growth in the coming years. The recent downward revision of the ECB's projections about GDP growth in the euro area reflects the strong impact of widespread uncertainty. More specifically, downside risks include: (i) prolonged geopolitical tensions and the ensuing supply chain disruptions and energy price volatility; (ii) the lagged effects of past monetary policy tightening, which may dampen consumption and investment more than currently expected; (iii) fiscal adjustment efforts in some Member States, which could further dent demand; (iv) the impacts of US trade tariffs, which might disrupt trade flows more severely than anticipated, thereby weighing on exports, especially in critical industrial areas; and (v) lasting structural weaknesses, such as low productivity, reduced competitiveness and demographic challenges. On the upside, risks include: (i) a stronger-than-

expected recovery in domestic demand, due to the resilience of the labour market and rising real incomes; (ii) a faster rebound in global trade and investment; (iii) higher-than-projected foreign demand from major trading partners, which could provide additional support to euro area exports; and (iv) an acceleration in the digital and the green transition, potentially leading to higher productivity and supporting a more sustainable long-term growth. On balance, the euro area economic outlook remains uncertain, relying on the interplay between these factors.

The outlook for euro area inflation is subject to significant upside and downside risks, adding to uncertainty about its future path. On the one hand, the main upside risks include: (i) an unexpected rise in energy prices and transport costs, as well as a weakening in global trade caused by geopolitical tensions; and (ii) possible upward pressure on food prices from climate change-related extreme weather events. On the other hand, weaker-than-expected demand, due to a worsening international environment or declining confidence, as well as longer-lasting effects of restrictive monetary policy are seen as downside risks. Besides, an aggravation of global trade frictions could raise volatility and exacerbate uncertainty about the path of inflation.

For the Greek economy, maintaining strong growth rates and accelerating real convergence towards the EU average are the key challenges. The risks surrounding the GDP growth forecast are mainly tilted to the downside and relate to: (i) the uncertainty surrounding global trade as a result of trade protectionist policies; (ii) worsening geopolitical tensions and their implications for the world and the European economy; (iii) a lower-than-anticipated rate of absorption and utilisation of RRF funds; (iv) the increasing frequency and severity of climate-related natural disasters; and (v) a tighter labour market and stronger wage pressures.

Challenges to the labour market persist. The drop in the unemployment rate limits staff availability, leading to increased labour market tightness. In several important sectors of the economy, such as tourism, manufacturing, construction and the primary sector, firms find it difficult to recruit workers with the desirable skills, adding to upward wage pressures. Furthermore, despite the considerable fall in unemployment in the past few years, a number of labour market distortions persist, with female, youth and long-term unemployment rates remaining significantly above the EU averages.

The improvement of the current account balance is subject to significant uncertainties and risks. The most important risk relates to a potential weakening in global demand and the imposition of tariffs by the United States, which may dampen the anticipated increase in exports in 2025. Additional risks are associated with adverse geopolitical developments, a rise in fuel prices and a resurgence of inflationary pressures. At the same time, tourist arrivals and travel receipts could be negatively impacted by factors such as: (i) political instability in large European countries that constitute main countries of origin of visitors; (ii) higher transportation costs; and (iii) the recent earthquake activity in the Southern Aegean.

The US tariffs imposed on EU imports are expected to have a limited direct impact on the Greek economy. The small share of Greek exports to the United States (around 5% in 2024) and the composition of goods exports suggest a mild impact on the country's foreign trade. With regard to shipping, the consequences are expected to be limited for the key sectors, with the exception of the container ship sector, which is expected to be harder hit. With safety in the Red Sea being gradually restored, the return of sea transport to normalcy should be easier. This notwithstanding, US tariffs on the EU are expected to have an indirect effect on the Greek economy, via slower growth in the euro area and higher uncertainty, impacting on exports and investor sentiment.

Turning to the Greek real estate market, there are certain challenges that could weaken its momentum in 2025, despite positive expectations. Conditions of geopolitical uncertainty, international economic and political developments and high construction costs are weighing on

the investment climate. Besides, the expected changes in the legislative framework on the construction and development of new properties are creating additional risks to the market, in particular its commercial segment.

The medium-term planning of fiscal policy should incorporate risk assessment to ensure economic resilience in times of crisis. The accumulation of adequate fiscal buffers over time is an integral part of a risk management strategy, capable of shielding the economy in times of crisis. Such a fiscal policy framework should: (i) encourage the build-up of buffers, even when debt sustainability is not directly compromised; and (ii) set more ambitious fiscal adjustment targets, while at the same time avoiding a procyclical policy that would act as a drag on economic activity.

Risks to the sustainability of Greek public debt remain contained over the medium term, as debt appears to be greatly resilient even to adverse scenarios. The evolution of public debt and gross financing needs shows little variation between alternative adverse scenarios and the baseline scenario of the Bank of Greece. Over the medium term, the likelihood of a reversal in the downward course of the debt-to-GDP ratio is estimated to be slim, as is the likelihood of gross financing needs exceeding the 15% and 20% of GDP limits. This resilience is largely due to the favourable repayment profile of official sector debt, which accounts for the bulk of total debt, coupled with past hedging swap contracts, which locked in low interest rates for a large part of the debt. Yet for debt sustainability to be maintained, constant adherence to the achievement of fiscal targets and an effective use of available European resources are required.

In the long term, however, there is increased uncertainty, and fiscal prudence and responsibility are needed in the face of growing fiscal challenges. Commitment to a fiscal position that ensures long-run sustainability is vital, as an increase in borrowing costs and slower growth rates could dampen the favourable contribution of the snowball effect. As a consequence, to keep debt on a downward trajectory, prudent fiscal management is warranted. Besides, it should be stressed that the current favourable characteristics of accumulated debt are not permanent. The gradual refinancing of official sector debt on market terms will increase the exposure of Greek government debt to interest rate risk, market risk and refinancing risk, limiting the potential for fiscal policy relaxation. Therefore, the period ahead provides a critical window of opportunity to rapidly reduce public debt. Safeguarding fiscal credibility and utilising EU resources are central to tapping this opportunity. Meeting these targets will not only ensure the maintenance of investment grade status, but also contribute to further gradual improvements in Greece's sovereign credit rating.

Lower interest rates are a major challenge to the profitability of Greek banks, reducing the share of net interest income and compressing the net interest margin. With the gradual decline in ECB policy rates, banks are expected to adjust lending rates accordingly, which may lead to lower interest income, especially if this adjustment is symmetric to past hikes. Despite a potential increase in outstanding loans, as lower borrowing costs encourage credit growth, shrinking interest income is likely to more than offset gains from the expansion of the loan portfolio. This in turn may put pressure on banks' operating results. Against this background, Greek banks are called upon to calibrate their strategies with a view to reducing the sensitivity of their financial results to an environment of falling interest rates, diversifying their income sources and safeguarding sustainable profitability.

Adjusting to the revised "Solvency II" framework is a key challenge for the private insurance market, despite the introduction of improvements to support the sector's sustainability and robustness. While the new framework reduces supervisory requirements and the administrative burden on smaller insurance undertakings in line with the principle of proportionality, increased requirements for risk management and compliance with new regulations, such as the liquidity risk management and sustainability risk plans, are putting pressure on larger undertakings. Fur-

thermore, the need for enhanced cooperation between supervisory authorities in the management of cross-border activities, as well as the incorporation of long-term climate scenarios into risk assessment make compliance more complex. In this context, timely adjustment to the new institutional framework, high capital adequacy, introduction of new systemic risk management mechanisms and effective implementation of macroprudential tools are key to insurance undertakings' competitiveness and resilience going forward.

Enhancing the pension system through Occupational Pension Funds is an important challenge for the private insurance market, with the Bank of Greece playing a leading role in their regulation and supervision. The goal is to make Occupational Pension Funds an important pillar for tackling the consequences of an ageing population and adverse demographic developments. The assumption of their supervision by the Bank of Greece as from January 2025, replacing the former tripartite scheme, is expected to ensure greater flexibility, stability and transparency. A broader coverage and the build-up of capital buffers through Occupational Pension Funds require sizeable investment and effective risk management. In this context, the fast and smooth adaptation of Occupational Pension Funds to the new regime should contribute to a sustainable pension system and economic growth in Greece.

6 POLICY RECOMMENDATIONS

In an environment of heightened uncertainty, credible medium-term economic policy planning is crucial. In order to strengthen the resilience of the Greek economy and effectively address its medium-to-long-term challenges and structural weaknesses, economic policy must focus on the following key areas:

- ***Reforms***

Developing a sustainable growth model for the Greek economy is vital for maintaining strong growth rates in an uncertain international environment. To achieve this, the following actions are warranted: (i) continuation of reforms for enhancing the country's competitiveness and attractiveness as an investment destination in key areas, such as cutting red tape in the public sector, increasing competition, by removing all entry barriers for newcomers into business sectors, and speeding up the delivery of justice; (ii) full utilisation of European and national resources for investment, e.g. in infrastructure related to the green transition and climate resilience, as well as in infrastructure improving the quality of life, such as in transportation, healthcare and education; (iii) promotion of research, innovation and human capital skills, so as to reverse the long-run trend of declining productivity; and (iv) further strengthening the economy's extroversion, by increasing the production of tradable goods and services, which will contribute to the gradual correction of structural imbalances in the current account.

Boosting investment in high technology is a strategic priority for upgrading the Greek economy and increasing high-skilled employment. The development of infrastructure such as data centres, fibre optics networks and green energy grids amplifies the role of Greece as a regional hub of digital infrastructure. The finalisation of the legal framework on the operation of data centres as well as investments by large high-tech companies will bring direct and indirect growth-enhancing benefits, supporting technological progress and assisting the "brain retain and regain" effort. Attracting flagship investment projects, which will transfer knowhow and new technologies into the country, is expected to upgrade its production model, raise its competitiveness and strengthen its growth dynamics.

The current account deficit remains a major imbalance of the Greek economy and requires targeted interventions for its reduction. More than half of Greek exports depends on just a few sectors – travel services, sea transport and fuels. At the same time, exports' high import

content lowers their contribution to the current account balance. To unwind this imbalance, it is necessary to expedite reforms, increase import substitution, utilise RRF funding, expand export sectors and deploy high-technology productive activities. In addition, domestic saving (by households in particular) must be incentivised so as to close the saving-investment gap, which weighs on the balance of payments.

Further expansion of the tourism sector requires targeted actions geared towards improving competitiveness and upgrading the services offered. Crucial to this are improving price competitiveness vis-à-vis other tourist destinations, upgrading infrastructure and supporting investment that helps to modernise tourist accommodation and attract higher-quality visitors.

Addressing the housing crisis warrants coordinated interventions aimed at increasing the affordability and the supply of residential properties. Strong house price growth in recent years has had a negative impact on the affordability of housing for middle- and lower-income households. The latest legislative interventions limiting investor demand, such as measures regarding short-term property rentals and Golden Visas, aim to release housing stock for primary residence. In parallel, cutting red tape and resolving chronic institutional issues in property transactions and development are key to increasing the supply of new housing. Of paramount importance is also a national strategic planning which would include actions to support the regions, decongest large urban centres and ensure a more evenly balanced demand for housing across the country.

Enhancing the structural competitiveness of the Greek economy hinges upon targeted interventions in key areas. These include simplifying the regulatory framework for doing business; boosting investment to upgrade the quality of the production base; revamping vocational education and training to address labour shortages and skills mismatches; supporting the green and digital transitions; and reforming the judiciary system. In this context, the elimination of the remaining market entry barriers in several business sectors is set to lower prices, increasing competition, as well as the production of tradable goods and services, with positive spillovers to the current account.

In the long run, a reorientation of social policy towards a "social investment" model is deemed necessary to strengthen human capital and thus tackle poverty and inequality in a proactive manner. Strengthening education and healthcare can contribute to social cohesion and ultimately lead to sustainable economic growth.

- ***Labour market***

Raising labour force participation is crucial for safeguarding the viability of the social security system, as demographic ageing weighs on population structure and limits labour supply. Increasing employment, especially of youth and women, calls for the adoption of measures that would facilitate work-life balance, such as upgrading early childhood education and elderly care or further developing flexible forms of employment, e.g. part-time and remote work. Furthermore, the reform of the tax system and the gradual overhaul of the unemployment benefit system can augment labour incentives. Moreover, reducing incentives for early retirement would make it easier for workers to rejoin and remain in the labour market. In parallel, creating more jobs in high-value-added sectors and professions, attracting foreign investment and increasing the openness of the Greek economy are key to raising labour market participation.

Addressing labour market tightness is crucial for maintaining the growth momentum of the Greek economy and enhancing competitiveness. Declining unemployment and rising employment have limited the availability of workers, with firms experiencing shortages in both skilled and unskilled labour. The tightening of the labour market over the past few years is likely to hamper the effort of the Greek economy to further catch up with the euro area average. In order

to reduce tightness, headcount employment must be raised, while the existing labour force, unemployed persons in particular, must be upskilled to meet firms' needs. The rapid penetration of artificial intelligence into the labour market entails the risk of wider skills mismatches. To close this gap, new educational and training programmes are needed for both employed and unemployed persons. In general, vocational training and continuous upskilling of workers and long-term unemployed persons must be strengthened. At the same time, it is necessary to implement effective policies for the integration of immigrants into the labour market and particularly in sectors and activities with serious labour shortages, such as agriculture, construction and tourism. What is also needed is the establishment of an institutional framework and the provision of competitive pay and incentives which would help attract skilled workers from abroad, with a view to reversing the brain drain that was observed during the economic crisis. In addition, mechanisms should be put in place to match the skills of the labour force with the needs of the labour market. Finally, policies for tackling undeclared labour and further reducing wage costs (by lowering or subsidising social security contributions) are needed so as to support employment and enhance the competitiveness of Greek firms.

- ***Fiscal policy***

In an environment of heightened uncertainty, credible medium-term fiscal policy planning is crucial. Geopolitical tensions, geoeconomic imbalances, persistently high – albeit declining – core inflation and constantly changing international economic relations call for a prudent and flexible fiscal strategy. With price stability, financial stability and fiscal sustainability as their primary objectives, monetary and fiscal policies must remain closely aligned and flexible. Their efficient interaction should strengthen the stabilisation of euro area economies, particularly at a time of rising global protectionism.

The year 2025 marks the launch of the EU's new economic governance framework, which focuses on public debt reduction and sustainability. The new fiscal rules place emphasis on containing public expenditure growth, envisaging that any fiscal space will be exclusively used to either build up buffers or reduce public debt. Meanwhile, any extraordinary fiscal measure on the expenditure side should be financed by revenue-increasing measures of an equal size. For Greece, maintaining fiscal credibility and complying with the revised framework is of vital importance. Sustaining primary surpluses and accumulating fiscal buffers must remain top priorities. Under such a binding framework, national fiscal policy should also focus on reforms that ensure the sustainability of public finances.

Combating tax evasion and broadening the tax base must continue to be key priorities of fiscal policy. This will ensure a fairer and more proportional distribution of the tax burden. For example, the continuous upgrading of the electronic tools of the Independent Authority for Public Revenue (AADE), coupled with other recent reforms, is bearing fruit and is expected to further strengthen tax compliance and public revenue. In 2025, it is crucial to complete the 2024 actions that have led to the containment of tax evasion, improvement of tax compliance and further automation of the tax collection process. Key actions include: (i) reporting of revenue/expenses on the myData platform by all firms; (ii) universal application of digital clienteling; (iii) mandatory use of a digital consignment note; (d) universal application of digital invoicing. At the same time, the automation of tax audit and collection procedures through AI applications, the development of new systems to monitor arrears and the use of customised software to combat the smuggling of marine fuel will enhance tax transparency and collectability.

To enhance tax compliance, a comprehensive system of incentives and targeted policies is needed. The aforementioned measures can deliver even greater gains if combined with tax incentives that encourage consumers to use electronic payments in high tax evasion sectors, as well as with a review of the current tax exemptions based on their growth-enhancing potential and social efficiency. The implementation of a modern and stricter tax compliance framework

can ensure a steady increase in tax revenue, enhance tax fairness and contribute to the country's fiscal stability and economic growth in the long term.

On the expenditure side, the establishment of regular reviews of public spending is instrumental in improving expenditure efficiency and ensuring an optimal allocation of fiscal resources. The dissemination of the review findings would allow to identify expenditures with low social and financial returns, facilitating their re-design and channelling to more productive and targeted uses. This would enhance transparency, accountability and efficiency in fiscal management.

The effective use of RRF funds is crucial for strengthening economic resilience in a constantly changing environment. Given the limited lifespan of the NGEU recovery instrument, there is a need to press ahead with the implementation of investment plans and necessary reforms, with a view to maximising the positive effects of NGEU on economic growth and productivity in the coming years. The timely absorption of EU funds is key to mobilising private investment. Special emphasis should be placed on the implementation of projects in strategic areas, such as green energy, environmental protection, digital technologies and artificial intelligence, so as to enhance the country's competitiveness and sustainable growth.

The ReArm Europe plan offers Greece a strategic opportunity to strengthen its domestic defence industry and productive base. The activation of the national escape clause under the Stability and Growth Pact in the context of the ReArm Europe initiative only refers to defence investment expenditure. Greece, already spending about 3% of its GDP on defence (above NATO's 2% of GDP benchmark), could benefit from joint EU funding of defence programmes and military equipment. At the same time, to take full advantage of the ReArm Europe plan, an active participation of the Greek defence industry in international co-production partnerships is required, thereby supporting the country's military self-sufficiency and boosting exports. In parallel, higher defence spending should be channelled into well-designed, growth-enhancing investment projects – in infrastructure, energy, research and innovation – with positive spillovers to other sectors of the economy. Overall, a more effective use of defence spending can create a more solid and resilient productive base.

Adherence to reforms and fiscal prudence is critical for further upgrades in Greece's sovereign credit rating. Improved public finances and strong growth rates have already led to the assignment of positive ratings by international credit rating agencies, strengthening the position of the Greek economy. However, amid heightened global uncertainty, rating agencies are expected to be more cautious in their decisions, which makes it all the more necessary to continue reforms and safeguard fiscal stability. Enhancing the institutional parameters and improving the current account balance are of paramount importance, as these factors can help sustain the upward trend in credit ratings. Pressing ahead with these policies would increase investor confidence and thus ensure the long-term resilience of the Greek economy.

- ***Banking sector***

Developments in the global macro-financial environment affect the Greek economy and the banking sector, so it is crucial for domestic banks to sustain their profitability. Bank profitability is strengthened by the upgrades in Greece's sovereign credit rating, as well as banks' ratings, leading to higher demand for Greek bank bonds and reduced funding costs on international markets. Meanwhile, the improved fundamentals of the banking sector pave the way for further upgrades, bolstering the sector's stability and resilience against exogenous shocks.

To remain profitable, Greek banks must take full advantage of the new funding instruments and diversify their income sources, so as to reduce their reliance on net interest income. First of all, they should increase the supply of credit, especially to businesses, through the

available EU funds, such as the Recovery and Resilience Facility (RRF). Next, the increase in fixed-rate loans can in the longer term provide banks with a stable income stream that is less sensitive to future interest rate changes. Furthermore, banks can turn to other sources of core profitability, such as the promotion of bank assurance products and investment banking services, with a view to increasing their non-interest income. The above strategies, coupled with an optimisation of operating costs and more efficient asset management, should enable banks to sustain their profitability, despite the challenges posed by declining interest rates.

Further improving the quality of banks' regulatory capital is another major challenge for the Greek banking sector. Higher profitability will also help banks to accelerate the amortisation of deferred tax credits (DTCs) and strengthen their capital base, which will eventually make them more capable of continuing to finance the real economy.

- ***European Union***

Strengthening the EU's competitiveness is key to addressing the growing geopolitical and technological challenges after the pandemic and energy crises. This need was also highlighted in the Draghi report, which outlines the competitiveness challenges posed by shifts in global trade, geopolitical developments and technological transformation. Such challenges call for an overhaul of Europe's strategy, most notably by closing the innovation gap vis-à-vis the United States and China; promoting the energy transition; increasing strategic autonomy; and bolstering security and defence. The European Commission's Competitiveness Compass sets a clear time schedule and envisages concrete actions to enhance the EU's competitiveness, such as simplifying the regulatory framework, facilitating access to the single market, increasing financing, upgrading job quality and better policy coordination at the European level. In addition, the Letta report contains proposals on deepening the EU's single market, with a focus on strengthening the capital market, promoting the green and digital transitions, supporting innovation and improving the investment environment.

Bolstering the resilience of the euro area economy and its financial system to future shocks, especially on the supply side, requires faster progress towards deeper European integration and better policy coordination. Establishing a fully functional Capital Markets Union and completing the Banking Union, as part of the broader strategy for a Savings and Investment Union, are expected to facilitate the mobilisation of investment resources that are required for addressing the EU's competitiveness challenges. In tandem with the development of a concrete strategy for a Fiscal Union, the initiatives towards deeper European integration would visibly improve monetary policy cohesion and effectiveness, reinforcing its stabilising role.

In the context of promoting the EU's defence autonomy, the European Council took initiatives which mark a shift towards expansionary fiscal policies. The ReArm Europe plan aims to increase the EU's defence capabilities through major investments and structural changes. The plan envisages the mobilisation of up to EUR 800 billion, of which EUR 150 billion will be made available under a new financial instrument called SAFE (Security Action for Europe), which will provide long-term loans for common defence procurement. Furthermore, the activation of the national escape clause under the Stability and Growth Pact is recommended for the 2025-2028 period, allowing Member States to increase their defence expenditure by up to 1.5% of GDP per year without violating the fiscal rules. Moreover, the plan provides for the EIB's participation as well as the mobilisation of private funds to support defence and security projects.

It should be noted that the temporary easing of the "debt brake" in Germany marks a historic shift in the country's fiscal philosophy, aiming to implement major investment projects. The historic agreement reached in the German Bundestag on the suspension of the debt brake rule paves the way for fiscal expansion of up to EUR 500 billion, with a view to stimulating the economy's recovery and reinforcing its geopolitical resilience. This new debt deal allows Ger-

many to finance critical investment in defence, green growth and infrastructure. This development represents a break from German fiscal orthodoxy and is anticipated to have significant positive spillovers to Europe's economic stability, supporting a joint European response to geopolitical and economic challenges.

The increase in defence expenditure in Europe is expected to have a positive growth impact, with mild inflationary pressures and a short-lived deterioration in fiscal indicators. Defence investment contributes to economic growth by increasing demand for military equipment, mobilising domestic industries and raising employment, especially when accompanied by policies that promote innovation and enhance defence capacity. Covering defence needs with own resources, so as to eliminate import dependence, would be beneficial to the domestic productive base. Meanwhile, strains on supply chains and increased demand for raw materials are likely to exacerbate inflationary pressures over the medium term. On the fiscal front, higher expenditure is expected to weigh on debt, even though flexibility in the application of fiscal rules and European co-financing partly mitigate adverse effects, particularly for high-debt countries that already invest heavily in defence.

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In an international environment of mounting new uncertainties, the continuation of the reform effort will be catalytic for maintaining economic stability and further bolstering the resilience of the Greek economy. Geoeconomic challenges, technological advances, green transition and the utilisation of artificial intelligence call for an adaptive economy, capable of withstanding exogenous shocks, thereby ensuring strong growth rates in the medium term. To this end, economic policy must maintain and step up its reform impetus, as well as foster broader social and political support to the necessary reforms.

Implementing the necessary reforms and consolidating trust in the institutions are the cornerstone of sustained economic stability and prosperity. The implementation of the recommended structural reforms is crucial for raising the economy's productivity, potential GDP and competitiveness. At the same time, trust in the institutions helps attract investment, supports the labour market and contributes to social cohesion. The synergy between reforms and strong institutions underpins economic resilience and sustainable growth rates amid global uncertainty.

Europe is confronted with crucial challenges to its international economic standing and stability. Slowing productivity, demographic pressures, market rigidities and weak investment momentum erode the competitiveness of the European economy. Furthermore, geopolitical instability, energy dependency and delayed green and digital transitions undermine its resilience. Such shortcomings, compounded by fragmented financial markets and inadequate integration and coordination in strategic sectors such as defence and innovation, exacerbate risks, making Europe vulnerable to external shocks and competitiveness losses relative to other major economies.

The current global upheavals, while posing a threat, also serve as a wake-up call for Europe. To address the above challenges, immediate and coordinated action is required for deepening European integration and bolstering the EU's strategic and defence autonomy. Proposals have already been formulated towards the completion of the Banking Union and Capital Markets Union, the creation of a permanent fiscal capacity at the EU level, the speeding up of the green and the digital transition, the promotion of innovation and the strengthening of defence. Besides, Europe has to revise and simplify its regulatory framework and to press ahead with deepening the single market and reinforcing its international trade alliances. The effective implementation of these initiatives can enhance the resilience of the European economy, laying the groundwork for sustainable growth, security, sound democratic institutions and long-term prosperity.

Box 1

ARTIFICIAL INTELLIGENCE: MACROECONOMIC IMPACT AND RISKS

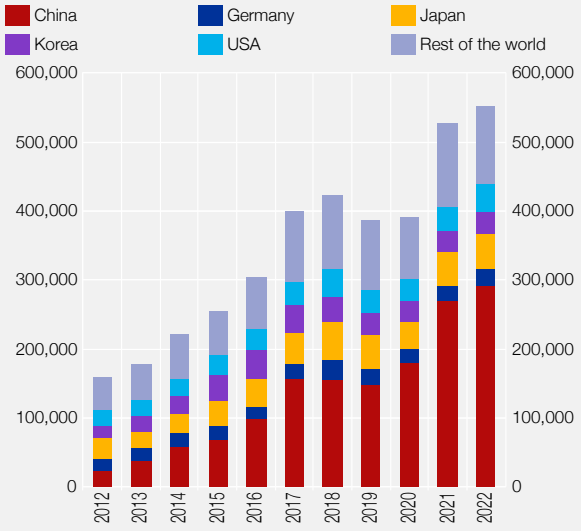
Productivity in Europe has slowed down significantly over the past 40 years, with the productivity gap of the euro area vis-à-vis the United States and China widening after 2009,[1,2] a trend that further accelerated following the COVID-19 pandemic.

This box reviews recent developments in the integration of artificial intelligence (AI) into the production process, explores its potential impact on productivity, growth, inflation and the labour market, and analyses the resulting policy challenges. AI is a set of IT technologies that mimic elements of human behaviour and ingenuity, such as learning, problem solving, planning and creativity. It has multiple applications across economic sectors and social activities and there is no single, universally accepted definition of it. As a result, there is as yet no uniform measurement methodology, making it difficult to assess its uptake and, thus, to quantify its economic impact with any certainty.

AI applications globally and the EU institutional framework

AI has gradually penetrated various aspects of economic activity and has triggered structural changes in several sectors over the past decade. Moreover, the use of AI extends to social and cultural life, although its impact is not always directly measurable in economic terms. The increasing integration of AI technologies into current production processes, with the inclusion of automated, programmable machinery (robots) carrying out various tasks in industrial settings (see Chart A), has fuelled intensive efforts to innovate, research and develop this technology globally. Over time, investing in AI has been absorbing an increasing proportion of total investment worldwide, leading to a massive surge in investment in 2023 (see Chart B). International R&D on AI has grown exponentially over the past decade, with China and the United States leading the way; however, both innovation efforts and the final number of AI patents granted appear to have been declining since 2021 (see Chart C1). In the EU, the largest number of AI patents is registered in Germany and France, while the corresponding number for Greece is low but has been increasing with a lag since 2021 (see Chart C2).

Chart A Number of industrial robots installed worldwide (2012 - 2022)



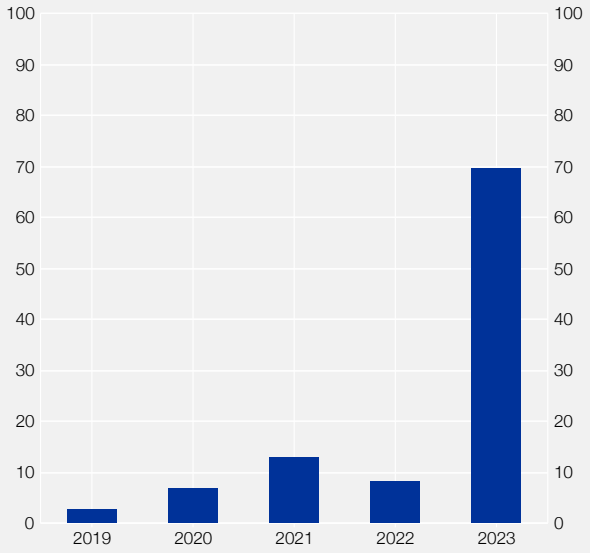
Sources: International Federation of Robotics; Stanford Institute for Human-Centered Artificial Intelligence (HAI); AI Index Report 2024; and Bank of Greece calculations.

The ability of AI to analyse large datasets has revolutionised decision-making processes in sectors such as finance, in terms of credit scoring,[3] marketing, i.e. the analysis of consumers' behaviour and preferences in order to optimise targeting strategies,[4] and healthcare, among other things for early diagnosis, development of new medicines and personalisation of treatment schemes.[5] In addition, AI has facilitated the development of innovative

1 See Draghi, M. (2024), "The future of European competitiveness. A competitiveness strategy for Europe".
2 See Bank of Greece, *Monetary Policy – Interim Report 2024*, Box II.3, Chart A, December 2024.
3 See Lessmann, S., B. Baesens, H.-V. Seow and L.C. Thomas (2015), "Benchmarking state-of-the-art classification algorithms for credit scoring: An update of research", *European Journal of Operational Research*, 247(1), 124-136.
4 See Davenport, T.H., A. Guha, D. Grewal and T. Bressgott (2020), "How artificial intelligence will change the future of marketing", *Journal of the Academy of Marketing Science*, 48(1), 24-42.
5 See Jiang, F. et al. (2017), "Artificial intelligence in healthcare: past, present and future", *Stroke and Vascular Neurology*, 2(4), 230-243.

Chart B Share of global investment in generative AI (2019 - 2023)

(% of total investment globally)



Sources: Quid via AI Index (2024); U.S. Bureau of Labor Statistics (2024); OWID; and Bank of Greece calculations.
Notes: Data expressed in constant 2021 US dollars. Inflation adjustment is based on the US Consumer Price Index (CPI). The data likely underestimate total global AI investment, as they only capture certain types of private equity transactions, excluding other significant channels and categories of AI-related spending.

products and services in line with consumers' evolving needs. Examples include applications that personalise consumers' online shopping experience or help prevent fraudulent practices,[6] self-driving vehicles and optimised traffic management systems in the transport sector,[7] as well as interactive leisure experiences.[8]

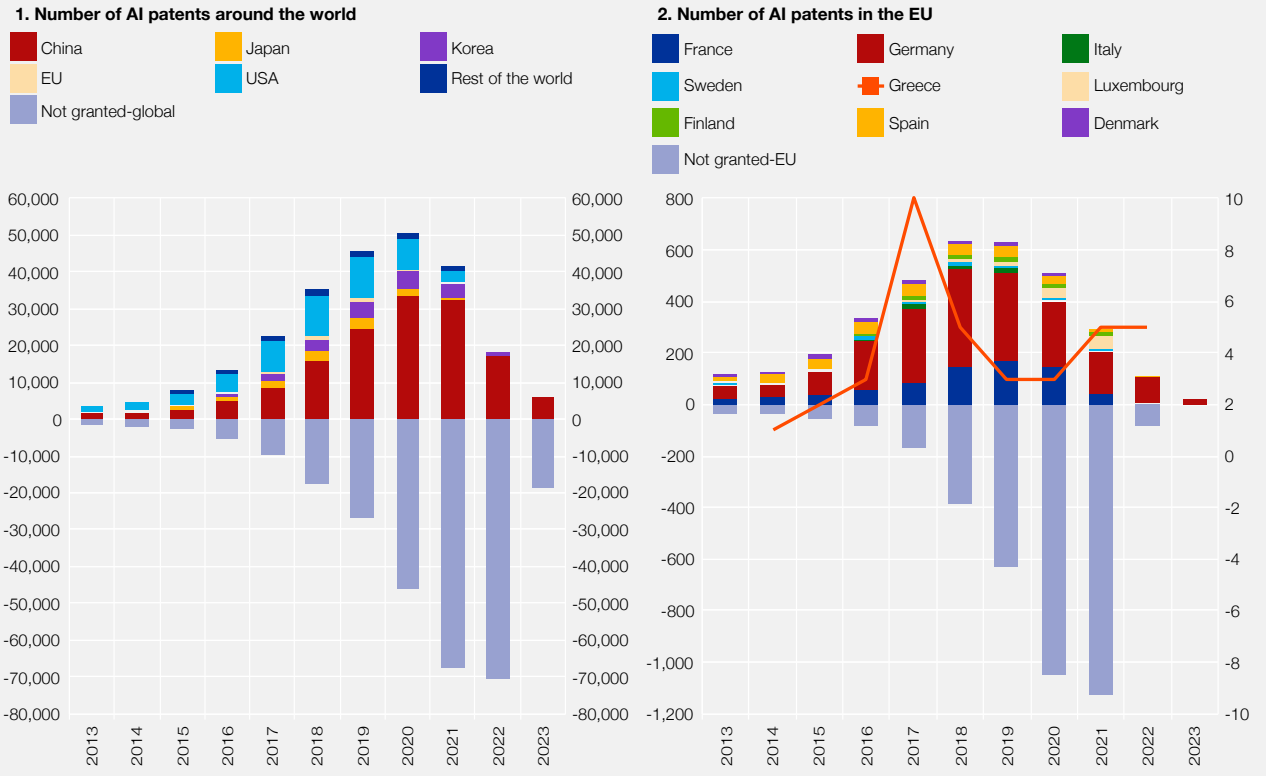
The broad scope of AI created – within the EU – the need for a legislative act regulating AI on the basis of potential risks arising from its ever-increasing use. Regulation (EU) 2024/1689 (EU AI Act) was thus adopted and is the first global comprehensive effort to balance out the benefits and risks of AI by establishing an appropriate legal framework that fosters innovation, while protecting fundamental rights and security. In particular, it categorises AI systems based on the level of risk they pose to society. Systems considered to entail an unacceptable level of risk are prohibited, while high-risk systems are subject to strict regulation. The cross-border nature[9] of this regulation could make it a global standard, significantly affecting the way in which other countries approach AI governance.

AI impact channels on growth and inflation

To quantify the impact of AI in terms of productivity growth, the current academic literature has adopted two alternative approaches. The first perceives AI as a "general purpose technology" (GPT), with horizontal effects on total productivity, similar to those attributable to the extensive development of Information and Communication Technologies or the introduction of electricity into production.[10] Specifically, GPTs are technologies that simultaneously affect several sectors, have been improving steadily and enable innovational complementarities.[11] The second approach to quantification borrows microfoundation elements, divides economic activity into a set of individual production activities (tasks) and looks at how AI can complement or even replace some of them. The macroeconomic impact is then determined by multiplying the share of individual AI-affected tasks in an economy by the average cost-reduction achieved per task due to AI. This process helps quantify the extent to which AI impacts productivity and ultimately contributes to growth.[12]

6 See Ricci, F., L. Rokach and B. Shapira (2011), "Introduction to Recommender Systems Handbook", in: Ricci, F., L. Rokach, B. Shapira and P. Kantor (eds), *Recommender Systems Handbook*, Springer, Boston, MA.
7 See Bojarski, M. et al. (2016), "End to end learning for self-driving cars".
8 See Yannakakis, G.N. and J. Togelius (2018), *Artificial Intelligence and Games*, Springer.
9 Although being an EU regulation, it is expected to have a marked impact worldwide, as companies active in global markets would have to comply with it in order to provide AI products or services in the EU market.
10 See Brynjolfsson, E. and A. McAfee (2014), *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, W.W. Norton & Company.
11 See Bresnahan, T.F. and M. Trajtenberg (1995), "General purpose technologies: 'Engines of growth'?", *Journal of Econometrics*, 65(1), 83-108.
12 The research work by Acemoglu and Restrepo (2018, 2019) and Acemoglu (2024) deviates from the strict concept of microfoundation, although adopting some of its elements. It models the economy as a set of individual tasks produced by the factors of production, i.e. labour and capital. Many of these models, although incorporating different types of tasks (e.g. expert vs. unskilled), still rely on a "representative household" framework. This hybrid approach deviates from the strict principle of microfoundation in the modelling of heterogeneous individuals. See (a) Acemoglu, D. and P. Restrepo (2018), "Artificial intelligence, automation and work", NBER Working Paper No. 24196; (b) Acemoglu, D. and P. Restrepo (2019), "Automation and New Tasks: How Technology Displaces and Reinstates Labor", *Journal of Economic Perspectives*, 33, 3-30; and Acemoglu, D. (2024), "The simple macroeconomics of AI," NBER Working Paper No. 32487.

Chart C Patents granted around the world and in the EU



Sources: Center for Security and Emerging Technology and Bank of Greece calculations.

The full economic impact of AI is likely to materialise over a time horizon of several decades. Current estimates may not fully capture its long-term impact, as is typically the case with any attempt to quantify radical innovations and structural changes in an economy. The relevant literature[13] estimates that the annual impact of AI on productivity ranges from 0.07% to 1.3%, with a median value of 0.68% over the next decade and varying effects across sectors and economies. The most optimistic 50% of the estimates comes from studies that take the first AI impact analysis approach, while the most pessimistic 50% comes from studies that follow the second approach. The positive impact on productivity translates into an acceleration of GDP growth, depending on an economy's level of development. Advanced economies prevail in terms of logistical and technical infrastructure already in place and workforce educational level over less developed economies, which only have a starting-position advantage. The underlying fertile ground lends strong leverage to advanced economies, allowing faster adoption of new technologies and, thus, greater growth benefits. Lastly, it is difficult to identify causality between productivity growth and GDP growth, as productivity is a component of GDP; nevertheless, an interactive relationship between them cannot be excluded.

To quantify the impact of AI on inflation, macroeconomic models incorporate such determinants as productivity growth, labour market dynamics and inflation expectations of both consumers and firms in an econ-

13 For alternative quantification methods, readers may refer to the following studies. See (a) Guerrón-Quintana, P., T. Mikami and J. Nosal (2024), "The macroeconomic implications of the Gen-AI economy"; (b) Aghion, P. and S. Bunel (2024), "AI and growth: Where do we stand?"; (c) Aghion, P., B.F. Jones and C.I. Jones (2018), "Artificial intelligence and economic growth", NBER Working Paper No. 23928; (d) Schoenherr, T., S.M. Wagner and H.C. Pfohl (2020), "The impact of artificial intelligence on gross domestic product", *International Journal of Production Economics*, 225, 107573; (e) Babina, T., A. Fedyk, A. He and B. Yan (2024), "Artificial intelligence, firm growth, and innovation", available at SSRN 4302257; (f) Baily, Martin Neil, James Manyika, and Shalabh Gupta, "US productivity growth: An optimistic perspective," International Productivity Monitor, number 25, spring 2013; and (g) Goldman Sachs (2023), "The economic impact of generative AI: The future of work".

omy.[14] Productivity growth tends to be deflationary by reducing unit labour costs. However, competition in the labour market and the input substitution ratio affect the balance of changes in wages and profits and thus shape final inflationary pressures. The associated energy costs and changes in competition play a significant role in quantifying the impact of AI on inflation. The global surge in energy demand, owing to the computing power needed to maintain increased use of AI, and pricing discretion on the part of businesses, due to real-time analysis of consumer demand and price elasticity, pose upward risks to inflation.

Labour market and artificial intelligence: demand, supply and working experience

The rapid advancement of AI brings profound and multi-faceted changes to the structure and functioning of the labour market. Automation and application of intelligent systems in production processes transform both the demand for and the supply of labour, have an impact on the quality of working experience and reshape the occupational landscape. AI affects labour demand by replacing existing jobs and creating new roles that require high skills and specialisation. Automation primarily affects low-skill occupations[15] in routine-intensive sectors, such as manufacturing, retail and administrative support, owing to the use of robots, self-service cash registers and chatbots.[16] Conversely, occupations requiring human interaction, such as healthcare and cleaning services, remain less exposed.[17]

The risk of job replacement gradually extends to more complex tasks, such as legal analysis and medical diagnoses, thereby increasing the need for continuous learning and upskilling. While automation has led to the creation of new high-skill jobs, particularly in areas such as programming and data analysis,[18] the ongoing development of AI constantly challenges the relevance of skills even in these areas, reducing demand mainly for certain supporting roles. Nevertheless, in these areas AI generally acts in a complementary manner, boosting productivity[19] and enabling workers to focus on more creative and strategic tasks. The human-machine collaboration enhances creativity, improves decision-making processes and facilitates cooperation, leading to more efficient and flexible teams.[20] At the same time, AI opens new career opportunities, especially in areas such as data science, machine learning, algorithm development and cybersecurity. Moreover, progress in the development of self-driving vehicles, smart cities and robotic systems raises new requirements for specialised labour.[21]

According to the International Labour Organisation (ILO), the share of labour exposed to automation is highest in high-income countries, reflecting their more advanced technological systems and multiplicity of industries and activities, while low-income countries are less exposed, due to their high dependence on human labour in sectors

14 A recent study by the Bank for International Settlements (BIS) finds that the inflation response depends crucially on households' and firms' anticipation of the impact of AI on productivity. Unanticipated increases in productivity put downward pressure on prices in the short term, while anticipated increases in productivity push up prices. See Aldasoro, I., S. Doerr, L. Gambacorta and D. Rees (2024), "The impact of artificial intelligence on output and inflation", BIS Working Paper No. 1179.

15 (a) According to a survey by Frey and Osborne (2017), up to 47% of US jobs are at risk of automation, with the greatest threat being identified in administrative and support work. See Frey, C.B. and M. Osborne (2017), "The future of employment: How susceptible are jobs to computerisation", *Technological Forecasting and Social Change*, 114, 254-280. See also (b) Acemoglu and Restrepo (2019), op. cit. and (c) Gmyrek, P., J. Berg and D. Bescond (2023), "Generative AI and jobs: A global analysis of potential effects on job quantity and quality", ILO Working Paper No. 96.

16 See (a) OECD (2024), "How is AI changing the way workers perform their jobs and the skills they require?", *Policy Brief*; and (b) McKinsey & Company (2023), "The economic potential of generative AI: The next productivity frontier".

17 See World Economic Forum (2025), *The Future of Jobs Report 2025*.

18 See Lin, J. (2011), "Technological adaptation, cities, and New Work," *Review of Economics and Statistics*, 93(2), 554-74.

19 The human-machine collaboration, while requiring initial investments and adjustments in businesses, may at first present lower productivity levels; nevertheless, once these changes yield results, productivity increases rapidly. This pattern is called the "productivity J-curve" and means that progress at the outset may appear slower than it is in reality. See Brynjolfsson, E., D. Rock and C. Syverson (2021), "The Productivity J-curve: How intangibles complement general purpose technologies", *American Economic Journal: Macroeconomics*, 13(1), 333-372.

20 See McKinsey Global Institute (2018), "AI, automation, and the future of work: Ten things to solve for"; and World Economic Forum (2025), op. cit.

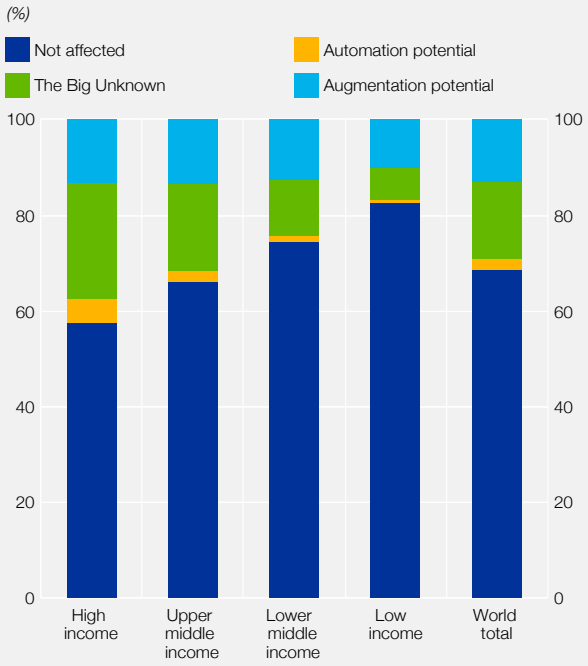
21 See World Economic Forum (2023), *The Future of Jobs Report 2023*; and (2025), op. cit.

such as agriculture and transport (see Chart D).[22] Based on ILO analysis, potential benefits from AI appear to be unevenly distributed, with high-income countries and skill-intensive groups benefiting more, and low-income countries facing constraints due to inadequate infrastructure.[23]

The International Monetary Fund (IMF) estimates that 40% of jobs worldwide will be affected by AI, with advanced economies facing more intense challenges such as the replacement of traditional occupations and the need for labour reallocation. Especially in developing economies, lack of access to upskilling programmes increases the risk of unemployment.[24] This inequality could exacerbate the digital divide and cross-country income disparity.[25] Furthermore, according to the OECD, around 14% of jobs in OECD member countries are at high risk of automation and 32% of workers are likely to see substantial change in how their jobs are performed, while the risk of automation is highest among low-skill jobs.[26]

Interestingly, the World Economic Forum (WEF) report on the future of jobs concludes that, between 2025 and 2030, structural labour market transformation due to broader developments, as well as automation and the uptake of AI, will affect 22% of current jobs. This involves the creation of 170 million new jobs (amounting to 14% of today's total employment) and the offshoring of 92 million jobs (8% of today's total employment), which results in a net benefit of 78 million new jobs (7% of today's total employment), ultimately making a positive contribution to employment.[27]

Chart D Percentage of jobs potentially affected by generative AI, by country-income group



Source: International Labour Organization (ILO).
Note: An occupational group referred to as "The Big Unknown" stands at the junction of automation, meaning that these occupations could either be transformed through job augmentation or suffer displacement by AI.

AI also has positive effects on labour supply, as it contributes to upskilling, improved health and more efficient job matching. In the field of education, technologies such as "AI tutors" improve learning performance, providing students with a tailored experience and enhancing skills such as critical thinking and creativity. Technologies such as immersive learning offer realistic scenarios and simulations, honing these skills in secure environments.[28] In terms of workers' health, AI accelerates medical diagnosis and treatment, reducing absence from work due to health issues, thus resulting in a more productive workforce. As regards finding a job, AI platforms better match labour force skills with labour market needs, contributing to lower unemployment and facilitating transition into new roles through tools that predict future trends.[29]

22 An occupational group referred to as "The Big Unknown" stands at the junction of automation, meaning that these professions could either be transformed through job augmentation or suffer displacement by AI.
23 See Gmyrek, P., J. Berg and D. Bescond (2023), "Generative AI and Jobs: A global analysis of potential effects on job quantity and quality", ILO Working Paper No. 96.
24 See Brollo, F. et al. (2024), "Broadening the gains from generative AI: The role of fiscal policies", IMF Staff Discussion Note No. 2024/002.
25 See Cazzaniga, M. et al. (2024), "Gen-AI: Artificial Intelligence and the future of work", IMF Staff Discussion Note No. 2024/001.
26 See OECD (2019), *Artificial Intelligence in Society*.
27 See World Economic Forum (2025), op. cit.
28 See Dede, C., A. Etemadi and T. Forshaw (2021), "Intelligence augmentation: Upskilling humans to complement AI", *Next Level Lab Brief Series*, The Next Level Lab at the Harvard Graduate School of Education. President and Fellows of Harvard College: Cambridge, MA.
29 See Broecke, S. (2023), "Artificial intelligence and labour market matching", OECD Social, Employment and Migration Working Paper No. 284, OECD Publishing.

AI is reshaping the overall working experience, reducing the burden of routine tasks and improving the accuracy of decision-making. On the other hand, it exacerbates work strain due to algorithmic surveillance, increased adaptation requirements and continuous assessment of workers' performance. In addition, AI widens pay inequalities, as it enhances the remuneration of high-skilled labour, while increasing the risk of displacement or wage stagnation for low-skill jobs.[30,31] At the same time, it intensifies labour market polarisation, raising demand for contact-intensive highskill and low-skill occupations that call for human interaction, while weakening demand for middle-skill positions (e.g. administrators). Inequalities in terms of access to education and technological skills exacerbate the problem, particularly affecting vulnerable social groups.[32]

Conclusion

The key parameters that determine the total estimated benefit of AI to an economy are the following: (1) the potential of AI, as determined by the speed of technological advancement; and (2) the pace and extent of AI uptake in an economy.

AI contributes to increasing both labour productivity and overall productivity, which is key to the evolution of the per capita disposable income of an economy. Effective integration of AI depends on removing structural, logistical and regulatory barriers, as well as on facilitating labour and capital reallocation.

The main economic risks involve the downgrading of unskilled labour, growing energy costs and the impact on firms' pricing policies. Although the overall impact of AI on economic growth is estimated to be positive, it might be more gradual than initially projected.

The structural transformation of the labour market is expected to accelerate, with routine jobs becoming more vulnerable to automation and occupations requiring specialised skills increasing. The final outcome depends on the degree of AI integration as well as on investment in education and upskilling. However, according to several research bodies, *inter alia* the World Economic Forum, McKinsey and Oxford Economics, AI-attributable job creation is estimated to outdo the loss of existing jobs.

In any event, a smooth integration of AI into the labour market calls for targeted policies that enhance lifelong learning and reskilling of workers, especially for those employed in occupations at high risk of automation. Investing in educational programmes and promoting technological training are essential for reducing social inequalities and facilitating transition to the new digital economy.

30 See (a) Acemoglu, D. and P. Restrepo (2022), "Tasks, automation, and the rise in US wage inequality", *Econometrica*, 90, 1973-2016; (b) Autor, D. (2019), "Work of the Past, Work of the Future", *AEA Papers and Proceedings*, 109, 1-32; and (c) Cornelli, G., J. Frost and S. Mishra (2023), "Artificial intelligence, services globalisation and income inequality", BIS Working Paper No. 1135.

31 See Georgieff, A. (2024), "Artificial intelligence and wage inequality", OECD Artificial Intelligence Paper No. 13, OECD Publishing.

32 According to another study, the introduction of AI does not seem to bring about significant changes in wage inequality. See Goos, M., A. Manning and A. Salomons (2014), "Explaining job polarization: routine-biased technological change and offshoring", *American Economic Review*, 104(8), 2509-2526.

Box 2

EU AND EURO AREA POLICY RESPONSES

Russia-Ukraine war

In 2024, the EU adopted three additional packages of economic and individual sanctions against Russia aimed at further weakening its economic and technological base in response to Russia's continuation of the war against

Ukraine. These included severer restrictions on bilateral trade in goods between the EU and Russia, a ban on Russian liquefied natural gas reloading on EU territory and a ban on access to ports and provision of maritime transport services for vessels that are part of Russia's "shadow fleet" and circumvent sanctions. On 24 February 2025, three years after Russia's invasion of Ukraine and with talks to end the war still ongoing, the Council of the European Union adopted a new broad set of economic and individual restrictive measures against Russia. This package extended the bans on Russia's shadow fleet and financial institutions, as well as restrictions on exports of goods and technology to Russia. It also suspended the broadcasting activities and licences of eight more Russian media outlets in an effort to tackle disinformation. Since the outbreak of the war, the EU has adopted a total of 16 packages of sanctions, targeting more than 2,400 individuals and entities in Russia and in third countries, in response to their support for Russia.

Meanwhile, military, humanitarian and financial support to Ukraine continued. The suspension of all import duties and quotas on Ukrainian exports to the EU has been renewed until June 2025. In March 2024, the Ukraine Facility entered into force, providing for up to EUR 50 billion in grants and loans to support Ukraine's recovery, reconstruction and modernisation for 2024-2027. Also, in October 2024, the Council of the EU adopted a new financial assistance package to Ukraine consisting of: (i) a cooperation mechanism between the EU and its G7 partners which collectively aims to provide approximately EUR 45 billion in financial support to Ukraine, as agreed in the G7 in June 2024 with the Extraordinary Revenue Acceleration (ERA) loans initiative; and (ii) an exceptional macro-financial assistance (MFA) loan to Ukraine of up to EUR 35 billion, representing the EU's contribution to the G7-led ERA loans initiative. The repayment of these loans will be ensured through the extraordinary profits from immobilised Russian state assets in the EU, which will be passed over to Ukraine. The aim is for the MFA loan to be disbursed in 2025 and repaid within 45 years. Since the outbreak of the war, the EU, its Member States and European financial institutions have provided a total of approximately EUR 139 billion in grants and loans to Ukraine.

In March 2025, EU leaders stressed the need for a comprehensive, just and lasting peace based on the principles of the UN Charter and international law. They highlighted the EU's readiness to further contribute to security guarantees (together with like-minded and NATO partners), including by exploring the use of instruments under the European Common Security and Defence Policy.

Competitiveness, productivity and economic resilience

Strengthening the EU's long-term competitiveness and productivity became a major policy priority in 2024 in the face of the new geopolitical reality and complex global challenges. The Letta report[1] on the future of the Single Market in April 2024 and the Draghi report[2] on the future of European competitiveness in September 2024 laid the groundwork for the preparation of a new European Prosperity Plan. At the same time, the Internal Market Emergency and Resilience Act (IMERA) was adopted in September 2024, intended to anticipate, prepare for and respond to the impact of future crises, thus ensuring coordinated responses at EU and member state level.

In summary, the European Commission's 2024-2029 priorities to enhance competitiveness focus on: (i) further deepening the Single Market, especially in the energy, financial and telecommunications sectors; (ii) increasing collective investment, mobilising both public and private funding, and streamlining the regulatory framework; (iii) an open and sustainable trade policy, coupled with diversified and resilient key supply chains; and (iv) promoting innovation and skills in key digital and green technologies. In this context, the European Commission introduced in January 2025 the "Competitiveness Compass", a roadmap for boosting competitiveness, which builds on the Draghi report to form concrete actions on innovation, decarbonisation and economic security and resilience. It then published in February 2025 the Clean Industrial Deal, a business plan focusing on EU energy-intensive industries and green technologies, which aims to help bring down high energy costs, boost demand for clean products, finance the clean transition and ensure industries' access to critical raw materials – also ensuring that they are used and reused efficiently – and to highly skilled workforce.

1 Letta, E. (2024), "Much more than a market".
2 Draghi, M. (2024), "The future of European competitiveness".

In addition, in February 2025 the European Commission presented two Omnibus legislative packages aimed at simplifying existing legislation in the field of corporate sustainability and investment programmes. In March 2025 these packages were discussed in the Council of the EU as a matter of priority and with a high level of ambition, with a view to finalising them as soon as possible in 2025.

The future of the Capital Markets Union

Open, efficient and integrated European capital markets are key to deepening the Single Market, improving access to finance for start-ups, scale-ups and small and medium-sized enterprises and providing households with more attractive savings opportunities. Acknowledging the contribution of these factors to boosting investment, competitiveness and innovation in Europe, the Council of the EU adopted in 2024 a series of policy initiatives to speed up work and make real progress in this field, also building on the recommendations of the Noyer Report[3] (April 2024) on the development of European capital markets. Key priorities identified include harmonising national corporate insolvency frameworks, further converging capital market supervision across the EU, integrating financial services infrastructures and advancing the development of European securitisation and retail investment markets. Among the more targeted decisions taken in 2024 to cut red tape was a package of measures aimed at simplifying the listing process for European firms of all sizes, including small and medium-sized enterprises. This package also introduced enhanced rules for clearing services in the EU by streamlining and shortening procedures, improving regulatory consistency and strengthening the supervision of central counterparties (CCPs). Finally, the Council of the EU adopted two legislative acts aimed at strengthening the role of the insurance and reinsurance industry in providing long-term private capital to European firms for investment, while also enhancing the sector's resilience to severe financial distress.[4] Overall, the creation of a European Savings and Investments Union is a step in the right direction, as it can facilitate the smooth flow of investment by mobilising both EU savings and foreign capital.

Banking Union

In June 2024, the Council of the EU agreed on a negotiating mandate for the review of the Crisis Management and Deposit Insurance (CMDI) framework for banks. This development paved the way for the start of inter-institutional negotiations with the European Parliament. In addition, new rules were introduced in May 2024 to increase the resilience of banks to economic shocks, which transpose the Basel III standards into EU legislation and update the legislative acts on banks' capital requirements. The key feature of the reforms is the introduction of a "capital requirements floor" designed to limit the risk of excessively low capital requirements and enhance comparability across banks. Alongside the implementation of the Basel III standards, the new rules also harmonise the minimum requirements for authorising third-country bank branches and supervising their activities within the EU. They also establish a transitional prudential regime for crypto-assets and introduce amendments to strengthen banks' management of environmental, social and governance (ESG) risks.

Landmark Pact on Migration and Asylum

In May 2024, the Council of the EU adopted ten legislative acts that fully reshape the European framework for asylum and migration management. The new rules will contribute to the orderly management of migrant arrivals, establish efficient and uniform procedures and ensure fair burden-sharing across Member States. Additionally, in April 2024 the Council approved the introduction of a single work and residence permit for third-country nationals. This measure seeks to attract the skills and talent necessary for the EU's digital transition and to help address labour shortages in specific sectors.

Cybersecurity

With cyberspace becoming an area of strategic competition, risks to EU security and defence are rising at a time of mounting geopolitical tensions and reliance on digital technologies. Cyberattacks can disrupt IT systems connected to critical infrastructures and operations, including those within the financial sector. In 2024, the Council of the EU adopted regulations on security requirements for digital products and measures to bolster cybersecurity capabilities across the EU, with the aim to enhance Europe's cyber resilience and improve cooperation mechanisms.

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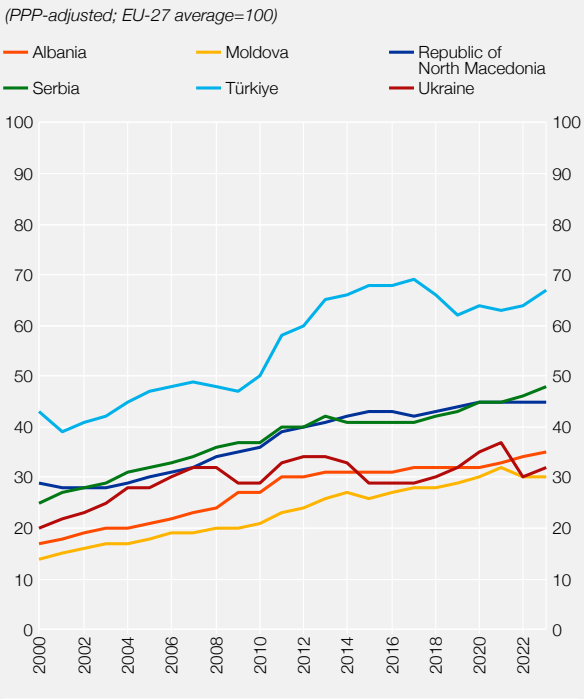
3 Noyer, C. (2024), "Developing European Capital Markets to finance the future: Proposals for a Savings and Investment Union".
4 See also Box 14 herein.

Box 3

THE DYNAMICS OF CANDIDATE COUNTRIES' ECONOMIC INTEGRATION WITH THE EUROPEAN UNION AND GREECE

The European Commission's new Growth Plan for the Western Balkans (WB),[1] under the Reform and Growth Facility, aims *inter alia* at accelerating the economic convergence of candidate countries[2] with the European Union (EU), as their continuing trade deficits and low GDP per capita levels compared to the EU average pose a serious challenge. The per capita income convergence of candidate countries towards the EU started from very low levels. For instance, Moldova's and Albania's GDP per capita in 2000 stood at 14% and 17%, respectively, of the EU average, while that of Türkiye corresponded to 43%. Since then, all candidate countries have achieved a significant rise in their per capita living standards, while Türkiye's economy has continued, despite episodes of monetary instability, to grow comparatively faster (see Chart A). In Ukraine, also due to the war conditions (Russia annexed Crimea in 2014 and invaded the south-eastern regions in 2022), the convergence path was put on hold, with GDP per capita in 2023 standing at the level of 2007, at just 32% of the EU average (see Chart A). As a consequence, in new and past candidate countries, although some income convergence was achieved throughout the 25-year period, the gap vis-à-vis EU economies remains significant, with some exceptions.

Chart A GDP per capita of EU candidate countries at current prices (USD)



Source: IMF, WEO Database, October 2024.

This box aims to investigate over time the degree of economic integration of the WB and the other candidate countries with the EU in terms of external trade and foreign direct investment. In particular, it will highlight the countries' key trading partners, with a more specific focus on the interconnection with Greece. It will also explore the implications for their trade relations with the EU and Russia, following the latter's invasion of Ukraine.

The evolution of candidate countries' trade relations with the EU and Greece

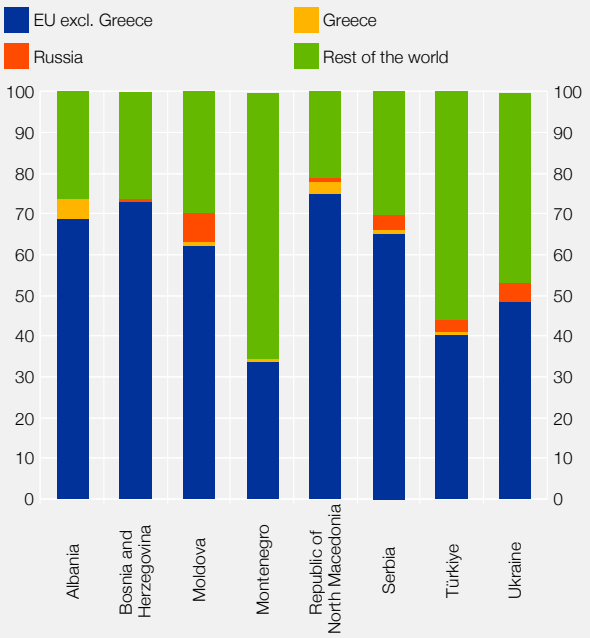
The EU appears to be the main trading partner for all candidate countries in 2019-2023. Their exports to the EU accounted for more than 58% of their total exporting activity on average and their imports from it accounted for more than 45% of their total imports. Lower trade shares with the EU are observed in Ukraine and Türkiye (see Charts B and C). As regards Ukraine, both imports from and exports to the EU before Russia's invasion amounted in 2021 to 39% of its total imports and exports, while in 2023 the respective share of imports increased to 51% and that of exports to 65%.

Albania, Bosnia and Herzegovina, and the Republic of North Macedonia hold the highest trade shares with the EU. The EU's share in Albania's exports has decreased since 2009, due to a gradual contraction in the latter's exports to Italy (main export partner), Germany and Greece. Part of this contraction was offset by a strengthening in its exports to China. As regards Albania's imports from the EU, the corresponding share has also shrank since 2009 (due to lower imports from the main import partners, i.e. Italy and Greece), whereas the share of imports from

1 See Bank of Greece (2024), *Annual Report 2023*, p. 68.
2 Western Balkans (Albania, Republic of North Macedonia, Serbia, Montenegro, Bosnia and Herzegovina), Moldova, Türkiye and Ukraine. Georgia is also a candidate country, but it is not reviewed herein due to data unavailability.

Chart B Geographical breakdown of EU candidate countries' exports

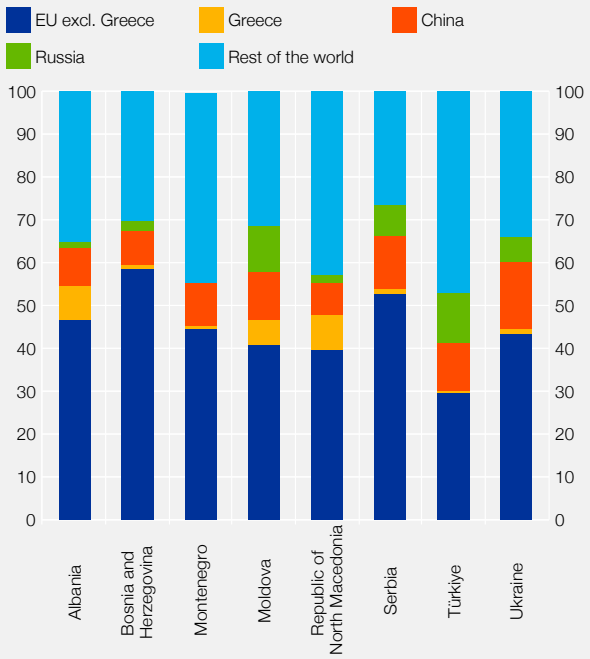
(% of total; 2019-2023 average)



Source: WIIW database.

Chart C Geographical breakdown of EU candidate countries' imports

(% of total; 2019-2023 average)



Source: WIIW database.

non-EU countries (China, Türkiye and the United States) has been increasing. A similar picture is observed in Serbia, the largest economy of the WB. Its lower trade share with the EU is due to a contraction (a) in the share of its exports to Italy and Greece, despite the country's growing shares of exports to Germany and Hungary, and (b) in the share of its imports from Italy and Slovenia, despite its higher shares of exports from Poland, Romania and Spain.

The Republic of North Macedonia has recorded a significant acceleration of its exports to the EU in 2019-2023, supported by its closer trade relationship with Germany. Its trade relationship with Greece has been gradually losing momentum, maintaining, however, a considerable weight until 2023 (imports from Greece: 9.4% and exports to Greece: 3.7% in terms of total imports and exports, respectively). By contrast, the shares of the country's imports from the EU (Germany, Italy, Slovenia, Greece) and Ukraine have been declining throughout the reviewed period. Russia does not constitute an important trading partner for the Republic of North Macedonia.

It should be noted that for all WB countries except Serbia the share of their exports to and imports from Russia has been gradually decreasing to become practically negligible following Russia's invasion of Ukraine in 2022 and the trade sanctions imposed. At the same time, all WB countries have very strong trade links with each other.

For Türkiye, the region's largest economy, the EU is an important trading partner but not its main one. The major share of its exports and imports lies with non-EU countries. The country's share of exports to the EU in 2019-2023 stood at 41% and mainly pertained to Germany (8.6%), Italy (5.0%), France (4.2%) and the Netherlands (3.1%). Apart from the EU, Türkiye's main export destinations over the past five years have been the United Kingdom (6.0%), the United States (5.8%) and Iraq (4.9%). Over the same period, the country's share of imports from the EU shrank to 30.0%, due to lower imports from its three main partners (Germany, France, Italy).[3] By contrast, the share of the "rest of the world" (main trading partner) in Türkiye's total imports grew,

3 The shift in Türkiye's trade flows towards non-EU countries reflects, to a significant extent, the country's geopolitical choices and strategic goals in relation to Russia, China and neighbouring Arab countries.

owing to an increase in import shares from Russia (11.9%), China (11.1%), the United States (4.8%) and South Korea (2.7%) (see Charts B and C).

As with Türkiye, the EU is not Ukraine's main trading partner. However, the share of Ukrainian exports to the EU (mainly to Poland, Romania, Germany and the Netherlands) has grown significantly in recent years (2019-2023), also on account of geopolitical developments. China and Moldova are Ukraine's main export partners apart from the EU. Over the same period, the share of the country's imports from the EU (mostly from France, Greece, Italy, Lithuania and Slovakia) increased significantly. Apart from the EU, Ukraine imports from China, Türkiye and the United States, Moldova's share of exports to the EU is high. Its main export partners are Bulgaria, the Czech Republic and Romania, as well as non-EU Ukraine. The share of its imports from the EU is smaller. As expected, the war and international sanctions led in 2023 to the collapse of Russia's shares of exports and imports in Ukraine's and Moldova's external trade.

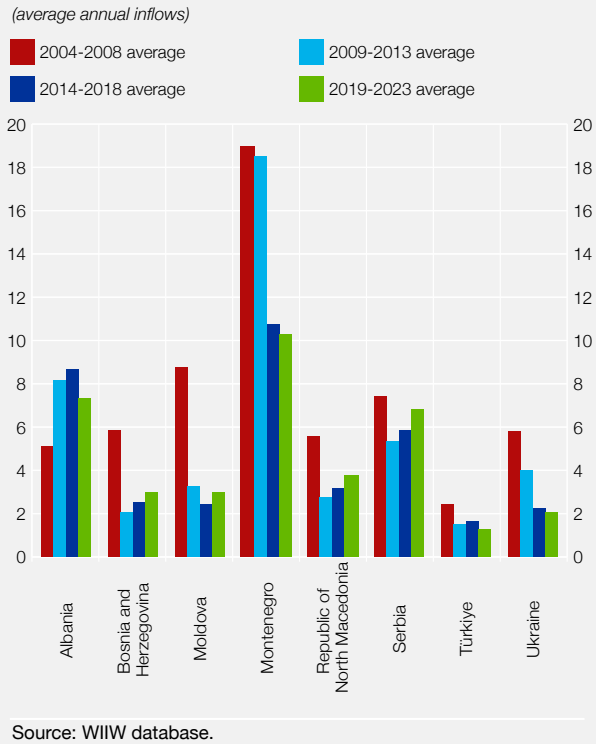
The evolution of candidate countries' investment relations with the EU, Greece and Russia

The WB generally received significant annual foreign direct investment (FDI) inflows over the entire 20-year period 2004-2023, ranging from 2% to 18% of GDP on average (see Chart D). In particular, Albania, Montenegro (also due to the small absolute size of the economy) and Serbia attracted the highest FDI flows, which averaged 7.4%, 10.3% and 6.8% of their corresponding GDP, respectively, in 2019-2023. In the Republic of North Macedonia and in Bosnia and Herzegovina, FDI inflows declined to 3%-4% of GDP in 2019-2023 relative to the first sub-period 2004-2008.

As a percentage of GDP, FDI inflows into Türkiye have been declining and reached an average of 1.3% in 2019-2023, although, in absolute terms, the level of FDI in Türkiye is the highest among all countries (EUR 10.1 billion per year, on average). The slightly reduced FDI inflows (relative to GDP) into Türkiye can be attributed to some extent to the significant monetary and exchange rate stability challenges facing the Turkish economy in recent years.

As regards the degree of FDI integration of the countries under review with the EU, a similar pattern as in their trade integration (import-exports) is observed. As shown in Chart E, the EU (mainly Austria, Germany, Italy and France) is the most important economic area of FDI origin[4] for the candidate countries, with the EU's share in total FDI stock in 2023 ranging between 54.4% (Albania) and 74.9% (Ukraine),[5] very close to the EU's FDI shares in Bulgaria (74.4%) and Romania (86.7%), which have already joined the EU.

Chart D Foreign direct investment inflows in EU candidate countries as % of GDP

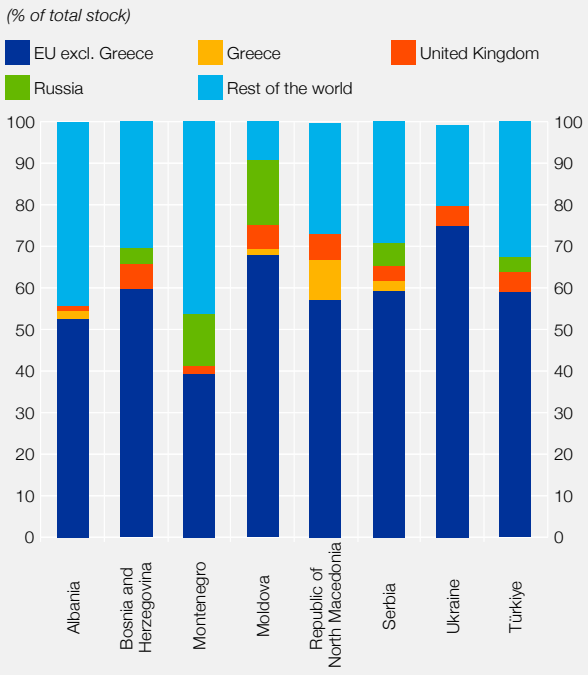


Source: WIIW database.

4 Determining the actual origin of FDI is difficult, as some EU countries feature prominently as central hubs for global tax avoidance, thus distorting officially recorded FDI statistics (Darvas, Z., M. Demertzis, C. Martins, N.F. Poitiers, L.L. Moffat, E. Ribakova and B. McWilliams (2023), "EU trade and investment following Russia's illegal invasion of Ukraine", study requested by the European Parliament's Committee on International Trade (INTA)). At the global level, up to 40% of FDI can be classified as "phantom FDI", whereby intermediate countries are used to benefit from favourable tax frameworks or increased investor protection, thus concealing the actual country of origin of FDI funds (Damgaard, J., T. Elkjaer and N. Johannesen (2024), "What is real and what is not in the global FDI network?", *Journal of International Money and Finance*).

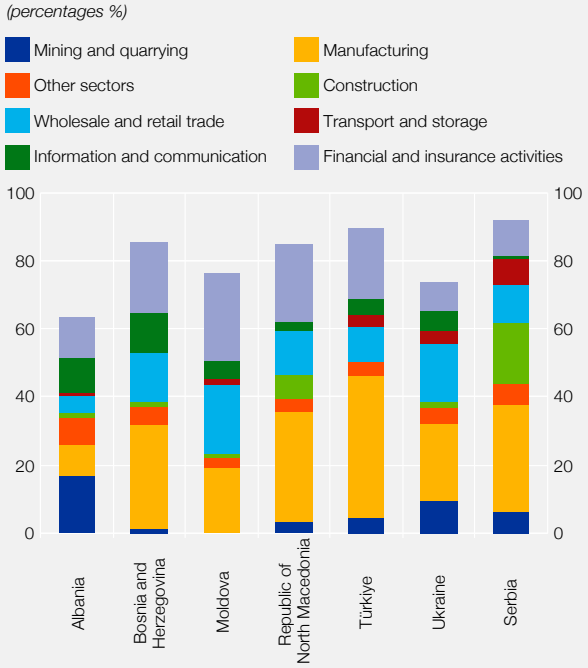
5 With the exception of Montenegro, where the EU's share in the country's FDI stock decreased to 39.4% in 2023 from 54.4% in 2010.

Chart E Foreign direct investment (stock) in EU candidate countries by country of origin in 2023



Source: WIIW database.

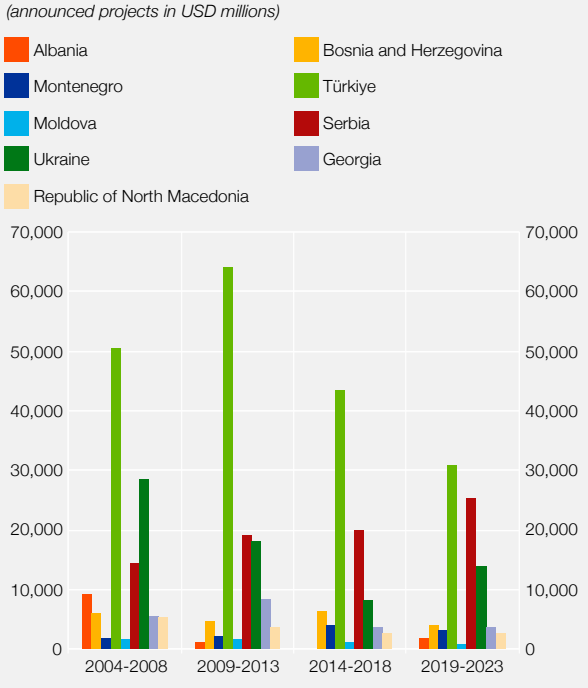
Chart F Sectoral breakdown of EU candidate countries' foreign direct investment stock in 2023



Source: WIIW database.

However, in recent years the FDI share of non-EU countries has increased. In particular, Canada invests in Albania; Serbia and the United Kingdom invest in Bosnia and Herzegovina; Russia and the United Kingdom invest in Moldova; the United Arab Emirates, the United States, the United Kingdom and Russia invest in Montenegro; the United Kingdom and Türkiye invest in the Republic of North Macedonia; China and the United Kingdom invest in Serbia; and, finally, the United Kingdom and the United States are the main investors in Türkiye.

Chart G Greenfield foreign direct investment in EU candidate countries



Source: WIIW database.

Greece had invested strongly in the past in a number of candidate countries, mainly in financial and insurance activities and in manufacturing. Despite its gradual withdrawal from the countries of the region during the economic crisis of the 2010s, Greece maintained its presence as a percentage of the total outstanding FDI stock, which in 2023 stood at 10% in the Republic of North Macedonia, 6.6% in Bulgaria and 3.4% in Romania.

As regards sectoral breakdown of FDIs in 2023 (see Chart F), in the manufacturing sector, Türkiye has attracted the highest FDI flows from the EU, accounting for 41.7% of its total FDI stock from the EU, followed by the Republic of North Macedonia (32.8%), Serbia (31.3%) and Bosnia and Herzegovina (30.2%). Significant FDI inflows have been channelled to the financial sector in most of the countries under review, led by Moldova, the Republic of North Macedonia, Bosnia and Herzegovina, and Türkiye, with shares above 20%. In the energy sector, Albania ranks first, followed by Moldova. Chart G shows

that, over time and throughout the period under review, Türkiye, Ukraine and Serbia attract the largest amounts (in absolute terms) of greenfield FDIs, i.e. investment for the establishment of new productive firms or new facilities.

In conclusion, the trade and FDI integration of candidate countries into the EU's single market has already reached very high levels. As regards Greece in particular, its economic interconnection with the Balkan countries weakened considerably in the decade of the economic crisis. The economic convergence gap of candidate countries vis-à-vis the EU is wide. The economic growth rates of candidate countries need to be further strengthened, thus the EU is already implementing the new Growth Plan for the Western Balkans. Moreover, EU accession requires economic as well as institutional convergence, notably on issues related to the rule of law, the protection of human rights, etc., where there is still a long distance to be covered towards the EU averages, hence the long delays in closing negotiations on individual chapters of the *acquis communautaire*. Stepping up institutional reforms will help candidate countries to improve social conditions and boost the efficiency of their economies, so as to meet the criteria for EU membership and reap even greater socio-economic benefits.

Box 4

ECONOMETRIC ESTIMATION OF LONG-TERM TRENDS IN THE GREEK ECONOMY

Since joining the euro area in 2001, the Greek economy has gone through all phases of the economic cycle and has experienced a series of strong shocks, including the global financial crisis (2007-2009), the domestic debt crisis (2010-2018), the COVID-19 pandemic (2020-2021) and the recent energy crisis (2022-2023). Studying the impact of these shocks on short-term changes in the main macroeconomic aggregates of the Greek economy, such as GDP or inflation, has become a hot topic for analysts and economic policy-makers. By contrast, long-term trends in the Greek economy, while playing an important role in the conduct of monetary and fiscal policy, have not been adequately and thoroughly studied.[1] In this box, we apply modern econometric techniques in order to gauge the long-term trend of key macroeconomic aggregates and thus investigate whether these economic shocks have brought about a structural change in the long-term trends of the Greek economy.

Econometric model and empirical analysis

In general, in order to reliably estimate the long-term trends of macroeconomic variables and identify any structural changes, we use time series models, which meet a number of technical features, such as: (i) decomposition of variables into trend and cycle components;[2] (ii) non-linear and time-varying trend modelling; (iii) use of a large number of explanatory variables, which adequately explain short-term (cyclical) changes in the variable under examination, so as to enable a more reliable estimate of the long-term trend; and (iv) use of stochastic volatility in model residuals, which allows us to take into account the time-varying macroeconomic uncertainty in coefficient and trend estimates. The Bank of Greece has developed a number of Bayesian vector autoregression models (BVARs), which meet all these features and allow a more reliable estimation of the long-term trends of the main macroeconomic variables of the Greek economy.[3]

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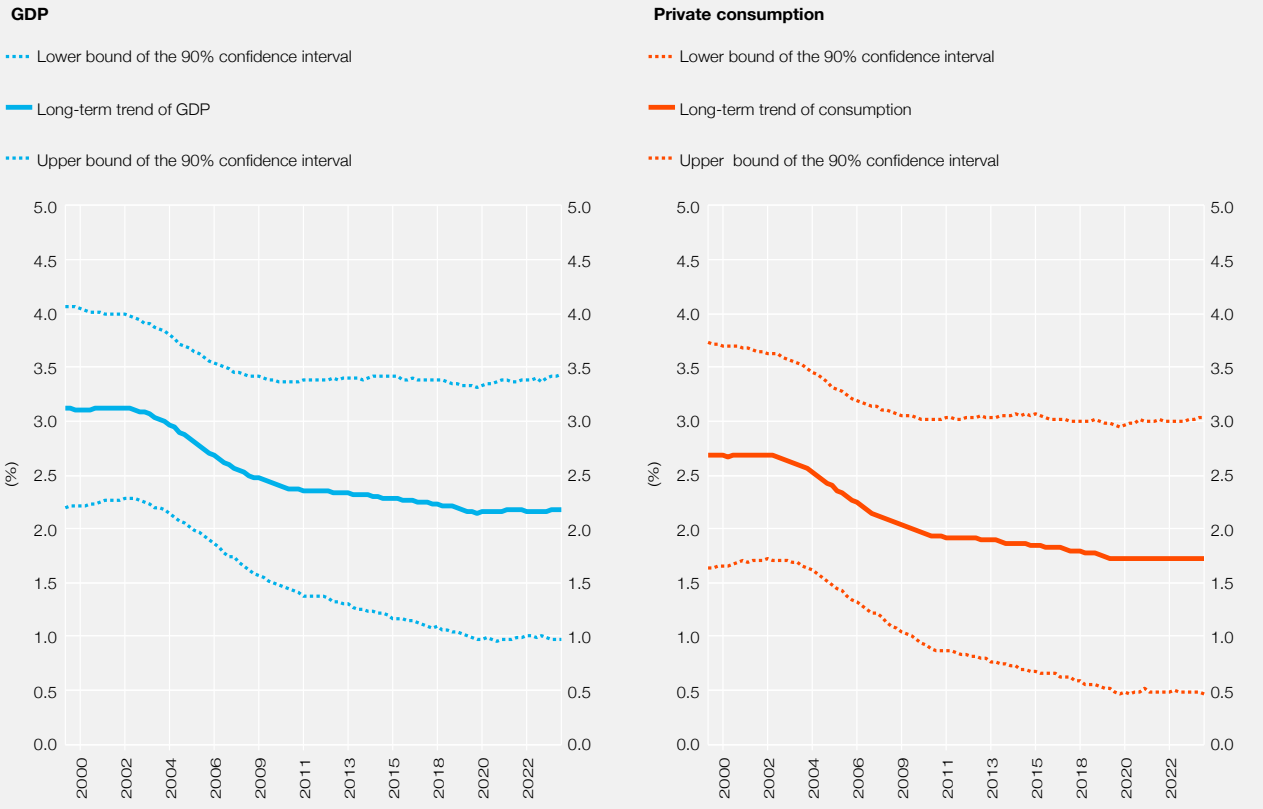
1 For instance, Orphanides, A. (2003), "The quest for prosperity without inflation", *Journal of Monetary Economics*, 50(3), 633-663, focuses on mistakes that may arise in the conduct of monetary policy because of a distorted picture of long-term economic growth, while Auerbach, A.J. (2011), "Long-term fiscal sustainability in major economies", BIS Working Paper No. 361, argues that small changes in long-term assumptions may have a large impact on fiscal sustainability exercises.

2 The cyclical component of a series refers to short-term movements around its long-term trend without periodicity (as is the case for the seasonal component).

3 In greater detail, the model used herein is a Hybrid Common-Trend Vector Autoregression (HCT-VAR) model, based on Louzis, D.P. (2024), "Large Hybrid Common-Trend Vector Autoregressions", *mimeo*. This model belongs to the trend-cycle VAR family proposed in the literature and is being developed by the Bank of Greece through a series of research papers. See (a) Louzis, D.P. (2016), "Macroeconomic forecasting and structural changes in steady states", Bank of Greece Working Paper No. 204, (b) Louzis, D.P. (2019), "Steady-state modeling and macroeconomic forecasting quality", *Journal of Applied Econometrics*, 34(2), 285-314, and (c) Louzis, D.P. (2023), "Trend inflation and inflation expectations in high dimensional vector autoregressions", *Conference on Research on Economic Theory and Econometrics (CRETE) 2023*, https://www2.aueb.gr/conferences/Crete2023/papers/Louzis.pdf.

Chart A Long-term trend of the rate of change in real GDP and private consumption in the Greek economy

(annualised data in real terms)



Source: Bank of Greece econometric estimates.

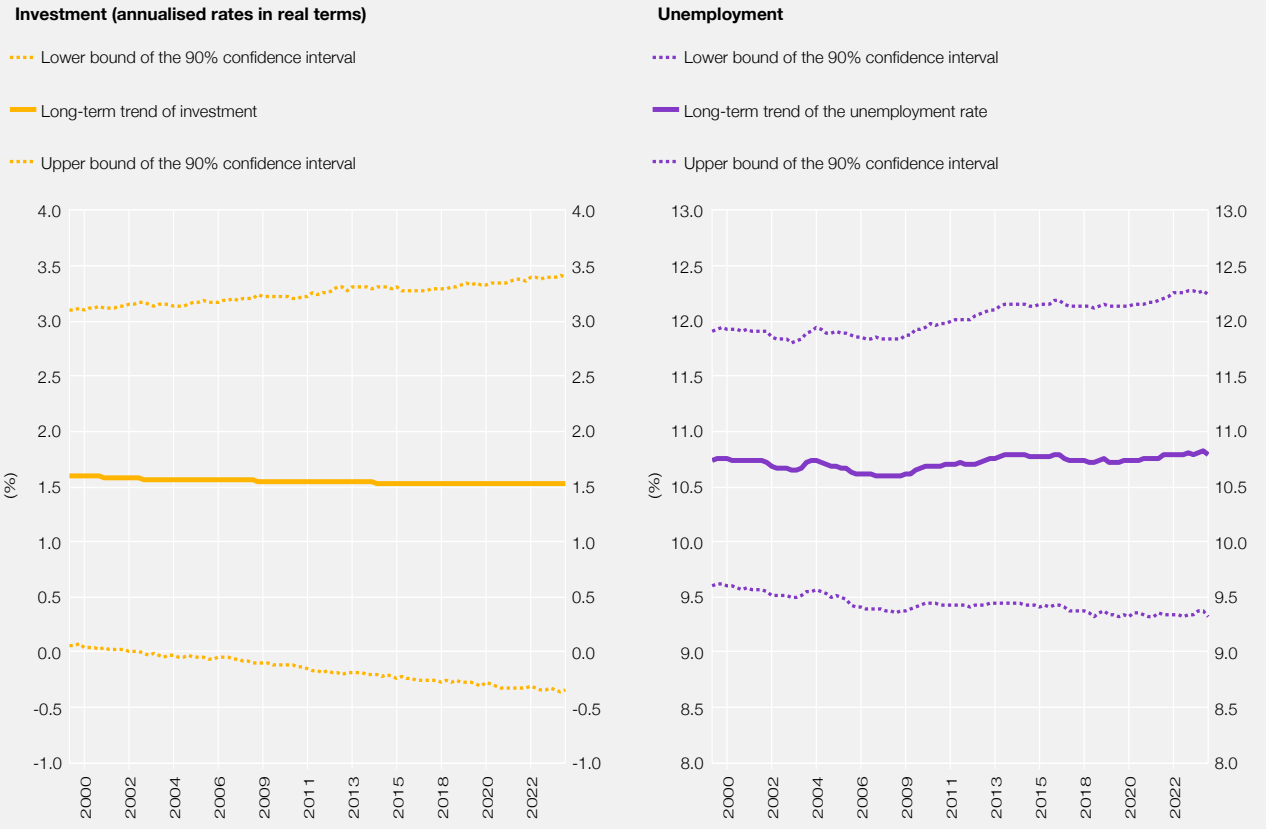
On the basis of these models, which use the information content of a large number of variables, we estimate the long-term trend of ten key macroeconomic variables of the Greek economy. The sample extends from Q2 1998 to Q2 2024 inclusive and comprises annualised rates of change for variables relating to economic activity (in real terms), inflation and nominal interest rates for the Greek economy, in accordance with literature on neo-Keynesian vector autoregression models.[4] The model results are presented, focusing on the variables for economic activity and the level of prices.[5]

In more detail, Chart A presents the long-term trend for the annualised rates of change in real GDP and household consumption. The results of the econometric estimation show that the long-term trend of both variables gradually decreased by almost one percentage point (pp) during the sample under review. As a result, the trend in real GDP

4 In particular, the variables included in the model are: (1) real GDP at 2015 prices (GDP); (2) real household consumption at 2015 prices (private consumption); (3) total hours worked; (4) real gross fixed capital formation at 2015 prices (total investment); (5) unemployment rate; (6) GDP deflator; (7) Consumer Price Index (CPI); (8) Harmonised Index of Consumer Prices (HICP); (9) short-term interest rates (as from Q1 2001 this index essentially coincides with the 3-month Euribor); and (10) long-term interest rates (a measure indicating 10-year Greek government bond yields). For all variables (except for the unemployment rate and the interest rates), we use annualised quarter-on-quarter growth rates (QoQ), while for non-seasonally adjusted variables we use the Tramo-Seats seasonal adjustment. The model is estimated by using Bayesian methods and 4 lags (for more details, see footnote 3).

5 The long-term trend in nominal interest rates generated by the model is less relevant than the long-term trend in real interest rates, which is used in literature as an indicator of the so-called *natural rate of interest* (or r-star). Due to space and time considerations, the results for the long-term trend in nominal interest rates are not shown. In any case, the long-term trend in nominal interest rates had been declining up to 2020, when it reversed and started a slightly upward course up to the end of the sample period (Q2 2024), reflecting the ECB's monetary policy.

Chart B Long-term trend of the rate of change in investment and the unemployment rate in the Greek economy



Source: Bank of Greece econometric estimates.

growth gradually declined from 3.1% (2.7% for private consumption) up to around 2003 to 2.15% (1.72% for private consumption) in 2020.[6] It is worth noting that the largest decline in the average rate of change in both variables had occurred by 2011 (0.74 and 0.67 pp for GDP and private consumption respectively), reflecting the impact of the Greek debt crisis and the start of the economic adjustment programmes. By contrast, the COVID-19 shock did not negatively affect the long-term trend of GDP and private consumption; all the more so, the respective long-term trends stabilised both during the pandemic and during the current post-pandemic period. Financial support programmes for households and businesses that were implemented during the pandemic and the energy crisis that followed contributed to this, preventing a further downward trend in these variables.

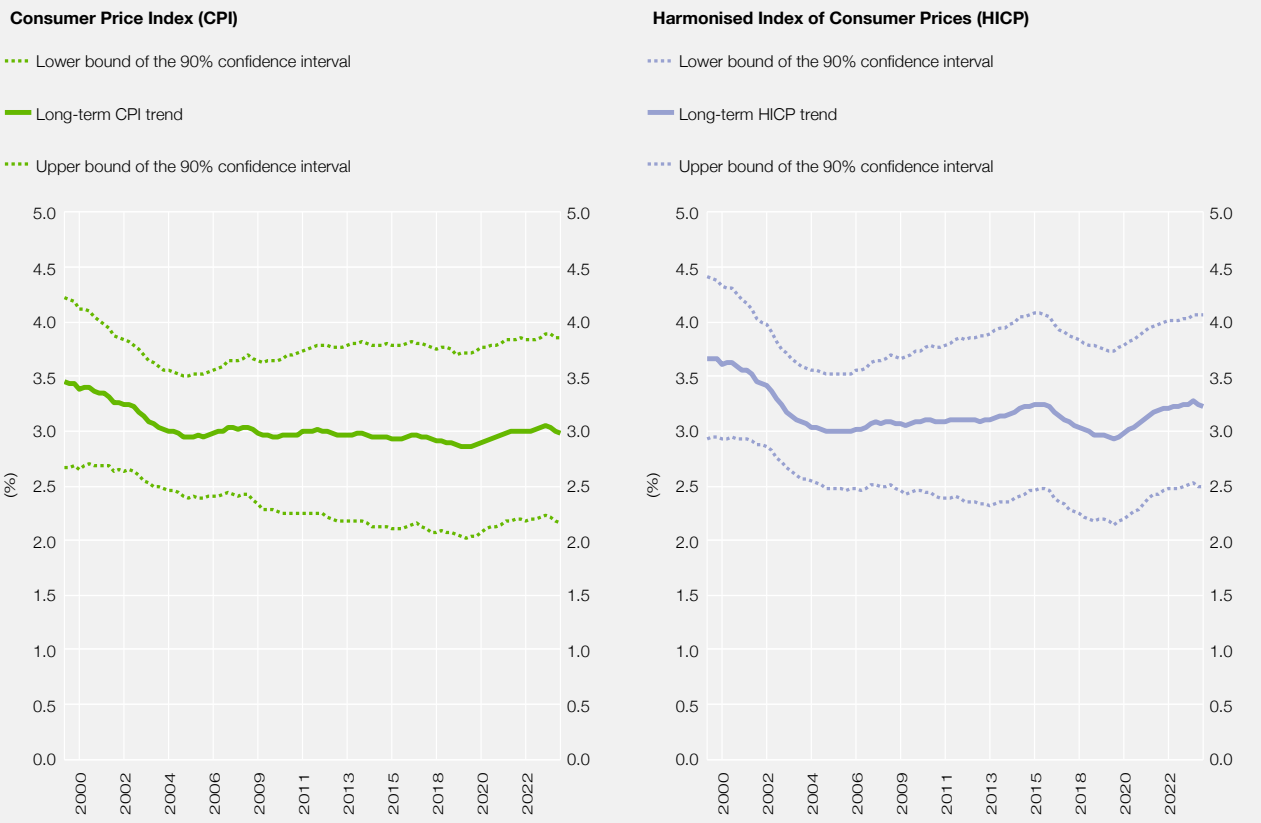
Chart B shows estimates of the long-term trend in the growth rate of gross fixed capital formation in real terms (or, in summary, total investment) and the unemployment rate. The long-term trend in investment has seen a slight linear decrease of 0.08 pp throughout the sample period (from 1.6% to 1.52%), while the long-term trend in unemployment increased slightly by 0.18 pp (from 10.6% to 10.78%). It is worth noting that the 90% confidence interval for the long-term trend in investment growth is around 0.5 pp higher than that of long-term trend GDP and private consumption. This finding suggests greater uncertainty surrounding the estimates due to the high volatility in the rate of change in investment.

However, the results of the estimate do not point to any structural change in long-term trends, as may have been expected owing to the high volatility of these variables during the domestic debt crisis. This can be attributed to

6 The long-term trend in GDP growth can be translated into the percentage change in potential GDP. This means that, had there been no permanent structural changes, potential GDP in the Greek economy could grow by around 2.1% annually over the following years.

Chart C Long-term trend of the rate of change in the Consumer Price Index and the Harmonised Index of Consumer Prices

(annualised data)



Source: Bank of Greece econometric estimates.

the following reasons: (i) the ability of the model to account for factors that affect cyclical changes in the variables and to produce filtered – net – estimates of long-term trends; (ii) a careful elicitation of prior distributions in order to minimise non-material change (the "noise") in estimates of long-term trends;[7] and (iii) the decline in unemployment and the return of the rate of change in investment to pre-crisis levels, as a result of both labour market and institutional reforms aiming at attracting new investment.[8]

Finally, Chart C shows the long-term trend inflation, as proxied by the annualised rate of change in the Consumer Price Index (CPI) and the Harmonised Index of Consumer Prices (HICP). The long-term trend of both measures of inflation follows a common and steady pattern, with the HICP exhibiting comparatively higher volatility. In particular, the CPI trend inflation has declined from 3.5% at the beginning of the sample period to around 3% in 2004 and remains close to these levels throughout the period under review. The long-term HICP trend inflation followed a similar pattern up to 2004, but with relatively larger fluctuations, with its values ranging between 3% and 3.25% until the end of the period. It should be noted that, in general, despite individual fluctuations, we cannot identify any overall upward or downward movement of a permanent nature that could be seen as a structural change in

7 For the elicitation of prior distributions, see Del Negro, M., D. Giannone, M.P. Giannoni and A. Tambalotti (2017), "Safety, liquidity, and the natural rate of interest", *Brookings Papers on Economic Activity*, 48(1), 235-316. In any case, the elicitation of prior distributions reflects an economist's beliefs as regards the level and evolution of the (time-varying) model coefficients. The results presented in the present box do not substantially change when we use alternative elicitation of prior distributions (robustness checks).

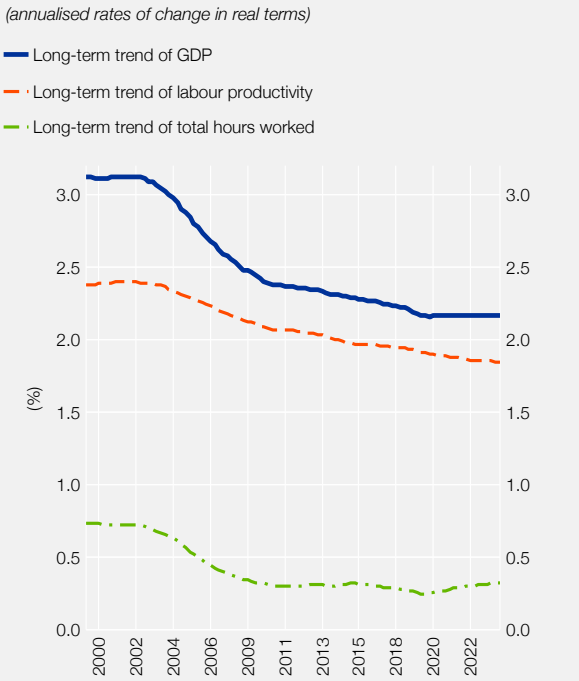
8 Further analysis to explain the evolution of long-term trends in total investment and unemployment is not possible with this model. Nevertheless, labour market reforms, mainly aimed at reducing structural unemployment, seem to have played an important role in containing the long-term trend in unemployment.

the long-term trend inflation of the Greek economy. Even the strong inflationary pressures during the recent energy crisis, or even during the current post-pandemic period, did not substantially affect the long-term trend inflation. This underlines the effectiveness of the monetary policy pursued by the ECB, which manages to contain the long-term trend inflation to slightly rising levels, despite persistent inflationary challenges in recent years.[9]

Decomposition of long-term trend GDP growth

The findings of the econometric estimation of the long-term trend GDP growth (see Chart A) show that the footprint of economic developments over the past two decades exhibits the features of a permanent structural change in the rate of change in the Greek GDP. The model allows for the long-term trend to be broken down into two aggregate components: (i) the long-term labour productivity growth trend; and (ii) the long-term labour input growth trend, which is not related to labour productivity and is proxied by total hours worked in the Greek economy.[10]

Chart D Analysis of the long-term trend of the rate of change in GDP



Source: Bank of Greece econometric estimates.

The results of the estimates (see Chart D) show that the decline in long-term trend growth of the Greek economy up to 2011 is attributable to a decline in both the long-term labour productivity and total hours worked trend. In fact, the contribution of hours worked to the overall decline in the long-term trend growth up to 2011 is slightly larger than the contribution of labour productivity.[11] As from 2011 however, we notice a reversal, with the long-term trend change in hours worked stabilising at close to 0.30% and recovering slightly from 2020 to date.[12] By contrast, the long-term labour productivity growth trend continues its almost linear downward path until the end of the sample (from 2.35% to 1.80%). This implies that since 2011 the decline in long-term trend labour productivity has contributed almost exclusively to the fall in the long-term GDP growth trend.[13,14]

Conclusion and monetary policy proposals

This box explores the long-term trend of key macroeconomic aggregates of the Greek economy, including GDP, investment, unemployment and inflation, for a period spanning about 25 years. Although strong macroeconomic

9 Estimates of the long-term trend of the GDP deflator are qualitatively similar to those for the CPI and the HICP.

10 For more details, see Antolin-Diaz, J., T. Drechsel and I. Petrella (2017), "Tracking the Slowdown in Long-Run GDP Growth", *The Review of Economics and Statistics*, 99(2), 343-356. In summary, using total hours worked enables us to identify and estimate the long-term trend in labour productivity, which (in the present model) includes technological and other factors. Further analysis of long-term trend labour productivity, as well as the identification of technological and non-technological factors that may affect labour productivity, call for the use of new variables, such as total factor productivity (TFP), etc. (see also Appendix K of the aforementioned study). The model does not allow for such an analysis, which would also be outside the scope of this box.

11 Specifically, the trend GDP growth declined by 0.74 pp up to 2011, with 0.34 pp being attributable to a decline in labour productivity growth and 0.40 pp to a decline in trend hours.

12 According to the European Commission (2023), *Labour Market and Wage Developments in Europe, Annual Review 2023*), the growth rates of total hours worked and employment tend to react in the same way to the various phases of the euro area business cycle (at least up to 2019). Also, according to the same source, total hours worked do not usually return to pre-crisis levels and this is because of the use of new technologies after severe recessions. It should also be noted that part of the increase in average weekly hours worked in the post-pandemic period is attributable to teleworking.

13 Antolin-Diaz et al. (op. cit.) draw similar conclusions for the euro area economy (as a weighted average of the economies of Germany, Italy and France).

14 See also Lopez-Garcia, P. and B. Szörfi (2021), "Key factors behind productivity trends in euro area countries", ECB, *Economic Bulletin*, Issue 7/2021.

volatility owing to severe economic shocks can be observed over the sample period, estimation results indicate that, overall, the long-term trend of the variables under examination remain relatively unaffected, with the exception of growth in GDP and private consumption. For these variables, the results show a permanent decline in the long-term trend of one (1) percentage point, which is mainly due to the declining long-term labour productivity trend.

Recent empirical findings show that labour productivity is a particularly critical factor for sustainable economic growth in view of the challenges associated with climate change and the green transition.[15] Moreover, an appropriate monetary policy can contribute to improving labour productivity. An accommodative monetary policy can, under the right conditions *(ceteris paribus)*, improve labour productivity in the long run by stimulating demand for investment in new, innovative and more productive technologies.[16]

15 Yu, X., A. Dilanchiev and S. Bibi (2024), "Enhancing labor productivity as a key strategy for fostering economic growth and resource efficiency", *Heliyon*, 10(3) (e24640).

16 See footnote 14. In the same work, the authors state that a second channel through which an accommodative monetary policy increases the overall productivity of the economy is by boosting business profits, thus preventing the death of highly productive firms that become financially constrained. Empirical results from this work also suggest that accommodative monetary policy shocks have a positive impact on total factor productivity in the long term in euro area countries.

Box 5

SERVICES INFLATION IN GREECE AND ITS MAIN COMPONENTS

In the period 2023-2024 it can be seen that for the Greek economy the key determinant of headline inflation, as measured by the Harmonised Index of Consumer Prices (HICP), was the services component. Consequently, it is of particular interest to investigate and identify those categories of services that make the largest contributions to services inflation.

The main components of services inflation

The HICP consists of five main components: unprocessed food, processed food, non-energy industrial goods, energy and services. Over time, the services component carries the highest weight. Headline HICP inflation started its upward course in mid-2021 and mainly in the last quarter. As of the second quarter of 2021 energy inflation strengthened, recording annual rates above 10%, while as of the third quarter of the same year food inflation also began to pick up. Major increases in the prices of services and non-energy industrial goods followed with a time lag of several months and became strongly felt in mid-2022. Table A presents the average annual rates of change in the HICP as well as the contributions of its five main components in the period 2020-2024.

Table A Headline HICP inflation and contributions of its main components[1]

(headline inflation: annual percentage changes; contributions: percentage points)

	Headline inflation	Unprocessed food	Processed food	Non-energy industrial goods	Energy	Services
2020	-1.3	0.33	-0.02	-0.07	-0.79	-0.71
2021	0.6	0.17	0.12	-0.12	0.79	-0.39
2022	9.3	0.74	1.56	0.91	4.47	1.62
2023	4.2	0.90	1.71	1.22	-1.69	2.01
2024	3.0	0.31	0.47	0.33	-0.12	2.02

Sources: ELSTAT and Bank of Greece.

1 The second column presents the annual rates of change in prices for headline HICP inflation, while the following columns show the contributions of each component to the annual change in headline inflation. Therefore, the sum of these contributions per year equals the annual headline inflation of the corresponding year.

Table B Inflation of the services component and contributions of main services sub-indices[1]

(inflation: annual percentage changes; contributions: percentage points)

	Services inflation	Food services	Accommodation services	Airline tickets	Rents
2020	-1.4	0.08	-0.53	-0.50	0.01
2021	-1.0	-0.20	0.09	-0.17	-1.67
2022	4.5	1.54	2.29	0.57	-0.55
2023	4.5	2.24	0.76	0.31	0.32
2024	4.4	1.83	0.69	0.34	0.34

Sources: ELSTAT and Bank of Greece.

1 The second column presents the annual rates of change in prices for the services component, while the following columns show the contributions of selected services sub-indices to the annual change in services inflation. The sum of these contributions per year does not equal the corresponding inflation rate of the services component, as the table comprises a small sample of only four services sub-indices out of a large number of services sub-indices that make up the services component.

The annual change in the energy component peaked in May 2022 (61.0%), contributing 4.47 percentage points to the average increase in headline inflation, which stood at 9.3% in 2022. Both food components contributed 2.61 percentage points in 2023 and, along with services (2.01 percentage points) and non-energy industrial goods (1.22 percentage points), kept headline inflation at high levels (4.2%) in spite of a considerable decline in the energy component (-1.69 percentage points). The contribution of services inflation to headline inflation was substantial both in 2023 (2.01 percentage points) and in 2024 (2.02 percentage points).

The persistence of high services inflation throughout 2024 (4.4% against 4.5% in 2023) is attributable to several factors. The surge in energy inflation in 2022, the large increases in food prices and the supply bottlenecks during the COVID-19 lockdown period fed into services inflation with a time lag. Furthermore, rising wages, partly due to minimum wage increases, are also reflected in the high and persistent services inflation.

Among the many sub-indices that make up the services component, specific indicators that are mainly related to tourism stand out, such as accommodation and food service activities, as well as airline tickets and rents. Table B shows the average annual rates of change in the services component along with the contributions of its four main sub-indices.

In terms of their weighting in the HICP, the above four services sub-indices together carry a weight of 223.06‰, accounting for slightly less than 50% of the total weight of the services component in the HICP, which was 463.79‰ in 2024. Specifically, their total contribution to services inflation, which stood at 4.5% in 2023, came to 81% and to 72% in 2024.

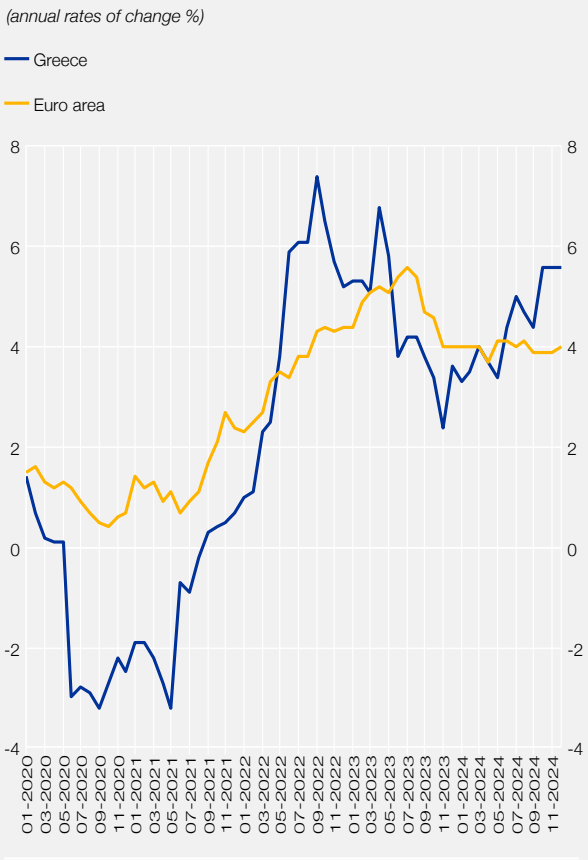
Food services as well as accommodation services carry high weights, strongly reflect wage increases as a large share of the people employed in the sector earn the minimum wage, incorporate food and energy costs, and capture high tourism demand. Airline tickets exhibit high volatility, incorporate energy costs and reflect high tourism demand. House rents are mainly limited to domestic factors, although to some extent they are also linked to the availability of housing for long-term rental, as opposed to short-term rentals that are associated with high tourism demand.

The persistence of services inflation in 2024, most likely also in 2025, is attributable to wage increases, hikes in indirect taxation and strong demand due to increased tourism activity. Wages and particularly the minimum wage are expected to rise further this year. Meanwhile, tax increases have already taken effect with the imposition of a climate resilience levy, while 2025 is expected to be another strong tourism year, which will maintain external demand at high levels.

Comparison of services inflation between Greece and the euro area

In the euro area as well as in Greece, services have the highest weight among inflation components (448.83‰ in 2024). The euro area countries with the highest weights for services are Austria (487.54‰), France (482.38‰)

Chart A Evolution of services inflation in Greece and the euro area (2020 - 2024)



Sources: Eurostat and Bank of Greece calculations.

and Spain (469.17‰), while those with the lowest weights are Slovakia (272.79‰), Latvia (273.34‰) and Croatia (320.91‰). Services in Greece are assigned the fourth highest weight among euro area countries.

From January 2020 to April 2022 (see Chart A), services inflation in Greece was lower than that of the euro area, even turning negative between June 2020 and August 2021. Since June 2021, a steady upward trend in services inflation had been observed both in Greece and in the euro area, mainly as a result of the easing of pandemic-related measures, which had had a disproportionately negative impact on the consumption of services compared to the consumption of goods. During that period, the rise in services inflation was much more pronounced in Greece than in the euro area. Between May 2022 and May 2023, services inflation in Greece exceeded that of the euro area, peaking at 7.4% in September 2022, compared with a peak of 5.2% in April 2023 for the euro area.

According to Corsello and Neri (2025)[1] and Michail and Louca (2024)[2], the rise in euro area services inflation in 2021 and 2022 was mainly attributable to the categories of food and travel services ("fast-movers"), which were greatly affected by higher fuel and food prices, especially during 2022. In 2023, rising services inflation in the euro area was mostly driven by the categories of rents, insurance, health and education, which generally react with a time lag ("late-comers").

In a recent study by Karakitsios et al. (2025)[3] investigating the persistence of HICP inflation and its components in Greece and the euro area, it is found that in Greece the persistence of services inflation appears to have been comparatively greater until the beginning of the inflation crisis in 2021. Nevertheless, the persistence of services inflation also grew significantly in the euro area, particularly from 2020 onwards. It is pointed out that the high persistence parameters in both Greece and the euro area can be attributed to supply chain disruptions and primarily to labour market tightness, which can drive prices and services inflation upwards, with wage increases being the main determinant (Schwartzman 2023; Shapiro 2023; Sanchez 2008).[4]

From June to December 2023, a decline in services inflation was observed both in Greece and in the euro area. Due to its stronger downward trend, services inflation in Greece was again comparatively lower. Subsequently, services inflation stabilised at approximately 4% in the euro area, while in Greece it steadily followed an upward trend, reaching 5.6% in December 2024.

1 Corsello, F. and S. Neri (2025), "Catch me if you can: fast-movers and late-comers in euro area inflation", *SUERF Policy Brief*, No. 1070.
2 Michail, N.A. and K.G. Louca (2024), "Wages and Inflation in the Euro Area", *CESifo Economic Studies*, ifae014.
3 Karakitsios, A., E. Kasimati, E. Kondelis and Z. Bragoudakis (2025), "Investigation of the persistence of Harmonised Inflation and its components in Greece and the euro area, *Greek Economic Outlook*, Issue 56, pp. 66-81, Athens: KEPE.
4 Schwartzman, F. (2023), "Untangling persistent inflation: underlying the factors at work", Federal Reserve Bank of Richmond, Economic Brief, 23-31; Shapiro, A.H. (2023), "How much do labor costs drive inflation?", Federal Reserve Bank of San Francisco, *FRBSF Economic Letter*; and Sanchez, M. (2008), "Why is services inflation higher than goods inflation in the euro area?", available at SSRN, http://dx.doi.org/10.2139/ssrn.1328827.

On the basis of the latest available data for the first two months of 2025, services inflation in Greece remained high (5.4%), well above the European average (3.8%). Among euro area countries, those with the highest services inflation for the period January-February 2025 were Estonia (8.7%), Croatia (8.0%) and Slovakia (also 8.0%), while the lowest services inflation was recorded in Luxembourg (2.0%) and France (2.5%).

The contribution of the main components of services inflation

Services as a whole have the highest weighting among the components of inflation over time, since spending on services exceeds 40% of total household spending. Consequently, services inflation significantly affects headline inflation. The services carrying the highest weights are considered to be main components. On the basis of 2024 data on total consumption expenditure (derived from 2023 consumer spending), services are assigned a total weight of 463.79‰, while the services sub-indices with the highest weights – in terms of total consumption expenditure – are restaurants (118.78‰), hotels (41.75‰), actual rents paid by tenants (31.07‰), mobile telephony services (23.19‰), fast-food services (22.02‰), secondary education (18.02‰) and hospital care (17.38‰).

Thus, the aforementioned services sub-indices shape to a large extent the behaviour of services inflation, accounting all together for more than 27% of total consumption expenditure. For this reason, an examination of their evolution and an analysis of their contribution to services inflation are particularly useful in order to comprehend the possible determinants of a major component of headline inflation.

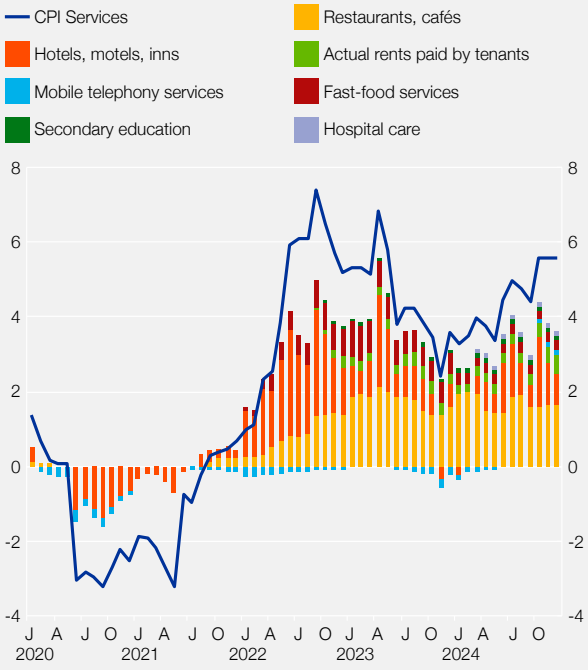
Chart B presents the evolution of services inflation and the contributions of the aforementioned services sub-indices in 2020-2024.

As shown by data analysis, the selected services explain a significant part of services inflation particularly over the years 2023 and 2024. Specifically, inflation rates for restaurants, hotels and house rents account for the largest part of services inflation, since their contribution over time is higher than 50% of total services inflation, with this percentage even exceeding 70% in 2023 and 2024. This reflects both the high weights of the specific services and their very high inflation rates since end-2021. The large contribution of these services was also observed during the pandemic period, when services inflation was negative.

From mid-2022 up until early 2024, the contribution of fast-food services inflation (not included in the restaurants sub-index) was also significant, which chiefly reflects the very high inflation rates of these services rather than their weighting. By contrast, the contributions of mobile telephony and secondary education services were notably smaller.

Chart B Evolution of CPI services inflation and contributions of its main components (January 2020 - December 2024)

(annual percentage changes % and percentage point contributions)



Sources: ELSTAT and Bank of Greece calculations.

Conclusions

The above analysis demonstrates that the contribution of services prices to the evolution of inflation at the current juncture is of paramount importance. Data show that the increase in the prices of services is attributable to the following factors:

(a) A rise in demand and, by extension, in the prices of services. Private consumption has been recording a continuous increase since 2021, exhibiting remarkable resilience to multiple external shocks. Following a decrease

of 6.1% in 2020 due to the pandemic, private consumer expenditure (at constant prices) increased by 5.4% in 2021, 8.8% in 2022 and 1.7% in 2023. Furthermore, in the first nine months of 2024, real private consumption recorded an annual increase of 1.8%, supported by the rise in employment, the upward trend of travel receipts and higher incomes.

(b) A time lag in the adjustment of services prices to the general price level. Compared with other price categories, such as energy and food, services prices adjust more slowly. This became evident during the energy crisis, as the HICP increased by 9.3% in 2022 and 4.2% in 2023, while the prices of services recorded a milder rise (4.5% in both years). Conversely, food prices surged by 12.0% and 11.7% respectively.

(c) Labour intensity in the services sector. The production of services is characterised by higher labour intensity, with wages accounting for a larger share of total costs in comparison with goods. Thus, the prices of services are more strongly affected by wage increases, which result to a certain degree from increases in the minimum wage (Bank of Greece 2024)[5] and labour market tightness (Antonopoulos et al. 2022)[6].

(d) Increased weighting of services in the HICP. The weights of each HICP component differ across euro area countries and are updated annually on the basis of household consumption expenditure. For 2024, services in Greece represented the fourth highest weight across the euro area, exceeding its respective average. This means that the HICP in Greece is more sensitive to the increases in services prices that have been recorded since early 2024.

5 See "Assessment of applicable statutory minimum wages", Bank of Greece, 2024 [in Greek].
6 Antonopoulos, C., S. Anyfantaki, H. Balfoussia, T. Kosma, E. Papapetrou, F. Petroulakis, P. Petroulas and P. Zioutou (2022), "The Greek labour market before and after the pandemic: slack, tightness and skills mismatch", Bank of Greece, *Economic Bulletin*, 56.

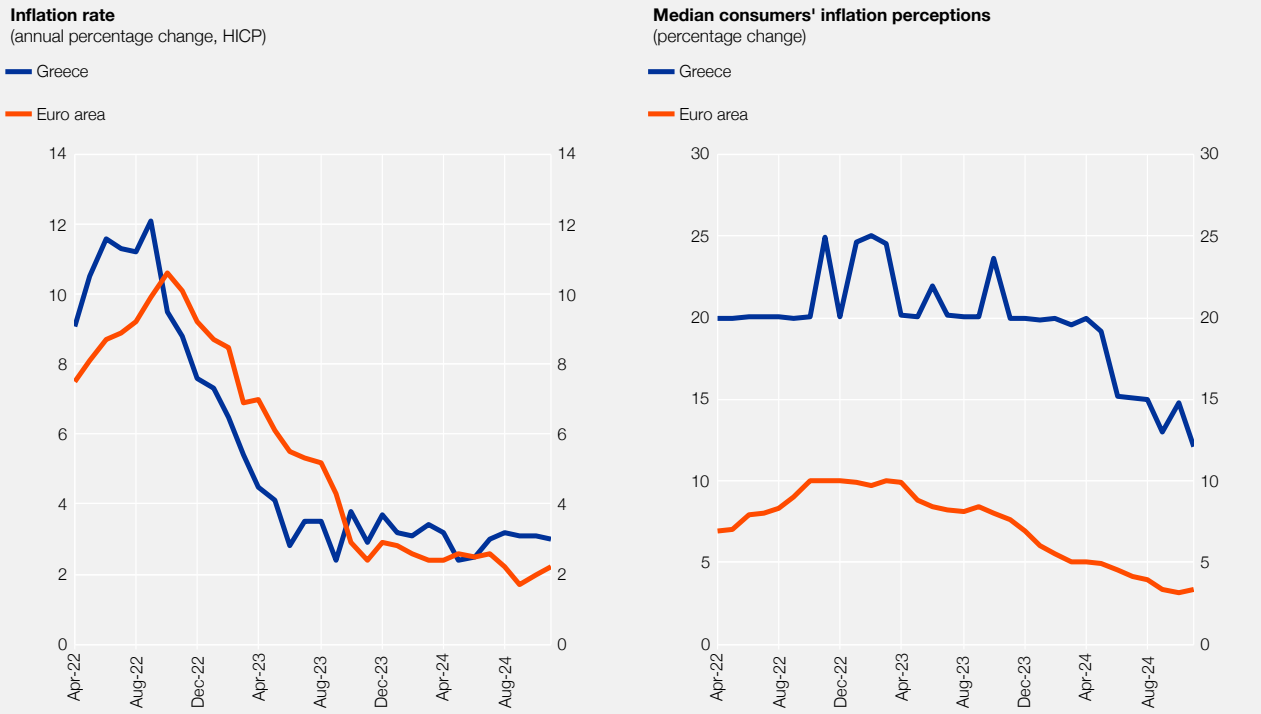
Box 6

CONSUMERS' INFLATION PERCEPTIONS AND EXPECTATIONS IN GREECE AND THE EURO AREA. INSIGHTS FROM THE ECB CONSUMER EXPECTATIONS SURVEY

The ECB Consumer Expectations Survey (CES) enables to gauge, in a timely manner, the inflation perceptions and expectations of consumers in eleven euro area countries. In April 2022 wave, the initial sample of six countries (Belgium, France, Germany, Spain, Italy, and the Netherlands) was expanded to include five additional euro area countries, namely Austria, Finland, Ireland, Greece and Portugal.[1] Accordingly, the CES has since then been collecting on a monthly basis also Greek data on consumers' perceptions of the percentage change in prices over the previous 12 months, as well as their expectations for price changes over the next 12 months and three years ahead. The purpose of this box is to examine whether, and to what extent, consumers' inflation perceptions in Greece and the euro area affect their short and medium-to-long-term inflation expectations. This would deepen our understanding of how consumers' inflation expectations are formed. Such understanding is key to effective monetary policy-making, as consumers' inflation expectations influence their economic behaviour, including consumption, saving and investment decisions.[2]

1 For a detailed description of the CES, see Bańkowska et al. (2021), "Consumer Expectations Survey: an overview and first evaluation", ECB Occasional Paper No. 287, December; and Georgarakos, D. and G. Kenny (2022), "Household spending and fiscal support during the COVID-19 pandemic: Insights from a new consumer survey", *Journal of Monetary Economics*, Vol. 129, Supplement, pp. S1-S14.
2 See e.g. Weber et al. (2022), "The Subjective Inflation Expectations of Households and Firms: Measurement, Determinants, and Implications", *Journal of Economic Perspectives*, 36(3):157-184, and D'Acunto et al. (2024), "Household inflation expectations: an overview of recent findings for monetary policy", ECB Discussion Paper No. 24.

Chart A Inflation rate and consumers' inflation perceptions



Sources: Eurostat (inflation rate) and ECB, Consumer Expectations Survey (CES) (median perceptions).
Note: Harmonised Index of Consumer Prices (HICP) in Greece and the euro area. Median inflation perceptions, weighted data for the period from April 2022 to November 2024. Latest observations: November 2024.

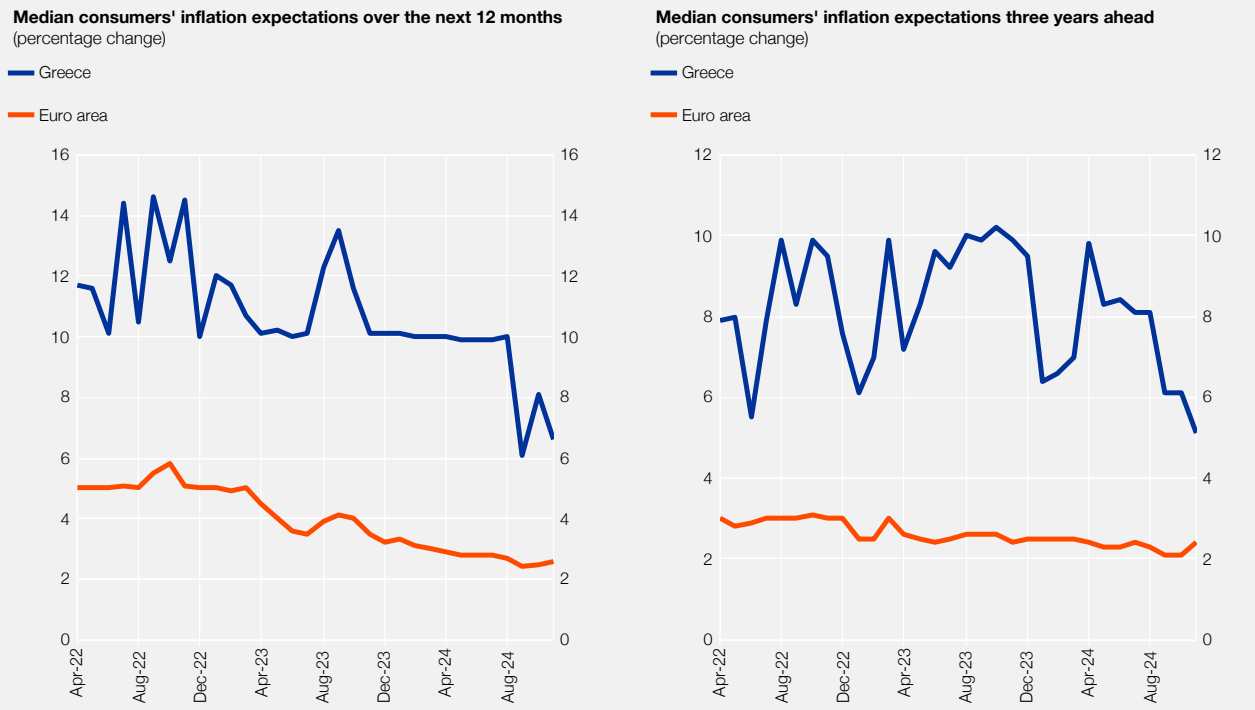
Evolution of inflation and consumers' inflation perceptions and expectations in Greece compared with the euro area

Chart A (left-hand panel) illustrates inflation developments based on the Harmonised Index of Consumer Prices (HICP) in Greece and the euro area over the period from April 2022 to November 2024.[3] A spike in inflation can be observed in 2022, due to global supply chain disruptions caused by the pandemic, as well as inflationary pressures on energy prices that intensified with the war in Ukraine. In Greece, HICP inflation increased from 9.1% in April 2022 to a peak of 12.1% in September 2022; in the euro area, it increased from 7.5% in April 2022 peaking at 10.6% in October 2022. Subsequently, inflation in the euro area fell substantially from that peak to 2.2% by November 2024, as a result of the ECB's monetary policy, moving closer to the 2% target. Greek HICP inflation fell from its September 2022 peak of 12.1% to 3.3% by November 2024. It is noteworthy that inflation in Greece rose from 2.5% in June 2024 to 3.2% in August 2024, mainly driven by higher energy and services prices.

Chart A (right-hand panel) shows the evolution of consumers' inflation perceptions in Greece and the euro area between April 2022 and November 2024 based on CES data. Consumers' median inflation perceptions are higher than official HICP values in both Greece and the euro area. It can be observed that, initially, consumers' median inflation perceptions in Greece, although elevated (20%), remained stable until the first quarter of 2022. Thereafter, they rose sharply, peaking at 25% in February 2023, before declining at a steady pace from April 2024 onwards to reach 12.1% by November 2024. Median inflation perceptions in the euro area exhibited a similar pattern, initially rising strongly and peaking at 10%, followed by a gradual decline to 3.4% by November 2024. Notably, the decline in median inflation perceptions began in the first quarter of 2023 in the euro area, whereas in Greece, the downward trend started nearly a year later.

3 November 2024 was the latest available month at the time of writing.

Chart B Consumers' inflation expectations



Source: ECB, Consumer Expectations Survey (CES).
Note: Median inflation expectations over the next 12 months and three years ahead, weighted data for the period from April 2022 to November 2024. Latest observations: November 2024.

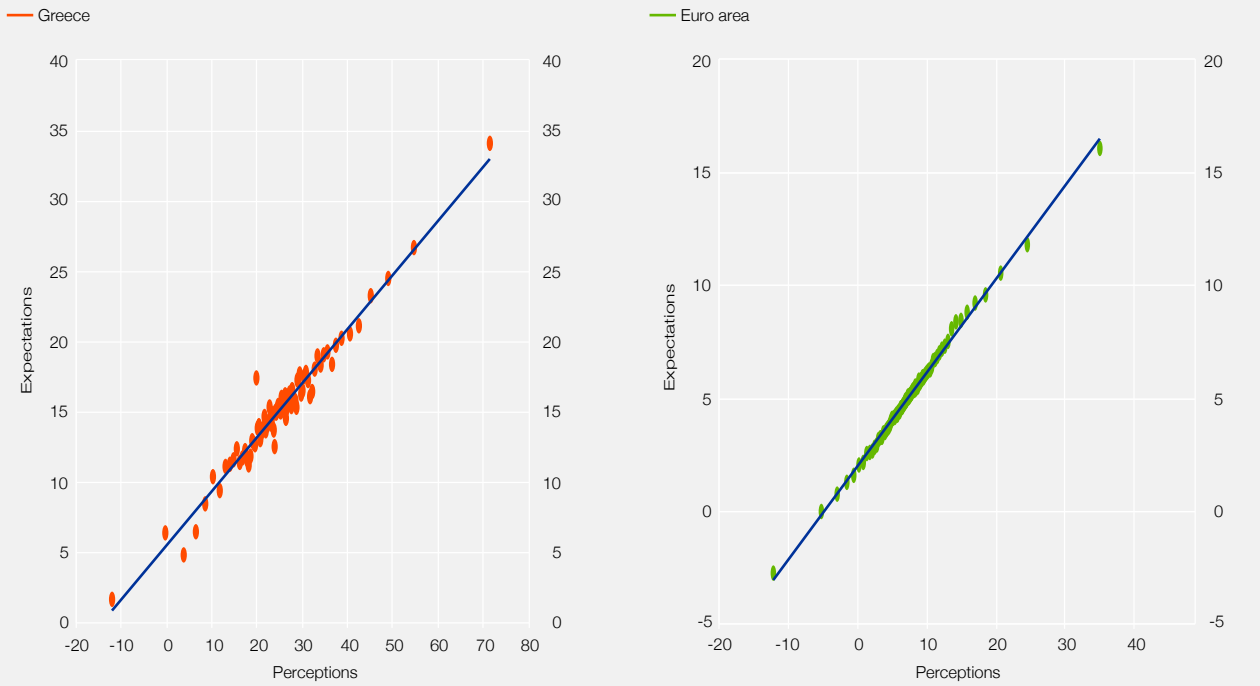
Chart B depicts the evolution of consumers' median inflation expectations over the next 12 months and three years ahead, in Greece and the euro area. Short-term expectations (over the next 12 months) seem to closely mirror the pattern of consumers' current inflation perceptions; however, they are significantly lower than the latter. Moreover, as with perceptions, consumers' inflation expectations in Greece are higher than in the euro area.[4] Also, the peaks in short-term inflation expectations in both Greece and the euro area (at 14.5% and 5.8%, respectively) coincided with the respective peaks of HICP inflation, in September 2022 for Greece and in October 2022 for the euro area. Median short-term expectations declined from 13.5% in September 2023 to 6.6% in November 2024 for Greece, while they fell from 4.1% to 2.6% for the euro area over the same period. These strong declines in consumer inflation expectations can largely be attributed to the ECB's monetary policy tightening, with significant increases in policy rates for ten consecutive months from July 2022 to September 2023.

Consumers' medium-to-long-term inflation expectations, i.e. three years ahead, are markedly lower than their short-term expectations both in Greece and in the euro area. As in the case of short-term expectations, they are higher and more volatile in Greece than in the euro area.[5] Greek consumers' median inflation expectations three years ahead increased and peaked at 10.2% in October 2023, but declined significantly thereafter; a new peak at 9.8% in April 2024 was followed by a fall to 5.1% by November. In the euro area, the respective expectations peaked in October 2022 (3.1%). In April 2023, they decreased to 2.6% and further to 2.1% by October 2024, very close to the ECB's 2% medium-term inflation target; however, they increased to 2.4% in November 2024.

4 This is also confirmed by the European Commission's consumer survey, which shows that consumers' inflation perceptions and expectations are higher in Greece than in the euro area.

5 Higher inflation expectations of consumers in Greece relative to the euro area are correlated with a more pessimistic view of Greek consumers regarding their income, own financial situation, liquidity and access. See Box IV.2 "ECB survey on Greek consumer expectations", Bank of Greece, *Annual Report 2023*, April 2024.

Chart C Relationship between consumers' inflation perceptions and expectations over the next 12 months



Source: ECB, Consumer Expectations Survey (CES).
Note: To identify the relationship between inflation perceptions and expectations over the next 12 months, individual-specific fixed effects (time-invariable characteristics such as educational level) and wave effects are taken into account. Data refer to the period from April 2022 to November 2024. Latest observations: November 2024.

The impact of consumers' inflation perceptions on their inflation expectations

Chart C plots consumers' inflation perceptions against their inflation expectations over the next 12 months in Greece and the euro area, based on CES data from April 2022 to November 2024, taking into account individual-specific fixed effects (time-invariable characteristics such as educational level) and wave effects. A clear positive and linear relationship can be observed between inflation perceptions and short-term inflation expectations. Chart D illustrates the relationship between consumers' inflation perceptions and three-years-ahead expectations in Greece and the euro area. Despite the longer horizon, consumers' inflation perceptions still have a positive impact on their three years ahead inflation expectations, both in Greece and in the euro area.

To empirically quantify the impact of consumers' inflation perceptions on short-term and medium-to-long-term inflation expectations, we use a linear regression model. Following the relevant literature, several additional independent variables are incorporated, namely: age group; gender; presence of a partner in the household; educational level; financial literacy; income quintiles; employment status; home ownership; mortgage liabilities; liquidity constraints; own financial situation compared with one year earlier; and access to credit from financial institutions (e.g. banks).

The empirical results, reported in Table A, point to a positive and statistically significant impact of consumers' inflation perceptions on their inflation expectations for the next twelve months in Greece and the euro area. The estimated coefficient of inflation perceptions is 0.56 for Greece and 0.51 for the euro area. This implies that a one percentage point increase in inflation perceptions leads to a 0.56 and 0.51 percentage point increase in short-term inflation expectations, respectively.

With respect to medium-to-long-term inflation expectations, the results (see Table B) show that consumers' inflation perceptions continue to have a positive and statistically significant impact on consumers' expectations for inflation three years ahead, both in Greece and in the euro area, with the estimated coefficients being 0.47 and

Chart D Relationship between consumers' inflation perceptions and expectations three years ahead

Source: ECB, Consumer Expectations Survey (CES).
Note: To identify the relationship between inflation perceptions and expectations three years ahead, individual-specific fixed effects (time-invariable characteristics such as educational level) and wave effects are taken into account. Data refer to the period from April 2022 to November 2024. Latest observations: November 2024.

0.36, respectively.[6] It is observed that the impact of consumers' inflation perceptions on their medium-to-long-term expectations is relatively weaker compared with the impact on their short-term inflation expectations.

Table A Empirical model of short-term expectations: Greece and euro area-11

	Greece	Euro area-11
Consumers' inflation expectations 12 months ahead		
Inflation perceptions	0.556*** (0.059)	0.507*** (0.008)
Observations	33,291	919,266
R-squared	0.501	0.466
Other variables	YES	YES
Wave effects	YES	YES

Source: ECB, Consumer Expectations Survey (CES).
Note: The table depicts the estimated coefficients deriving from a linear regression model of short-term expectations with clustered standard errors. The data refer to the period from April 2022 to November 2024. Latest observations: November 2024.

Table B Empirical model of medium-to-long-term expectations: Greece and euro area-11

	Greece	Euro area-11
Consumers' inflation expectations three years ahead		
Inflation perceptions	0.477*** (0.059)	0.359*** (0.011)
Observations	33,291	919,267
R-squared	0.3327	0.2577
Other variables	YES	YES
Wave effects	YES	YES

Source: ECB, Consumer Expectations Survey (CES).
Note: The table depicts the estimated coefficients deriving from a linear regression model of medium-to-long-term expectations with clustered standard errors. The data refer to the period from April 2022 to November 2024. Latest observations: November 2024.

6 This positive relationship between consumers' inflation perceptions and expectations has often been identified in the literature, see e.g. D'Acunto et al. (2021), "Exposure to Grocery Prices and Inflation Expectations", *Journal of Political Economy*, 121(5), 1615-1639; Arioli et al. (2017), "EU consumers' quantitative inflation perceptions and expectations: an evaluation", ECB Occasional Paper No. 186; and Huber et al. (2023), "The pass-through from inflation perceptions to inflation expectations", Deutsche Bundesbank Discussion Paper No 17/2023.

Concluding remarks

In conclusion, consumers' inflation perceptions and expectations in Greece and the euro area show a similar pattern, although they are significantly higher in the case of Greece. Inflation perceptions and expectations rose during 2022, primarily due to global supply chain disruptions caused by the pandemic, as well as inflationary pressures on energy prices, exacerbated by the war in Ukraine. Subsequently, as a result of the ECB's monetary policy tightening, both perceptions and expectations declined significantly, although with some lag in the case of Greece. Overall, consumers' inflation perceptions are found to be positively and strongly correlated with their short-term and medium-to-long-term inflation expectations. Therefore, we need to understand the formation mechanism of consumers' inflation expectations and perceptions in order to design an effective monetary policy.

Box 7

MACROECONOMIC IMPLICATIONS OF A TAX ON BANKS' PROFITS

Since 2022, European banks have been experiencing increased profitability, fuelled by the post-pandemic economic recovery and the rise in inflation. At the same time, the tightening of monetary policy, together with the slow pass-through of policy rate increases to deposit rates, widened the interest rate spread between loans and deposits, further boosting bank profits. Faced with rising budget deficits, many European countries have already imposed or are considering imposing additional or temporary taxes on banks. This development has recently triggered discussions in academia and international institutions about the potential effects of such a policy on the financial sector and the real economy.[1]

Against this background, the objective of this box is to investigate the potential macroeconomic effects of a tax on banks' profits for the Greek economy. To this end, a Dynamic Stochastic General Equilibrium (DSGE) model is employed, which allows to identify and understand the propagation channels through which a tax on bank profits may affect the real economy and the financial sector.

Methodology

To study the transmission mechanisms of a tax on banks' profits, the theoretical model of Clerc et al. (2015) is employed.[2] This is a DSGE model, suitable for studying the transmission of exogenous shocks from the real economy to the financial sector, and vice versa. In particular, the model incorporates a detailed financial sector, with banks providing business and housing loans to firms and households, respectively. Firms and households use physical and residential capital, respectively, as collateral to acquire loans. Bank funding is made through equity funding and household deposits. The novelty of this model is that it includes three "layers of default", establishing the conditions under which default on outstanding loan obligations becomes the optimal "strategic" choice for financial institutions, firms and households, with knock-on effects on the financial system and the real economy.

The model is calibrated for the Greek economy on a quarterly basis and, for the purposes of the analysis, it is assumed that a temporary tax of 1% is imposed on bank profits.[3] At the same time, it is assumed that the resulting

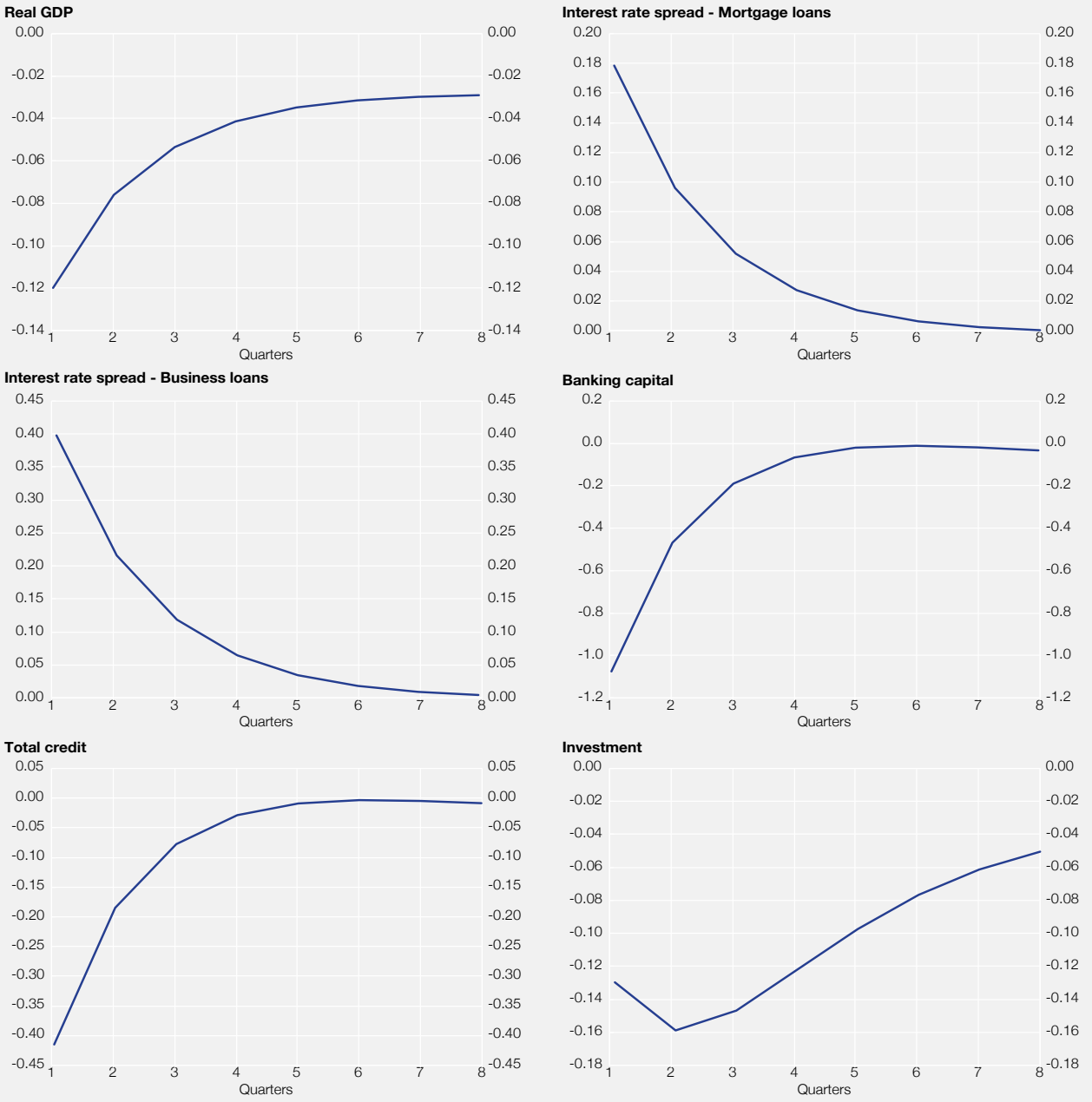
1 See Maneely, M. and L. Ratnovski (2024), "Bank profits and bank taxes in the EU", IMF Working Paper No. 143, and Chen, R., V. Guzzo, F. Jamaludin, A. Mohommad, R. QU and Y. Zhao (2024), "Bank profitability in Europe: Not here to stay", IMF Working Paper No. 142.

2 Clerc, L., A. Derviz, C. Mendicino, S. Moyen, K. Nikolov, L. Stracca, J. Suarez and A.P. Vardoulakis (2015), "Capital regulation in a macroeconomic model with three layers of default", *International Journal of Central Banking*, 11(3), 9-63. For details regarding the calibration of the model for the Greek economy, see Balfoussia, H. and D. Papageorgiou (2016), "Insights on the Greek economy from the 3D macro model", Bank of Greece Working Paper No. 218, and Balfoussia, H., H. Dellas and D. Papageorgiou (2019), "Fiscal distress and banking performance: The role of macroprudential regulation", CEPR Working Paper No. 14003.

3 In the model, banks' profits are equal to the difference between the returns on loans granted and the repayment obligations on deposits.

Dynamic effects of a tax on banks' profits

(percentages %)



Source: Bank of Greece estimates.
Note: All variables are expressed as percentage deviations from the steady-state, except for the interest rate spreads that are expressed as percentage point changes (annualised). Interest rate spreads are calculated as the difference between lending and deposit rates.

tax revenues are distributed to households. The calibration of the size and duration of the tax is illustrative and aims to investigate the sensitivity of macroeconomic variables to the imposition of the tax. Given that the shock is temporary, all macroeconomic variables will gradually converge back to their initial levels.

Dynamic effects of a tax on banks' profits

The chart shows the dynamic effects of a tax on banks' profits. According to the model's results, the tax affects the economy through two main channels.

The first channel operates through banking capital. The tax reduces banks' profits, negatively affecting the return on equity and thus the ability of banks to raise new equity. This limits the supply of loans in the model, exerting a negative impact on investment expenditure and, consequently, on the output of the real economy. At the same time, the tax creates an incentive for banks to increase lending rates on business and mortgage loans in an effort to offset the decline in profits caused by the tax burden and to attract new equity funding. However, higher lending rates dampen demand for business and residential investment, leading to a further decline in output and a further widening of the interest rate spread between loans and deposits.

In addition, the decline in GDP negatively affects the prices of physical and residential capital. Given that in the model these assets are used as collateral to provide business and mortgage loans respectively, the fall in their value leads to an increase in the share of non-performing loans of households and businesses, as it is now more advantageous to grant the mortgaged asset to the bank rather than repay the loan. This development deteriorates the quality of banks' loan portfolios, weakens banks' balance sheets and leads to a further decline in banking capital. As a result, the adverse effects of the policy measure under consideration on the financial sector, as well as on the real economy and household incomes, are amplified.

The second channel through which the tax affects the economy relates to the cost of bank funding through deposits. Higher default rates by households and firms negatively affect the creditworthiness of banks in the context of the model, leading to an increase in the interest rate demanded by depositors. As a result, the cost of funding through new deposits increases, leading to a further decline in banking capital and total credit. The increase in the deposit rate is in turn passed on to lending rates, further reducing credit demand and exacerbating the contraction of economic activity.

It should be noted that the redistribution of tax revenue to households acts as a compensating mechanism, partially offsetting the negative effects on their income and on aggregate demand. However, it is not sufficient to fully offset the negative impact of the tax, and the net effect on aggregate demand and GDP is negative.[4]

These results are consistent with recent findings in the relevant literature. For instance, as confirmed by empirical studies for European countries, the imposition of a tax on banks leads to an increase in lending rates and a decline in bank credit. Reduced lending, in turn, causes a drop in business investment.[5] Nevertheless, it should be noted that the channels identified in this study occur in the context of a theoretical model of the economy. In practice, in the case of the Greek banking system, the direct impact of these channels may be limited, given that Greek credit institutions have high levels of capital adequacy and liquidity, well above the regulatory minimum required. Therefore, they have a considerable degree of flexibility, and any decline in their profitability may not directly affect their capacity to raise funds from the financial markets. Nonetheless, the model highlights the potential implications of a tax on banks' profits as well as the channels through which such a policy could affect Greece's real economic aggregates, thus underlining the importance of including a range of factors in the assessment of the policy measure under consideration.

Conclusions

This box explores the potential macroeconomic effects of a tax on banks' profits, using a DSGE model calibrated for the Greek economy. It is found that the imposition of such a tax affects the economy through two main channels: banking capital and bank funding. These channels may constrain the supply of credit and reduce the value of banking collateral, leading to a contraction in economic activity. It is concluded that a tax on bank profits could potentially have negative effects on both the financial sector and the real economy. At the current juncture, Greek banks have high levels of capital adequacy and liquidity, therefore any decrease in their profitability is not ex-

4 The decline in household income also leads to a reduction in household consumption expenditure, further dampening aggregate demand and thus real GDP.

5 See, among others, Borsuk, M., J. Przeworska, A. Saunders and D. Serwa (2024), "The macroeconomic costs of the bank tax", *Journal of Financial Stability*, Vol. 72, and Buch, C.M., B. Hilberg and L. Tonzer (2016), "Taxing banks: An evaluation of the German bank Levy", *Journal of Banking and Finance*, 72, 52-66.

pected to directly affect their ability to raise new capital. However, the theoretical transmission channels identified in the model highlight the need to take into account a number of factors for an evaluation of the policy measure under consideration.

Box 8

IMPLEMENTATION OF REGULAR EU FUNDING PROGRAMMES FOR 2014-2020 AND 2021-2027 AND THEIR IMPACT ON THE CURRENT ACCOUNT BALANCE

Regular funding from the European Union (EU) budget is integrated into successive programmes. The aim of these programmes is to provide support to Member States – subject to conditionality[1] – in order to reinforce the EU's economic, social and territorial cohesion through investment and structural reforms. The current Multiannual Financial Framework (MFF) concerns the period 2021-2027, while the Partnership Agreement (PA) covered the period 2014-2020. However, in accordance with the rules, each programme allows for a full disbursement within three years after the end of the programme (n+3 rule), i.e. until the end of 2030 for the current MFF. In the balance of payments, receipts from EU programmes' structural funds are recorded under the primary and secondary income accounts, which are included in the current account, as well as under the capital account, depending on the recipient and type of financing. In terms of receipts, the implementation of the 2021-2027 MFF falls short of the previous 2014-2020 programme, possibly also due to the introduction of the Recovery and Resilience Facility (RRF). So far, the slower implementation of the 2021-2027 MFF has resulted in lower-than-expected inflows into the current account over the first years of the programme. This box reviews and compares the last two programmes, while projecting the medium-term absorption of the current MFF funding and its impact on the current account balance in Greece.

Stocktake on the implementation of the 2014-2020 PA, description of the 2021-2027 MFF and comparison of the disbursement timeline between the two programmes

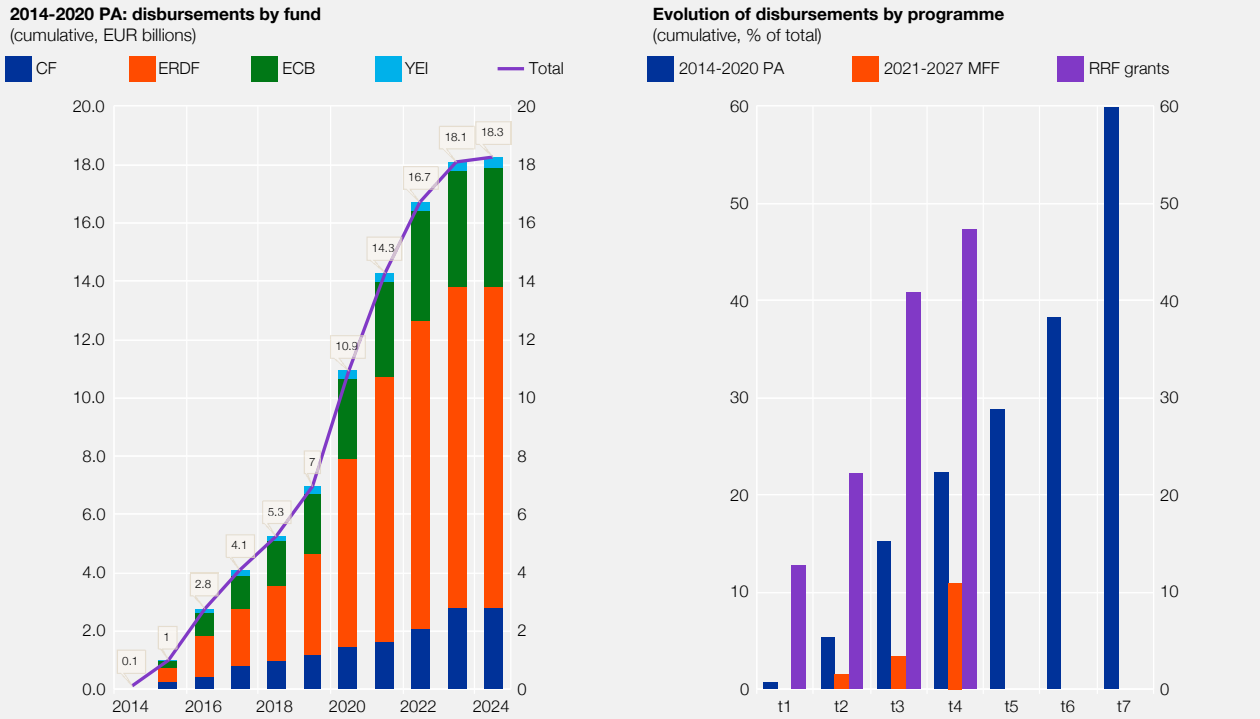
The 2014-2020 PA secured resources of a cumulative EUR 18.3 billion for Greece.[2] These resources were mainly directed at enhancing the competitiveness of small and medium-sized enterprises (EUR 3.5 billion), environmental protection and the efficient management of available natural resources (EUR 2.1 billion), resilience and crisis response (EUR 2.0 billion), as well as employment (EUR 1.9 billion). The funds that allocated the resources included the European Regional Development Fund (ERDF), accounting for 60% of total EU resources, the European Social Fund (ESF), the Cohesion Fund (CF) and the Youth Employment Initiative (YEI).

In the context of the 2021-2027 MFF, Greece has been allocated EUR 20.5 billion from EU funds. MFF priorities include actions on: a more competitive and smarter Europe; a greener, low carbon transitioning towards a net zero carbon economy; a more connected Europe by enhancing mobility; a more social and inclusive Europe; and a Europe closer to citizens by fostering the sustainable and integrated development of all types of territories. The funds financing these projects are roughly corresponding to those of the 2014-2020 programme.[3] Compared to all other funds, the ERDF continues to pool most of the EU resources allocated to Greece (52% of total EU resources), followed by the ESF+, which accounts for 27.1% of the resources.

Experience with the implementation of past EU funding programmes in Greece shows that the programmes are back-loaded and that the bulk of resources is disbursed either in the last years of the programme's duration or

1 Such conditionalities relate either to the deviation of each region's GDP per capita from the EU average for the European Regional Development Fund and the European Social Fund or to a Gross National Income (GNI) per capita below 90% of the EU average for the Cohesion Fund.
2 Excluding resources mostly relating to rural development interventions or projects contributing to the sustainable exploitation and management of water resources promoted by the European Agricultural Fund for Rural Development and/or the European Maritime and Fisheries Fund.
3 The only difference is that the Youth Employment Initiative fund has been replaced by the Just Transition Fund.

Chart A Evolution of disbursements under EU funding programmess



Sources: European Commission, Cohesion Open Data Platform, Ministry of Finance and Bank of Greece calculations.
Note: On the horizontal axis of the right-hand panel, t1 to t7 refer to the first seven years of each programming period (2014-2020 and 2021-2027). The additional three years provided to complete the full disbursement for the 2014-2020 PA are not reflected in the chart.

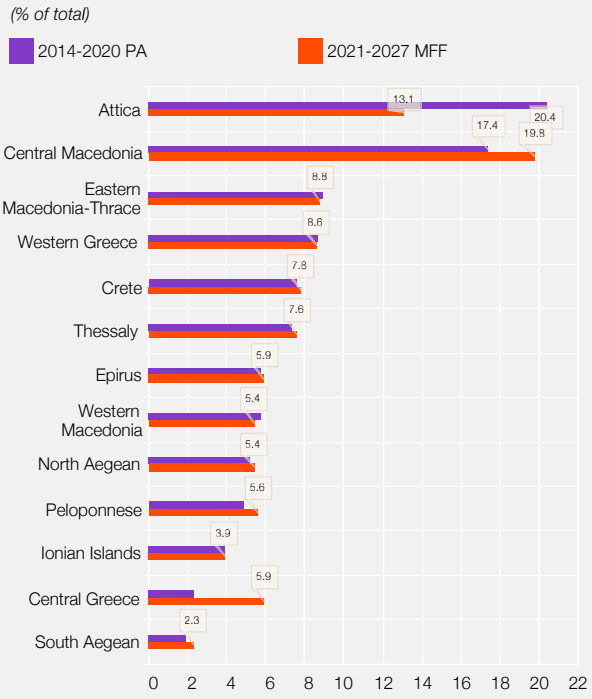
in the additional three years provided for the completion of the full disbursement (see Chart A1). Specifically, in the 2014-2020 programme, only 22% of total resources (EUR 4.4 billion) had been disbursed over the first four years, with disbursements significantly accelerating from the programme's seventh year of implementation onwards. Over the corresponding four-year period, 2021-2027 MFF disbursements amount to 11% of total available MFF resources (EUR 2.2 billion), i.e. half the absorption compared to the 2014-2020 PA. In this context, it is evident that the implementation of the 2021-2027 MFF is lagging behind relative to the previous 2014-2020 programme. This is largely due to the introduction of the temporary recovery instrument to address the impacts of the pandemic (RRF). As this instrument ends in 2026, priority may be given to the implementation of projects that use RRF resources. It should be noted that in the first four years of its implementation, the 2021-2027 MFF coincided with the RRF, through which a cumulative of EUR 8.6 billion was disbursed in the form of grants over the same period. It is worth pointing out that across all EU Member States, progress in implementing the 2021-2027 MFF so far translates into disbursements amounting to only 5.4% of the committed resources, whereas in the first four years of the 2014-2020 programming period absorption had reached 24.5%. Besides, the competent authorities responsible for the administration of approved RRF and MFF projects fall under the scope of the same Ministry with a view to enhancing cooperation and the exchange of know-how and experience.

Summary of funded areas to be supported and comparison by lines of action and region between the two EU programmes

EU programme resources are allocated according to the lines of action to individual structural and special purpose funds,[4] as well as to operational and regional programmes. Chart B shows the percentage distribution of resources across the 13 regions of Greece. Regarding actions to support regional development, compared to the

4 These include, for example, the new fund for the transition to delignitisation (under the Just Transition Fund) and the Asylum, Migration and Integration Fund.

Chart B Allocation of EU programme resources by region



Sources: European Commission, Cohesion Open Data Platform, Ministry of Finance and Bank of Greece calculations.

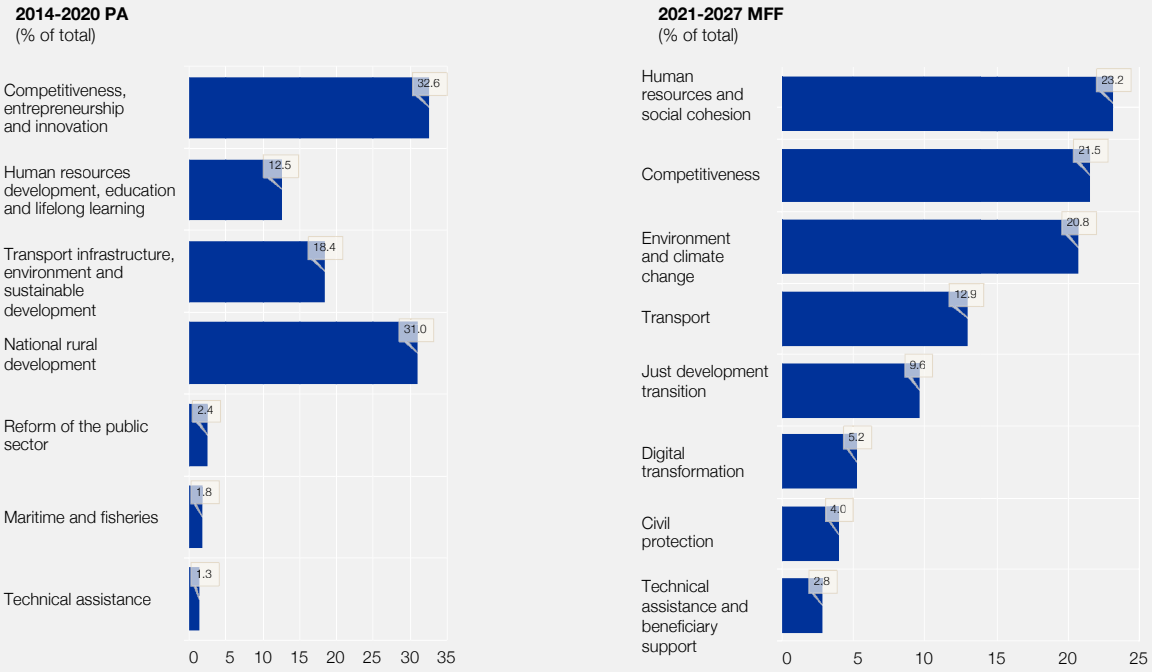
previous programming period, resources intended for Attica decreased from 20% to 13%, while those intended for Central Greece and Central Macedonia were reinforced (by an additional 3.5 and 2.4 percentage points, respectively), followed by the Peloponnese region. In the 2021-2027 MFF, EU financial support to regions has increased by a total of EUR 2.1 billion compared to the previous programme, with the aim of strengthening regional GDP and value added by region.

Operational programmes vary between the two programmes, as illustrated in Chart C. In the 2021-2027 MFF, competitiveness remains among the priority areas to be supported, although its share in allocated resources has shrunk. At the same time, additional resources were transferred towards actions to reskill and upskill workers, tackle climate change, promote green growth and enhance transport efficiency (see Chart C).

Impact on the current account balance as a percentage of GDP from current receipts and expected EU payments

In the balance of payments, receipts from the structural funds of EU funding programmes, such as the MFF, are recorded under the primary and the secondary income accounts, which are included in the current account, as

Chart C Breakdown of EU programme resources by lines of action



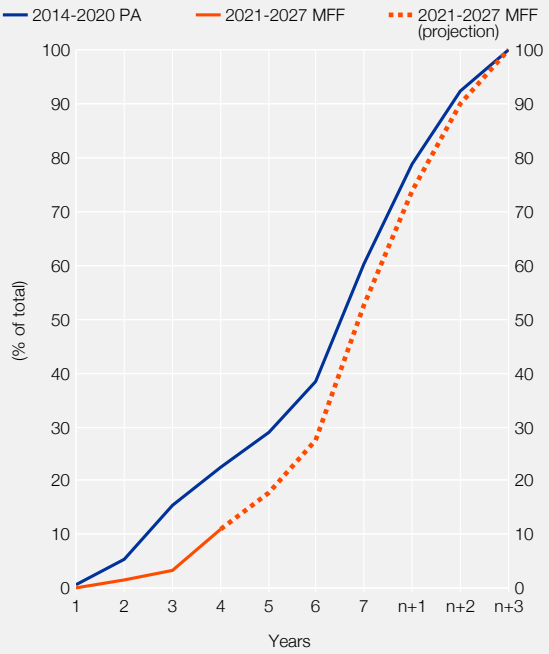
Sources: European Commission, Cohesion Open Data Platform, Ministry of Finance and Bank of Greece calculations.

well as under the capital account, depending on the recipient and type of financing.[5] Past recording experience with regard to EU programmes shows that around 70% of the structural funds' budget is recorded under the current account and the remaining 30% under the capital account.

Based on the progress of the 2014-2020 PA and considering the upcoming end of the RRF's duration, the implementation of the 2021-2027 MFF in Greece is expected to accelerate from 2027 onwards and for the next three years after the end of its implementation period (n+3 rule), with a positive impact on GDP and the current account balance (see Chart D).

It is projected that, within 2025-2026, the 2021-2027 MFF will disburse around 17% of its total resources,[6] i.e. EUR 3.5 billion, which will be allocated to the balance of payments between the current account and the capital account in more or less the same proportion as in previous programmes. EU resources are estimated to average around 1.1% of GDP annually for 2025-2027. Of course, apart from the direct impact of disbursed resources on the current account balance, there is also an indirect impact that is associated with spillover effects from other sectors, such as increased imports of capital goods, which are a key component of infrastructure projects. Against this backdrop, the mobilisation of synergies may temporarily weigh on the current account deficit at the early stages. In particular, RRF disbursements to be recorded under the current account balance as a percentage of GDP are expected at around 0.8% and 1.1% of GDP in 2025 and 2026, respectively. Overall, in 2025-2027 the direct impact of total EU resources is expected to reduce the current account deficit by 1.7% of GDP per year on average.

Chart D Progress in the implementation of EU funding programmes



Sources: European Commission, Cohesion Open Data Platform, Ministry of Finance, Bank of Greece calculations and estimates.

Conclusion

Funding programmes backed by EU budget resources have over time supported the development and upgrading of infrastructure in those EU regions and sectors that are lagging behind others, targeting convergence in priority areas. The resources allocated on the basis of the structural reforms needed must be fully absorbed and utilised. For this reason, it is necessary to strengthen administrative infrastructure and procedures, in order to speed up the implementation of the 2021-2027 programme and, by extension, ensure a full and timely absorption of the relevant resources. At the same time, resources under EU programmes are important inflows that reduce the country's balance of payments deficit and external financing needs, both of which are indicative of the evolution of the Greek economy over time.

5 The primary income account records taxes on production and imports, as well as subsidies and rents from natural resources. The secondary income account records current taxes on income and wealth, social security contributions, social benefits, current transfers from international cooperation programmes, miscellaneous current transfers and EU own resources based on VAT and GDP. The capital account records unrequited transfers related to fixed capital formation, i.e. contracts, leases and licences for land, real estate and other capital equipment, compensation for extensive damages in the context of natural disasters, large projects for the construction of infrastructure, hospitals, schools, etc.

6 Including resources under the Common Agricultural Policy (CAP).

Box 9

DECENTRALISATION OF PROPERTY TAX: ADVANTAGES AND DISADVANTAGES

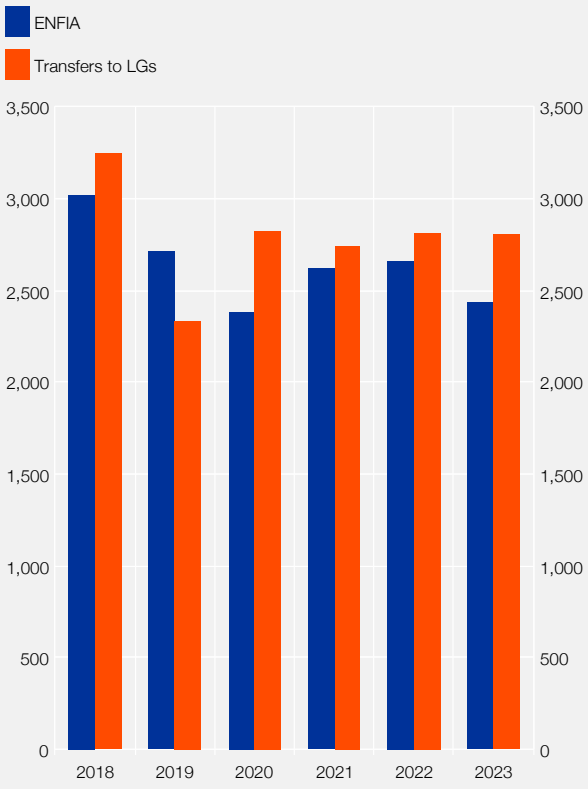
Rationalisation and control of public expenditure are key to the planning and execution of the State Budget (SB) respectively. They are linked to the efficient use of public funds, to which simplified and transparent management mechanisms also contribute. Decentralisation of responsibilities,[1] where possible, could create significant economies of scale in the management of the expenditure side, but also of the revenue side of the SB. This could be so because local authorities have better knowledge of both the tax base (and can therefore cut red tape related to the levying and control of taxes, reducing the associated costs) and the local needs to which revenues will be channelled.

A step in this direction could be, in particular, the collection and management of revenues from ENFIA (Unified Property Ownership Tax),[2] or parts thereof, by local governments[3] (LGs). On the one hand, this tax concerns real estate that lies within the geographical limits of each municipality in the country and, on the other hand, ENFIA revenues could replace a large part of the transfer payments[4] from the SB to LGs (see the chart), thus freeing up SB resources to other uses linked to the provision of public goods and services, such as health, education, etc.

Advantages and disadvantages of the management of ENFIA by local governments

Starting from the advantages, it should be stressed that it is a tax with limited scope for tax evasion because the tax base, i.e. the property, cannot easily be misreported in tax returns.[5] Property tax is also a neutral tax in the sense that changes in tax rates are not associated with distortions in the tax base.[6] Thus, local governments, by assuming the collection of ENFIA, would not have to bear the high costs of a tax control mechanism, as they would have the advantage of better knowledge of the real estate and its use within the limits of their geographical areas. This knowledge would allow LGs to contribute to combating tax evasion by helping to better track property income (e.g. undeclared income).

ENFIA revenue and transfers to LGs (2018 - 2023)



Source: Ministry of Economy and Finance, General Accounting Office of the State, State Budget Execution, Monthly Bulletins.

1 It should be noted that the reduction in the number of municipalities to 332 in 2019, from 910 in the 2000s, facilitates any decentralisation endeavour.
2 The Unified Property Ownership Tax (ENFIA) in Greece is levied on all properties and is a function of many factors, such as the surface of buildings, the age rate, the floor level, the zone price, etc. It was introduced in 2013 and replaced the Special Emergency Property Tax (EETA).
3 As part of this logic, LGs already collect taxes related to the ownership of real estate (e.g. the Real Estate Fee – TAP) through utility bills.
4 Without disregarding the role of transfers in reducing inequalities (economic, social and local) associated with the provision of public goods and services.
5 Of course, account should be taken of the impact on the tax-paying capacity of property owners from possible large increases in property prices.
6 This is why historically classical economists such as Adam Smith and Ricardo, as well as later ones (see, for example, Mirrlees et al. (2011), Tax by Design: The Mirrlees Review, Institute for Fiscal Studies, and Schwerhoff et al. (2022), "Equity and Efficiency Effects of Land Value Taxation", IMF Working Paper No 2022/263), have been advocates of a property tax.

The tax revenues would help strengthen the economic independence of LGs and allow for a more targeted response to local needs (e.g. development of local infrastructure and services), ensuring that taxes are used for the benefit of taxpayers. At the same time, transparency in the use of resources and accountability of local authorities to taxpayers would be enhanced. In turn, this would help to nurture tax responsibility and compliance. This tax tool could be used by LGs for redistribution purposes, based on the horizontal and vertical equity criterion,[7] so that taxpayers with the same property and tax capacity are taxed the same.[8] For example, real estate taxation could include[9] exemptions and rebates for specific categories of citizens (e.g. elderly people, low-income people, etc.) and/or a progressive tax rate depending on the value of the property, as is the case in France, Denmark and Ireland.[10]

In addition, good management by local authorities would enhance their credibility, potentially expanding their financing horizons and their ability to take actions to improve the everyday lives of local residents. Such a reform would thus create a need for LGs to evolve into bodies with technocratic infrastructure and know-how, capable of contributing to the modernisation and development of local societies and, by extension, the country.

As regards the implementation of the SB, the effective management of ENFIA by LGs could help rationalise and save public expenditure, as well as administrative costs arising from intra-governmental transfers.

Turning to the drawbacks of the management of ENFIA by municipalities, there is a visible lack of technocratic infrastructure in the majority of municipalities, which need to be trained and become familiar with the relevant tools. This is not only the case for small municipalities – moreover, it is a challenge as effective property tax management requires know-how, expertise and specialised staff, the implementation of which also depends on the willingness of the municipalities themselves. Such an effort would inevitably be associated with increased administrative costs in the medium term and possibly with a risk of mismanagement, which however would be compensated for by more direct accountability to local societies. Finally, it should be noted that poor management of tax tools could lead to inequalities between municipalities, while at the same time it could also contribute to tax competition (in terms of the property tax), thus making it necessary for the state to step in and supervise the transitional phase.

International experience

The management of property taxes solely or primarily by local authorities is international practice and concerns different kinds of taxes and control mechanisms (local or state-wide). The table provides summary information on the responsibilities for levying and managing property taxes in European countries.

It is worth noting that Greece ranks low among European countries as regards the management of tax revenues by local governments. Using as a decentralisation indicator tax revenues[11] (including, where appropriate, property taxes) collected at local and regional level (sub-central tax revenue) as a percentage of total tax revenues (a part of which is property taxes), it can easily be seen that in Greece the share of tax revenues managed by local authorities in 2016 was 2.94% of total tax revenue, when the European average was 12.64%. Since ENFIA is managed by the Central Government and involves a large part of property tax revenue, entrusting the local authorities with the management of ENFIA would change Greece's ranking with regard to the tax decentralisation index.

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7 See, for example, Rosengard, J.K. (2012), "The Tax Everyone loves to Hate: Principles of Property Tax Reform", Harvard Kennedy School M-RCBG Faculty Working Paper No. 2012-10.

8 Of course, the financial capacity of each taxpayer (income, other assets, etc.) should also be centrally assessed in order to avoid levying high taxes, for example on pensioners who have acquired a property during their working life or on employees who have inherited a property but their income does not match the value of the property.

9 It should be noted that such a change in Greece would require an amendment to the Constitution allowing municipalities to exercise fiscal power.

10 See Tatsos , N. and M. Zoi (2021), "Proposals for strengthening the economic independence and efficiency of Municipalities. Taxation of real estate as a source of finance" [in Greek], diaNEOsis.

11 See Tatsos and Zoi, op. cit.

Real estate taxes in selected European countries

Country	Tax name	Basis of calculation	Enforcement/collection body
Austria	Grundsteuer	Various factors such as land value, property type, location	Local authorities (enforcement and collection)
France	Impôt sur la fortune immobilière (IFI)	Value of real estate above EUR 800,000. Imposed at a progressive scale with rates of 0.5%-1.5%	Central Tax Authority (Direction générale des finances publiques-DGFiP)
Germany	Grundsteuer	Value of land and buildings	Local authorities (municipalities – Gemeinden) (calculation and collection)
Denmark	Ejendomsvaerdiskat (Real estate Tax)	Real estate value	Central government (enforcement and collection)
	Grundskyld (annual land tax)	Land value	Local authorities (enforcement and collection)
Switzerland	Vermögenssteuer	Net real estate value Rates: depending on the canton	Local authorities Imposed by the cantons Every canton has its own tax authority which manages property tax
Greece	Unified Property Ownership Tax (ENFIA)	Objective value of the property. It has two parts: 1) Main tax separately for each property 2) Supplementary tax (total real estate above a certain value threshold)	Central government Independent Authority of Public Revenue (AADE)
United Kingdom	Council Tax		Local authorities (Local Councils)
Ireland	Local Property Tax (Annual Local Property Tax)		Central government (enforcement and collection)
Spain	Impuesto Sobre el Patrimonio	Imposed on persons with total assets of more than EUR 700,000 Rates: 0.2 %-2.5 % depending on the value of the property	Central government (Agencia Tributaria, the national tax office of the country)
Italy	Imposta Municipale Unica (IMU)	Rates: depending on the location and type of property (decided by each municipality separately) Exemptions for principal residence	Local authorities Imposed by the municipalities
Cyprus	Property tax abolished in 2017	(There is a property transfer tax, purchase of principal residence tax and capital gains tax)	
Norway	Property tax exists only at local level if the Municipality chooses it		Local authorities (if imposed)
Netherlands		There is a tax on the net worth of wealth, but this is levied in the context of total income and not as separate property tax	Central government The tax on the wealth net worth is integrated into income taxation and is imposed by the central administration Local authorities Local authorities collect other local property taxes
Portugal	Imposto Municipal sobre Imóveis (IMI)		Local authorities (enforcement and collection)
Sweden	Kommunal fastighetsskatt was repealed in 2007	Property owners pay annual property tax (fastighetsskatt). Imposed on residences Cap on taxation	Central government Local authorities Municipal property tax
Finland	Kiinteistovero Property tax levied only at local level		Local authorities Imposed and collected by municipalities

Sources: National competent authorities, https://theluxuryplaybook.com/what-are-the-property-taxes-in-every-european-country-2024/ and Taxheaven.

Conclusions

As part of the need for a broader reform effort, in particular as regards the country's tax system and better management of the SB's expenditure, this box briefly presents the (positive and negative) aspects of decentralised activities linked to the execution of the SB, such as the management (or aspects of the management) of the property tax by LGs. At the same time, the importance of modernisation (administrative and technocratic) of LGs is highlighted, so that they can cope with the new challenges and thus contribute to the transformation of the Greek economy and to economic growth. Nevertheless, it is recognised that such a "difficult" endeavour requires careful planning to be successful.

Box 10

THE FIRST IMPLEMENTATION CYCLE OF THE NEW EU FISCAL RULES: CHALLENGES, STRATEGIES AND CONCLUSIONS

I. Introduction

The Medium-Term Fiscal-Structural Plans (MTPs) are the foundation of the EU's new economic governance framework. They outline both a fiscal path for Member States and priorities for public investment and reforms. These policies should ensure a gradual and sustained reduction in public debt, as well as sustainable and inclusive growth, while avoiding procyclical policies.

Pursuant to the new revised fiscal rules,[1] most EU Member States submitted their national MTPs to the European Commission in October 2024 for the first time.[2] This was preceded by a three-month technical dialogue between national and European authorities to determine fiscal adjustment needs and the maximum growth rate of nationally financed net primary expenditure that meets the various sustainability criteria under the new fiscal framework. In November 2024, the European Commission assessed and approved the national MTPs, thereby setting out the fiscal adjustment that Member States should deliver over the 4-year period 2025-28 (or 2025-31 in the case of 7-year MTPs).[3]

The aim of this box is to conduct a comparative analysis of EU Member States' fiscal strategies over the coming years based on national MTPs and their assessment by the European Commission. In particular, we focus on: (a) the fiscal adjustment, in structural primary balance terms, required to meet the various fiscal sustainability criteria; (b) the growth rate of nationally financed net primary expenditure, which is the operational indicator used for assessing compliance with the new fiscal rules, and the available fiscal space, as this arises from net primary expenditure growth (as a percentage of GDP); (c) the level of the required primary balance; (d) the rate of public debt reduction and the long-term projections of the debt-to-GDP ratio; and (v) the fiscal stance for 2025 implied by the required adjustment. For the purposes of the analysis, countries are classified according to their level of medium-term fiscal risk, as assessed by the European Commission.

II. Assessment of medium-term fiscal risks

The new EU fiscal rules incorporate the European Commission's medium-term fiscal risk assessment, as this is analysed in its annual Debt Sustainability Monitor (DSM). The DSM provides a detailed risk assessment, classifying countries as *low-, medium- and high-risk* according to their debt trajectories, fiscal policies and macroeconomic conditions. The new rules allow for a differentiated pace of fiscal adjustment, depending on the country risk profile, instead of applying a single (horizontal) approach across Member States. By incorporating these assessments, the new fiscal rules aim to ensure that Member States pursue fiscal policies that lead to a permanent and sustainable reduction in public debt (or prevent excessive debt accumulation), while preserving macroeconomic stability. At the same time, the objective of the reduction of fiscal deficits is pursued without imposing procyclical tightening, which allows for a more gradual adjustment depending on the level of fiscal risk (risk-based fiscal adjustment) and provides flexibility in the design of MTPs by Member States. Moreover, the use of these risk assessments under the new fiscal framework enhances the predictability and transparency of policy decisions regarding the fiscal strategy pursued, while also improving market confidence in European economies, as the DSM is a public report based on detailed fiscal and macroeconomic data.

1 For more details, see Chapter V Special Feature "New fiscal rules in the context of the EU economic governance review", Bank of Greece, *Annual Report 2023*, April 2024, p. 169.

2 By end-November 2024, a total of 22 MTPs had been submitted by an equal number of EU Member States, while five countries (Austria, Belgium, Bulgaria, Germany, Lithuania) delayed the submission of plans due to general elections and the formation of new governments.

3 For more details regarding national MTPs and the European Commission's assessments, see National medium-term fiscal-structural plans, November 2024. A 7-year fiscal adjustment period is foreseen for 5 of the 22 MTPs (in particular, for the MTPs of Finland, France, Italy, Romania and Spain).

The following analysis uses the classification of countries according to the level of medium-term fiscal risk, in accordance with the Debt Sustainability Monitor 2023.[4] Overall, 9 Member States are classified as high-risk, 11 Member States as medium-risk and 7 Member States as low-risk.[5]

III. Fiscal adjustment needs

Fiscal adjustment needs are determined on the basis of five sustainability criteria designed to ensure both long-term public debt sustainability and government deficits below the 3% of GDP reference value (see the table). Countries where fiscal adjustment is needed are required to comply with one or more binding or non-binding criteria. According to the European Commission's guidance,[6] under the new framework, **debt sustainability criteria (DSA-based criteria)** are central to determining fiscal adjustment needs, particularly for high-risk countries. By contrast, for low-risk countries, where no adjustment is needed, the key criterion is compliance with the requirements of the **Stability and Growth Pact (SGP)**. In some countries subject to an Excessive Deficit Procedure (EDP)[7] (such as Italy, France and Malta), the **deficit benchmark** is binding for specific years of the adjustment period. **The debt sustainability safeguard**, which requires a minimum reduction of debt over the adjustment period, is binding upon Finland. In the case of Greece, fiscal adjustment needs were determined mainly on the basis of debt sustainability, while in particular for 2025 the **deficit resilience safeguard** was also taken into account as an important element of fiscal strategy planning, in order to build up fiscal buffers.

Fiscal adjustment is defined in terms of improvement in the structural primary balance.[8] According to the national MTPs, high-risk countries are required to implement a significant adjustment to meet the fiscal sustainability criteria. This is why many of these countries chose to implement a 7-year plan to ensure a gradual adjustment and avoid any possible procyclical effects of fiscal policy. On a *cumulative basis*, the adjustment for Romania, France and Slovakia exceeds 5 percentage points (pps) of GDP. By contrast, in low-risk countries, compliance with the new fiscal framework is compatible with fiscal loosening. Compared with the old fiscal framework, the adjustment required is smaller for most countries (mainly medium- and low-risk ones)[9] (see Chart A). On an *annual basis*, on average, almost all high- and medium-risk countries are required to achieve a larger amount of fiscal adjustment compared with 2016-19, which reflects the increased fiscal challenges facing Member States. However, in most cases this annual adjustment is lower than that implied by the old fiscal framework.[10] Low-risk countries are allowed to loosen their fiscal policy, while in 2016-19 they had undertaken fiscal adjustment (see Chart B). Greece shows the lowest adjustment needs among countries required to make a fiscal effort (0.4 pp of GDP cumulatively). On an annual basis, it is the only country where the average required adjustment is lower than that achieved in the past and marginally higher than that implied by the old rules. This highlights the re-

4 European Commission, "Debt Sustainability Monitor 2023", Institutional Paper No. 271, March 2024 (pp. 39-58).

5 The classification of countries according to fiscal risk over the medium term is as follows: **High-risk countries:** Belgium, Greece, Spain, France, Italy, Portugal, Romania, Slovakia, Finland. **Medium-risk countries:** Bulgaria, Czechia, Germany, Croatia, Cyprus, Lithuania, Hungary, Malta, Austria, Poland, Slovenia. **Low-risk countries:** Denmark, Estonia, Ireland, Latvia, Luxembourg, the Netherlands, Sweden. In particular, the *high-risk* classification is mainly driven by the debt dynamics under the no-fiscal-policy-change baseline scenario, due either to currently high and rising debt ratios (Belgium, France and Italy), debt rising above 90% of GDP (Romania, Slovakia and Finland), or debt falling but remaining high and with only limited room for additional consolidation (Greece). In several cases, the stochastic analysis confirms the high risk of a further increase in debt over five years (Belgium, Spain, France, Italy, Finland) and points to considerable uncertainty surrounding the baseline projections (Greece, Portugal, Romania). Vulnerability to more adverse scenarios, in particular in case of less favourable macro-financial conditions or a weaker fiscal position, is also a high-risk factor (Portugal). Furthermore, projected financing needs suggest that countries with the highest debt ratios could also be potentially exposed to liquidity challenges.

6 See Commission prior guidance, June 2024.

7 In total, 8 countries are subject to an EDP: Belgium, France, Italy, Hungary, Malta, Poland, Slovakia and Romania (Source: 2025 European Semester: bringing the new economic governance framework to life, European Commission, 26.11.2024).

8 According to the European Commission, the structural primary balance is defined as the primary deficit/surplus adjusted for the effects of the economic cycle (i.e. the cyclically adjusted primary balance), net of one-off and other temporary fiscal measures. It is used as a key fiscal policy indicator in the European Fiscal Framework for the assessment of Member States' fiscal adjustment, as it allows to assess a country's *underlying fiscal position*, net of the impact from fluctuations of the economic cycle and one-off measures.

9 For high-risk countries, the new framework requires a higher adjustment (with the exception of Slovakia, Italy and Spain).

10 Except for Romania, Finland, Portugal, Greece and Cyprus.

Fulfilment of the fiscal sustainability criteria used for determining the adjustment needs[1]

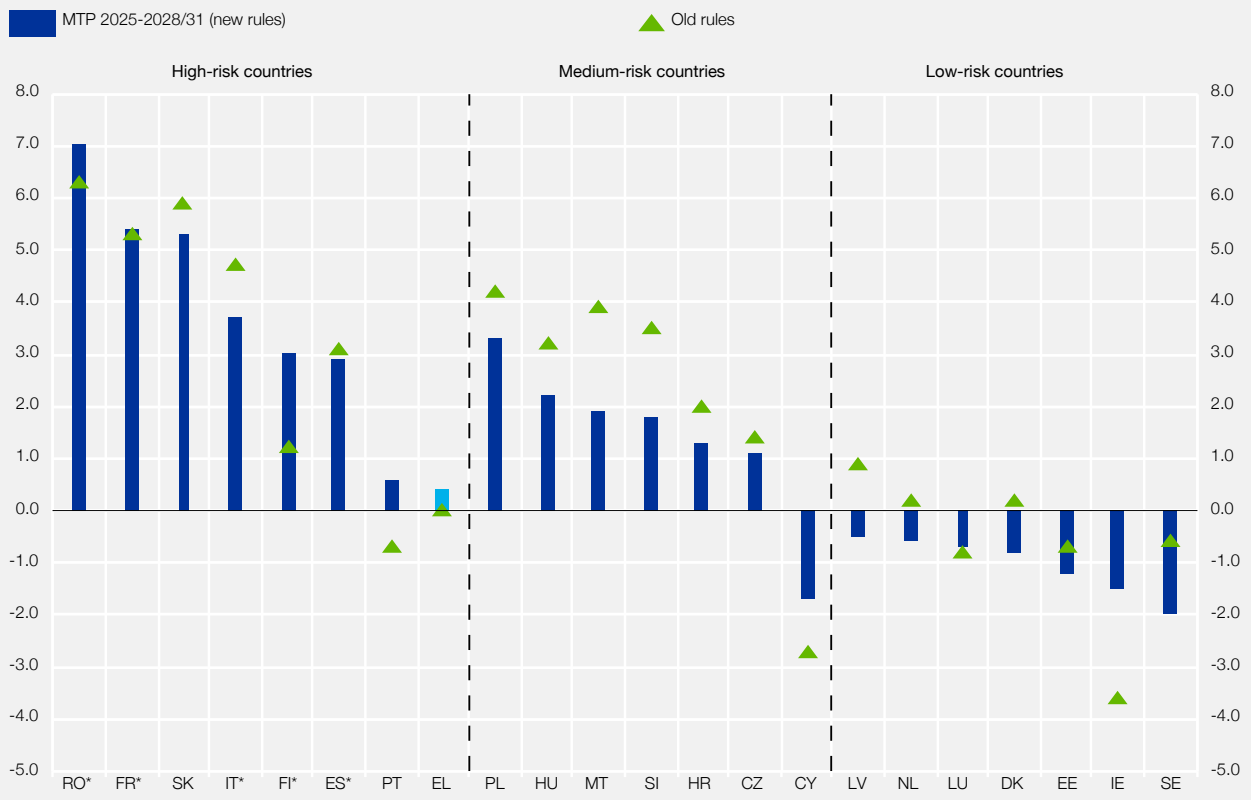
	2025	2026	2027	2028	2029	2030	2031
High-risk countries							
Greece (EL)	3/1	1	1	1			
Portugal (PT)	1	1	1	1			
Romania (RO)*	1	1	1	1	1	1	1
Spain (ES)*	1	1	1	1	1	1	1
Italy (IT)*	1	1	1	4/1	4/1	4/1	1
Slovakia (SK)	1	1	1	1			
Finland (FI)*	2/1	2/1	2/1	2/1	2/1	2/1	2/1
France (FR)*	1	1	1	4/1	4/1	4/1	4/1
Medium-risk countries							
Hungary (HU)	1	1	1	1			
Croatia (HR)	5	5	5	5			
Czechia (CZ)	5	5	5	5			
Cyprus (CY)	0	0	0	0			
Poland (PL)	1	1	1	1			
Slovenia (SI)	4/1	4/1	4/1	4/1	1	1	1
Malta (MT)							
Low-risk countries							
Denmark (DK)	5/0	5/0	5/0	5/0			
Latvia (LV)	5/0	5/0	5/0	5/0			
Luxembourg (LU)	-	-	-	-			
Ireland (IE)	-	-	-	-			
Netherlands (NL)	5/0	5/0	5/0	5/0			
Estonia (EE)	0	0	0	0			
Sweden (SE)	5/0	5/0	5/0	5/0			

Sources: European Commission prior guidance, June 2024, and National medium-term fiscal-structural plans.
Notes: Fiscal sustainability criteria:
0. No adjustment required.
1. **Debt sustainability analysis criteria (DSA-based criteria):** The debt-to-GDP ratio is put on a plausible downward path (or stays at prudent levels) in the baseline scenario of no-policy change after the adjustment period. (a) By the end of the adjustment period and over the following 10 years, debt declines or stays below 60% of GDP both in the adjustment scenarios and under the stress tests; (b) in the 5 years following the adjustment period, debt declines with a sufficiently high probability (at least 70%), in line with the European Commission's stochastic analysis methodology set out in the DSM; (c) the deficit is brought and remains below 3% of GDP in the medium term.
2. **Debt sustainability safeguard:** (a) Countries with debt above 90% of GDP are required to reduce their debt by at least 1 pp. of GDP on average per year during the adjustment period; (b) countries with debt between 60% and 90% of GDP are required to reduce their debt by at least 0.5 pp of GDP on average per year during the adjustment period.
3. **Deficit resilience safeguard:** Convergence towards a structural fiscal deficit of 1.5% of GDP.
4. **Deficit benchmark:** The government deficit should be below 3% of GDP (for countries subject to the Excessive Deficit Procedure-EDP).
5. **Compliance with SGP requirements** (the government deficit is maintained below 3% of GDP and public debt remains below 60% of GDP after the adjustment period).

In some countries, fiscal adjustment needs are determined based on the fulfilment of more than one criterion (the binding criterion is indicated in bold).
–: No available data.
* 7-year MTP.
1 In June 2024, Member States with public debt above 60% of GDP or a government deficit above 3% of GDP received guidance from the European Commission on the risk-based "reference trajectory", which determined their fiscal adjustment needs measured in structural primary balance terms for the different fiscal sustainability criteria set out in the new framework to be fulfilled. For Member States with a government deficit below the 3% of GDP reference value and public debt below 60% of GDP, the European Commission provided (upon request) "technical information" regarding the structural primary balance level required to ensure that the headline deficit is maintained below 3% of GDP over a 10-year no-policy-change period after the end of the national MTP.

silience of Greece's public finances, as a result of the structural nature of the adjustment over the past decade and prudent fiscal management in the 2020-24 period.

Chart A Change in structural primary balance (cumulative)



Sources: European Commission, National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

IV. Nationally financed primary expenditure and fiscal space

Compliance with the new fiscal rules is monitored through a single operational expenditure rule, which is the main tool of fiscal policy surveillance. MTPs set out the key fiscal commitment of Member States, ensuring that the annual growth of net primary expenditure[11] does not exceed pre-defined limits to meet the requirements of the new framework. Consequently, the annual growth of net primary expenditure as a percentage of GDP determines the **available fiscal space** for each country, thus affecting the room for expansionary measures in the coming years. According to national MTPs, countries facing high fiscal challenges show, on average, a lower annual rate of change in net primary expenditure compared to medium- and low-risk countries (see Chart C). As a result, fiscal space in high-risk countries is relatively limited compared with that of other countries (see Chart D). In the case of Greece, net primary expenditure is projected to rise by an average of 3.4% annually over the period 2025-28, above the average for this group of countries (2.7%). This translates into a fiscal space corresponding to an average primary expenditure growth of around 1.3% of GDP per year, higher than that of high-risk countries (1.1% of GDP), which allows for more flexibility in the country's fiscal strategy.

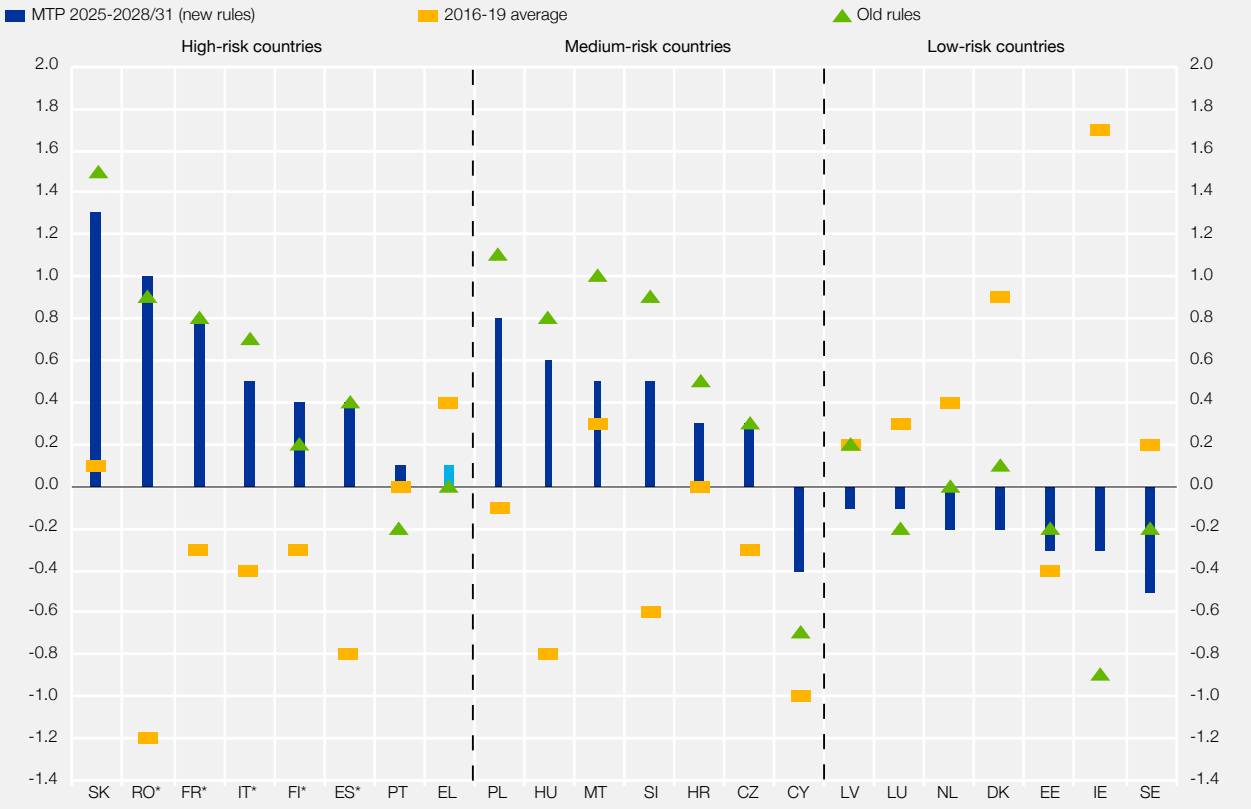
V. Public debt – Primary balance

Fiscal adjustment and the limit on net primary expenditure result in a primary balance sufficient to set the debt-to-GDP ratio on a firm downward path or on a path of gradual stabilisation (see Chart E). Several high-

11 Net primary expenditure is defined as nationally financed expenditure excluding interest payments and cyclical elements of unemployment benefit expenditure, minus discretionary revenue measures. It should also be noted that national expenditure on co-financing of programmes funded by the Union is also excluded. The upper limit on the annual growth rate of net primary expenditure (NPE) is calculated as follows:

$$\%\,\Delta\,(NPE) = \%\,\Delta\,(nom.potential\ GDP) - \left(\frac{\Delta\,(structural\ primary\ balance)}{primary\ expenditure\ as\ \%\ of\ GDP\ in\ the\ year\ before\ the\ adjustment}\right) * 100$$

Chart B Change in structural primary balance (average annual rate)



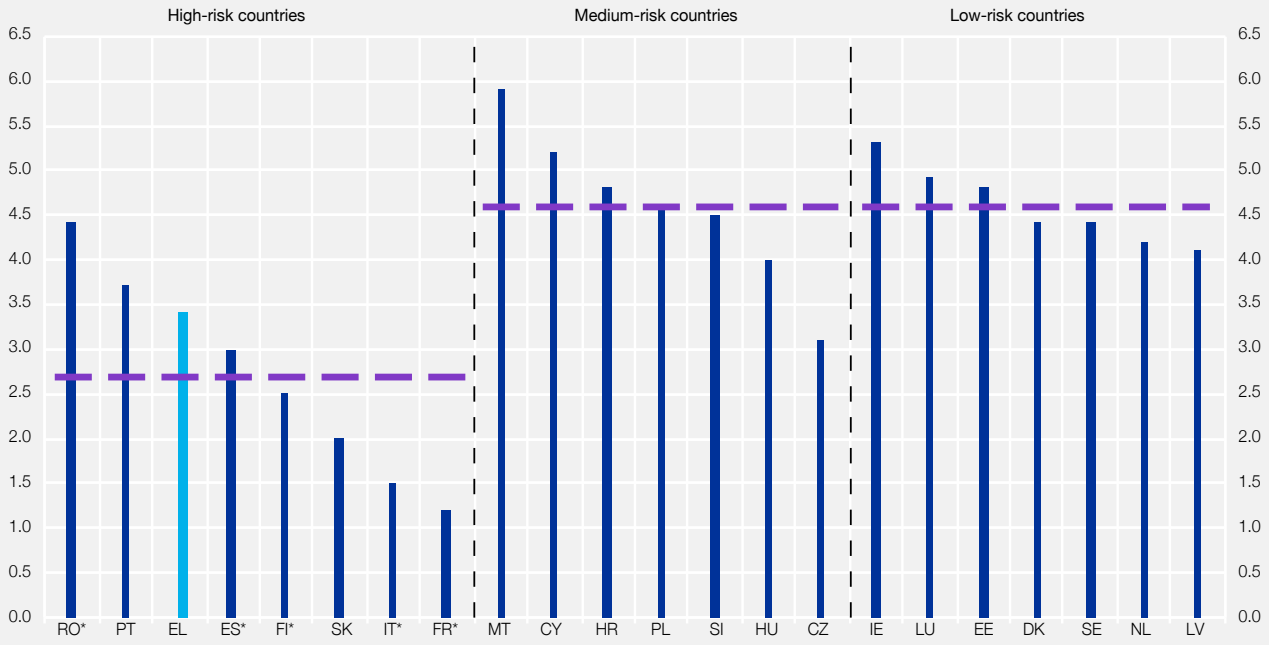
Sources: European Commission, National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

risk countries must improve their primary balances compared with the past either by achieving higher surpluses (Portugal, Italy) or by switching from a deficit to a surplus (Spain, Finland) or by reducing their deficits (France). By contrast, countries facing significant fiscal challenges, but with a relatively low level of debt, can follow a more gradual adjustment and are allowed to maintain primary deficits (Slovakia, Romania). Greece is expected to achieve a primary surplus of 2.4% of GDP per year on average during the adjustment period, lower than in 2016-19. It is worth noting that Greece's primary surplus is expected to be one of the highest in Europe – also in view of the level of its debt – and yet it should be achieved by making the smallest fiscal effort (as implied by the change in the structural primary balance; see Charts A and B). This reflects the country's favourable starting fiscal position, thanks to the economic adjustment over the past decade. The requirements of the new fiscal rules allow most medium- and low-risk countries to move from surpluses to primary deficits. This reflects the differentiated fiscal strategy approach towards each Member State, which allows more flexibility in public finance management.

The planned fiscal policy leads to a gradual and milder debt reduction compared with the past, with the exception of some high-risk countries (see Chart F). Greece and Spain are expected to record a higher average annual debt reduction rate over the adjustment period than in 2016-19. By contrast, in Italy and France the public debt is projected to broadly stabilise over the 7-year adjustment period, without any significant downward trend. On the other hand, some low-debt (mainly low-risk) countries are expected to see an increase in their debt-to-GDP ratios, reflecting a looser fiscal stance. At the same time, in medium-risk countries debt is projected to decline at a slower pace than in the previous period, as these countries take advantage of their larger fiscal space, the only exception being Cyprus, where debt reduction is projected to accelerate. Greece is expected to achieve one of the sharpest reductions of public debt in the EU in the coming years, confirming the continuously improving resilience of its public finances.

Chart C Net primary expenditure

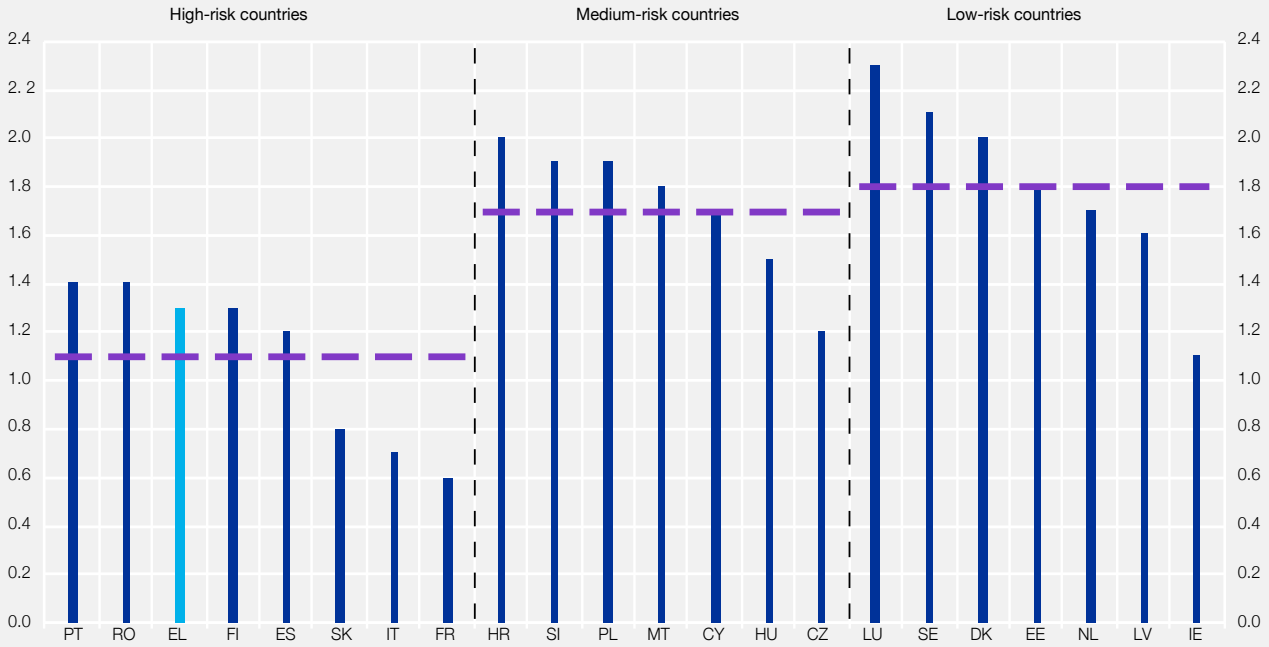
(annual rate of change, average over the adjustment period 2025-2028/31)



Sources: European Commission, National medium-term fiscal-structural plans, November 2024, and Bank of Greece calculations.
* 7-year MTP.

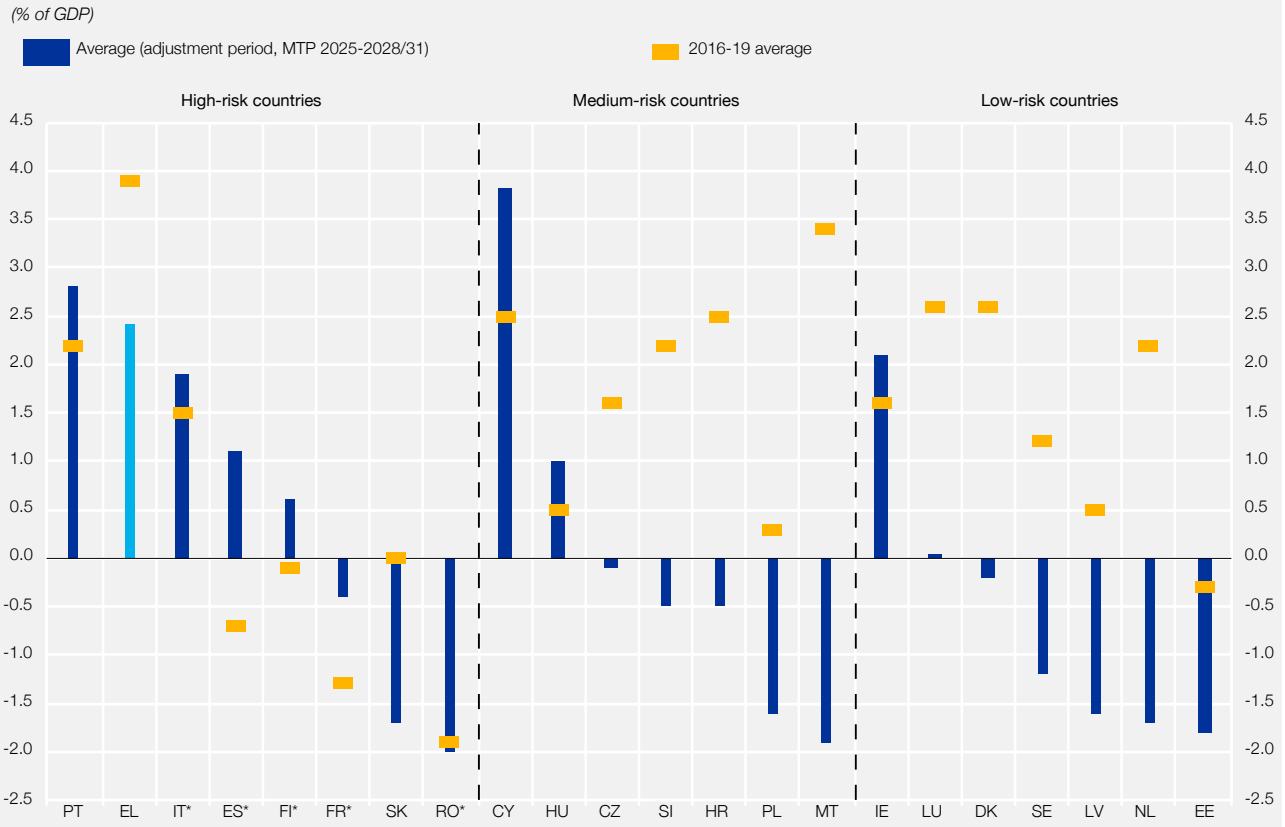
Chart D Change in net primary expenditure

(% of GDP, average over the adjustment period 2025-2028/31)



Sources: European Commission, National medium-term fiscal-structural plans, November 2024, and Bank of Greece calculations.
* 7-year MTP.

Chart E Primary balance



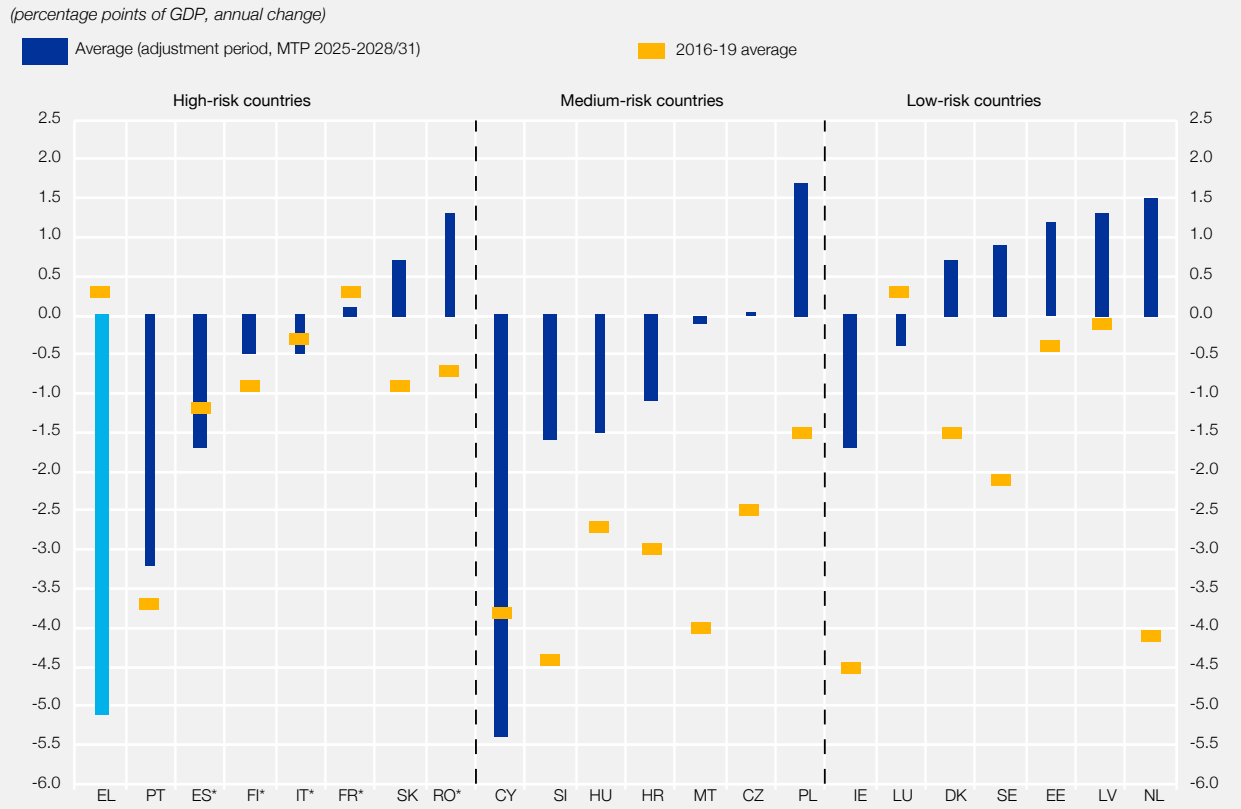
Sources: European Commission, National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

The new approach under the revised fiscal framework ensures the long-term sustainability of public debt, as reflected in the relevant analyses included in the MTPs. Chart G illustrates the differentiated debt paths under the baseline and three alternative scenarios,[12] according to the level of fiscal risk. Under all scenarios considered, the debt-to-GDP ratio follows a downward path, mostly in high-risk countries, as a result of the structural adjustment. In most medium-risk countries, debt is either on a moderately downward trend, declining at a slower pace than in high-risk countries, or exhibits an almost stable trend. By contrast, in low-risk countries there is room for even increasing debt, provided that it remains within the limits set, which reflects the fiscal flexibility and the lower need for strict adjustment.[13] Greece stands out as an example of fiscal resilience among European countries, due to both its favourable structural fiscal position and its favourable debt profile. In particular, under the baseline scenario, Greece is expected to record the largest cumulative debt reduction in Europe over the

12 The DSM 2023 sets out three deterministic stress scenarios, which must satisfy the requirement for a continuous decline in the debt-to-GDP ratio. (1) **Financial stress scenario:** market interest rates are assumed to temporarily increase in the first year following the adjustment period. Interest rate increases are not the same for all countries, as a horizontal 1 pp increase applies to all Member States, while a country-specific risk premium burdens only Member States with a debt ratio above 90% of GDP. (2) **Lower structural primary balance scenario:** The structural primary balance is assumed to be reduced by 0.5 pp of GDP in total in the first two years after the end of the adjustment period (0.25 pp per year) and to remain at that lower level for the remaining period considered. (3) **Adverse interest rate-growth differential scenario:** this differential is assumed to be permanently increased by 1 pp after the end of the adjustment period. This increase comes in half from lower growth and in half from higher interest rates.

13 Low-risk countries were required to provide long-term projections for the debt-to-GDP ratio only under the baseline scenario of fiscal adjustment according to the new rules. As a result, Chart G does not include stress scenarios for this group of countries.

Chart F Change in debt-to-GDP ratio



Sources: European Commission, National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

next 14 years, with an overall decrease of about 40 pps of GDP (same as Cyprus). It should be noted that this performance remains strong under all stress scenarios considered, which confirms the capacity of the Greek economy to withstand fiscal shocks, strengthening the prospect of public debt sustainability even under adverse conditions.

VI. Fiscal stance

The fiscal stance in 2025 is expected to be heterogeneous across Member States, reflecting the new spirit of the revised fiscal rules, which adopt a risk-based approach (see Chart H). Based on the definition of the European Commission,[14] the fiscal stance is projected to be expansionary in about one-third of EU Member States,[15] restrictive in 9 Member States[16] and broadly neutral in the remaining Member States.[17] Among the high-

14 Traditionally, the fiscal stance is defined as a measure of the annual change in the underlying budgetary position of the general government. It may serve to assess the impact of fiscal policy on an economy's aggregate demand, as well as the speed at which the underlying budgetary position converges towards budgetary targets. The European Commission defines the **fiscal stance** as the change in general government primary expenditure, net of the incremental impact of discretionary revenue measures, excluding cyclical unemployment expenditure, but including the change in expenditure financed by Recovery and Resilience Facility grants and other EU funds, relative to the 10-year average potential GDP growth rate, in nominal terms. A *negative sign* indicates an excess of primary expenditure growth over medium-term potential GDP growth, which corresponds to an **expansionary fiscal stance**. A *positive sign* indicates a shortfall of primary expenditure growth over potential growth, which corresponds to a **contractionary fiscal stance**. (See European Commission, "Commission Staff Working Document", 26.11.2024).

15 Greece, Portugal, Hungary, Bulgaria, Croatia, Denmark, Latvia, the Netherlands, Luxembourg, Lithuania.

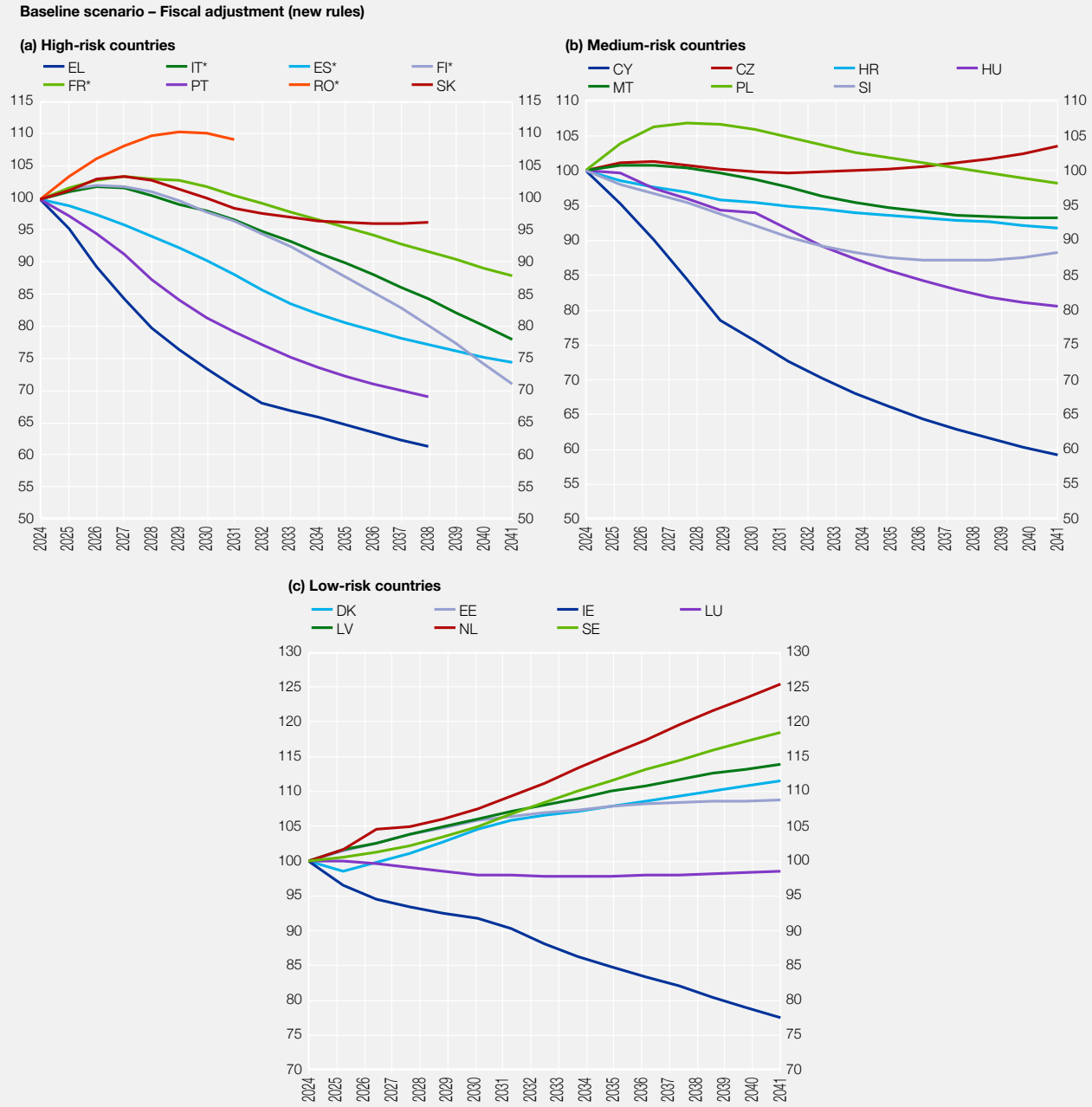
16 Slovakia, Belgium, Finland, France, Cyprus, Poland, Slovenia, Malta, Sweden.

17 Romania, Spain, Italy, Czechia, Germany, Austria, Ireland, Estonia.

risk countries, Greece is expected to pursue the most expansionary policy, while on the other hand, the fiscal stance in France is estimated to be the most restrictive. This heterogeneity of the fiscal stance is an indication of the differentiated approach to fiscal consolidation in accordance with the specificities of each country (country-specific fiscal consolidation), in line with the new fiscal framework. At the EU and the euro area level, the fiscal stance is estimated to be slightly restrictive, in parallel with continued growth in public investment. Therefore, the new framework confirms the basic principle that fiscal adjustment is not carried out at the expense of public investment. At the same time, the projected fiscal stance for the euro area as a whole in 2025 should support the monetary policy effort for a return of inflation to the 2% target, contributing to the stability of the macroeconomic environment.

Chart G Debt-to-GDP ratio - Baseline scenario

(2024=100)



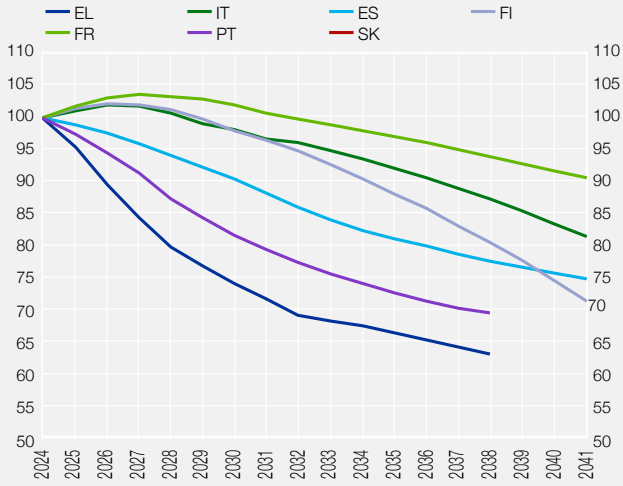
Sources: National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

Chart G Debt-to-GDP ratio - Alternative scenarios

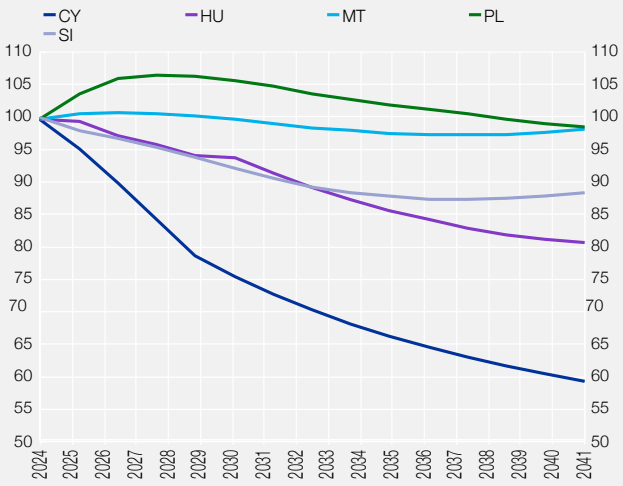
(2024=100)

Alternative scenario 1: Financial stress

(a) High-risk countries

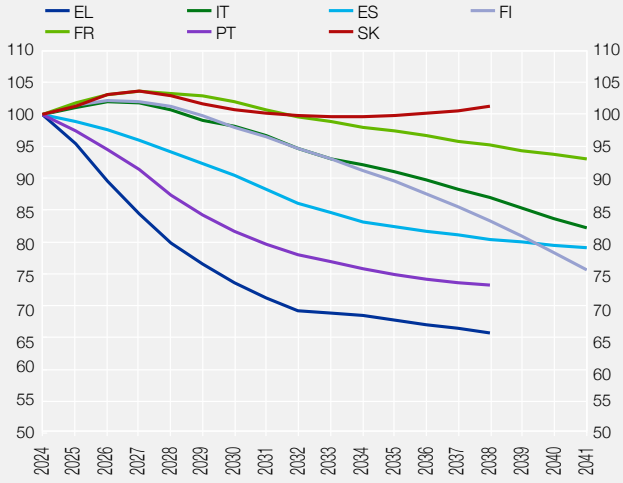


(b) Medium-risk countries

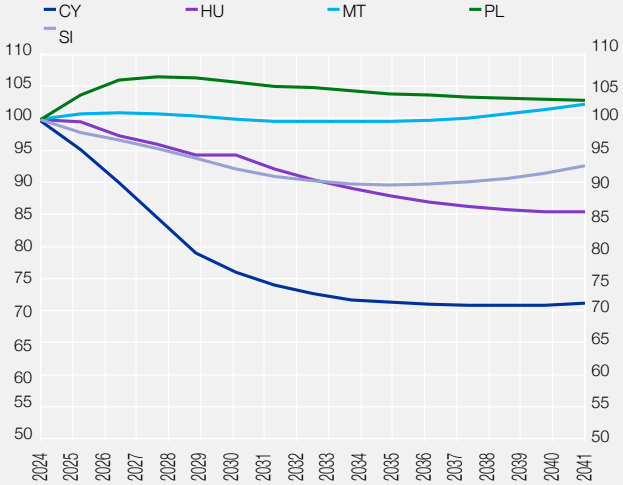


Alternative scenario 2: Lower structural primary balance

(a) High-risk countries

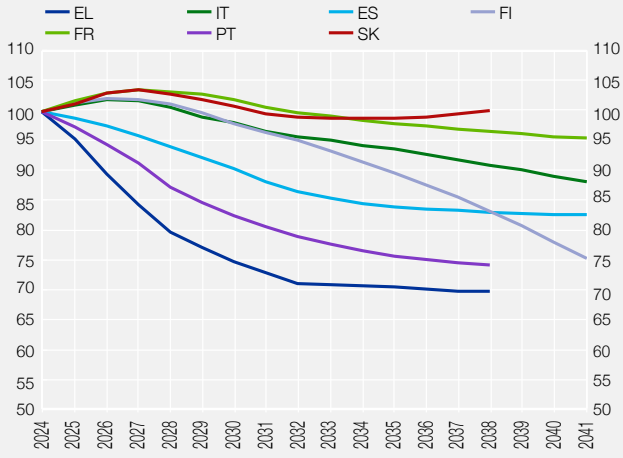


(b) Medium-risk countries

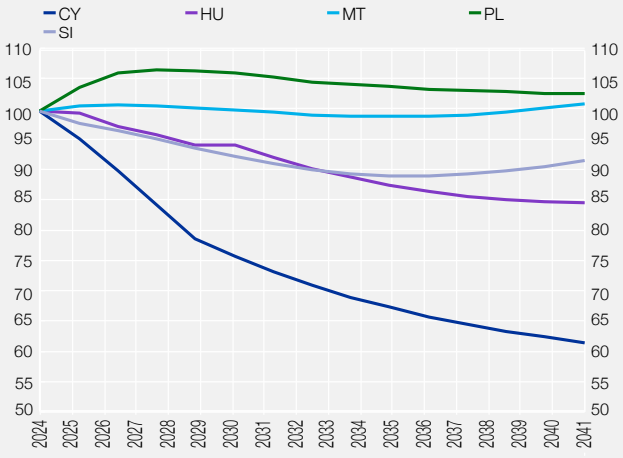


Alternative scenario 3: Adverse interest rate-growth differential

(a) High-risk countries



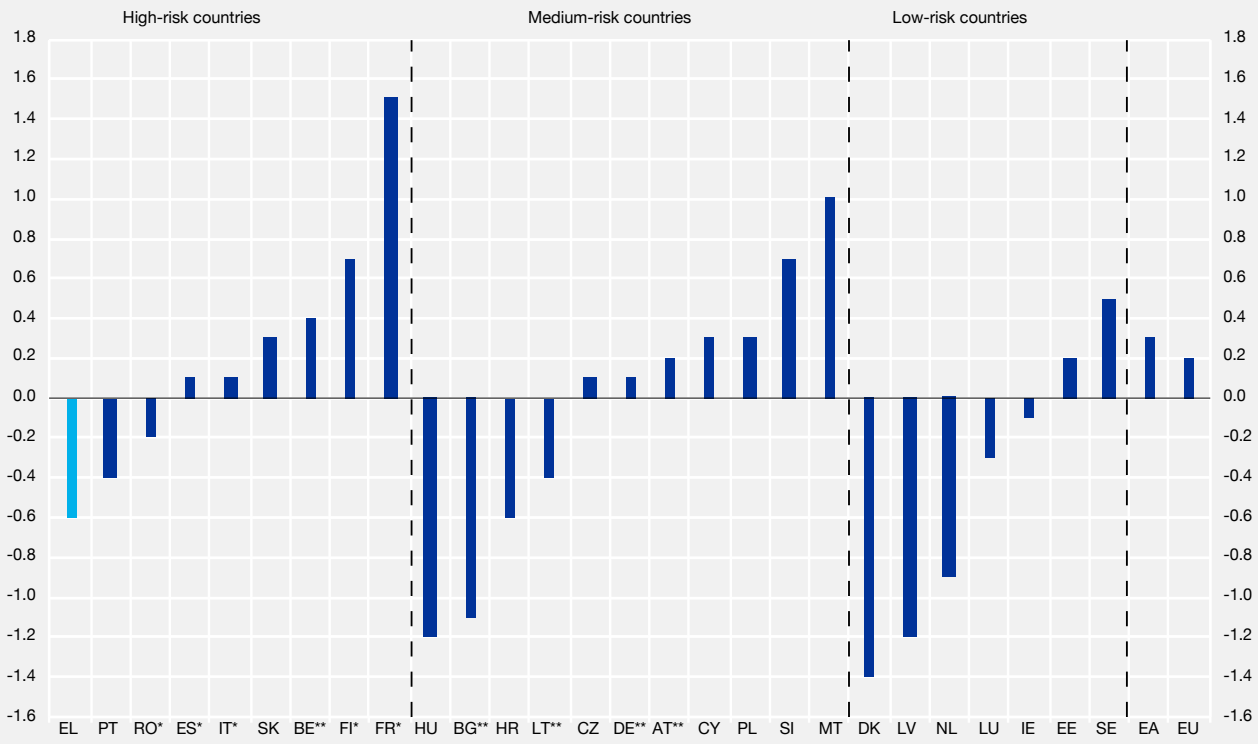
(b) Medium-risk countries



Sources: National medium-term fiscal-structural plans, November 2024, AMECO database and Bank of Greece calculations.
* 7-year MTP.

Chart H Fiscal stance

(% of GDP, 2025)



Sources: European Commission, National medium-term fiscal-structural plans, November 2024, and Autumn 2024 Economic Forecast, November 2024.
* 7-year MTP.
** No MTP submitted.

The new fiscal rules are expected to boost the implementation of counter-cyclical fiscal policies, thus avoiding the self-defeating effects of fiscal adjustment.[18] The new approach provides more flexibility, abandoning horizontal numerical rules and taking into account the specific economic and structural characteristics of each country in the determination of the fiscal effort needed. Therefore, rather than adopting a strictly contractionary fiscal policy, the new framework follows a rules-based approach to fiscal discipline. This avoids excessive levels of fiscal adjustment that could lead to ineffective procyclical policies and hamper economic growth. A key mechanism to avoid procyclical episodes is the new expenditure rule, which allows to maintain fiscal flexibility. In particular, an expansionary fiscal stance in the face of adverse economic shocks is feasible when fiscal buffers have been built up from revenue windfalls in periods of growth. Moreover, the countercyclicality of the new rules is enhanced by the fact that automatic stabilisers (mostly expenditure) are excluded from the operational monitoring indicator, and, thus, can still be effective in downturns. At the same time, compliance with the expenditure rule does not preclude growth-enhancing investment with a high fiscal multiplier, such as public investment, which is considered crucial for long-term economic growth.

VII. Conclusions

The first implementation cycle of the new EU fiscal rules, as reflected in the national MTPs, marks a more flexible and differentiated approach to fiscal policy, taking into account country-specific circumstances and the level of fiscal risk it faces. High-risk countries are required to achieve a larger amount of fiscal consolidation in order to put the debt-to-GDP ratio firmly and durably on a sustainable downward path in the long term, curbing public expenditure growth. By contrast, medium- and low-risk countries have more fiscal flexibility and broader

18 The term “self-defeating effects” refers to cases where fiscal adjustment measures lead to results contrary to the intended objectives, such as a deterioration in the fiscal balance or an increase in public debt.

fiscal space. Compared with the past, most countries are required to make a larger fiscal effort. However, in most cases the consolidation required remains smaller than would have been the case under the old rules. This highlights, on the one hand, the fiscal challenges facing European countries following a period of successive exogenous shocks and, on the other hand, the need to revise the Stability and Growth Pact to make it more flexible and allow for more gradual fiscal consolidations than in the past, as well as to strengthen countercyclical policies.

Greece stands out as an example of fiscal resilience. Compared with other high-risk countries, Greece has lower fiscal consolidation needs, as these are defined in terms of improving the structural primary balance, while it is also expected to register one of the fastest rates of public debt reduction in the EU over the coming years. Greece's anticipated relatively high primary surpluses, to be achieved with the smallest fiscal effort, reflect its favourable structural position and prudent fiscal management in the previous period, while at the same time stressing the need to reduce the high public debt level.

At the EU and euro area levels, fiscal policy is projected to be slightly restrictive, but to be accompanied by an increase in public investment, confirming the principle that fiscal consolidation does not take place at the expense of investment. At the same time, the projected fiscal policy for 2025 is expected to support the monetary policy effort for a return of inflation to the 2% target over the medium term, contributing to the stability of the macroeconomic environment.

Overall, the new approach to fiscal rules allows for a more balanced and countercyclical adjustment, avoiding the procyclical policies of the past, while enhancing transparency, predictability and confidence in European economies.

Box 11

CONTRIBUTION OF FINANCIAL INSTRUMENTS AND LOANS UNDER THE RECOVERY AND RESILIENCE FACILITY TO BANK CREDIT TO DOMESTIC ENTERPRISES

Credit growth to domestic non-financial corporations (NFCs)[1] accelerated in 2024 due to the significant contribution of loans linked to modern financial instruments (FIs) and the Recovery and Resilience Facility (RRF). Their share in total business financing increased compared with the previous year, as they were associated with 24% of new bank loans to enterprises, as against 18% in 2023 (see Chart A). In terms of disbursement values, the contribution of guarantee or co-financing schemes offered by development banks were larger, while disbursements related to the loan segment of RRF accelerated.

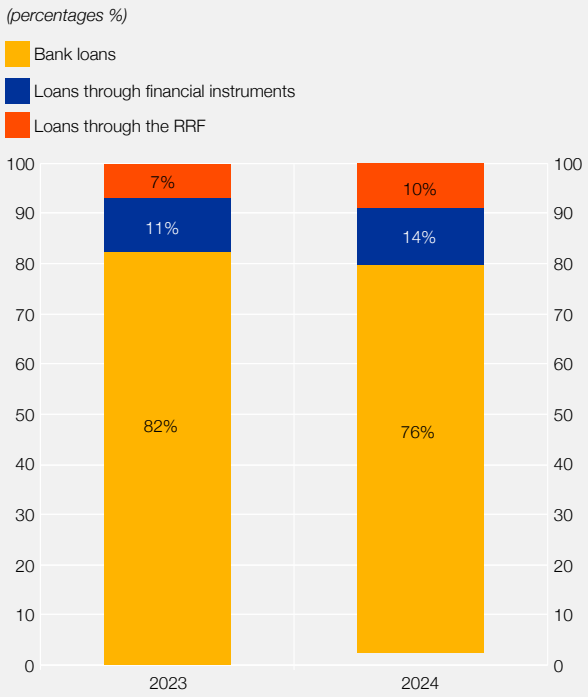
Developments in 2024

(a) Financial instruments (FIs)

In 2024, as in previous years, bank credit related to FIs was mainly linked to schemes offered by the European Investment Bank (EIB) Group[2] and the Hellenic Development Bank (HDB) with the intermediation of domestic credit institutions. Under these schemes, bank credit amounting to EUR 3.7 billion was provided to NFCs and sole proprietors, i.e. EUR 1.7 billion more than a year earlier (see Chart B). The share of loans related to FIs in total new bank loans to enterprises reached 14%, up from 11% in 2023. The bulk of funding (around 3/4 of total disbursements) was directed to micro-, small- and medium-sized enterprises. This is in line with European and national SME support policies, which are incorporated at a national level by (a) adopting restrictions regarding beneficiaries[3] and (b) expanding the forms of SME financing with equity financing and microcredit schemes. As a result, in 2024 the share of new bank credit to SMEs and sole proprietors supported by FIs stood at 40% (2023: 26%), i.e. almost three times the corresponding share for all businesses.

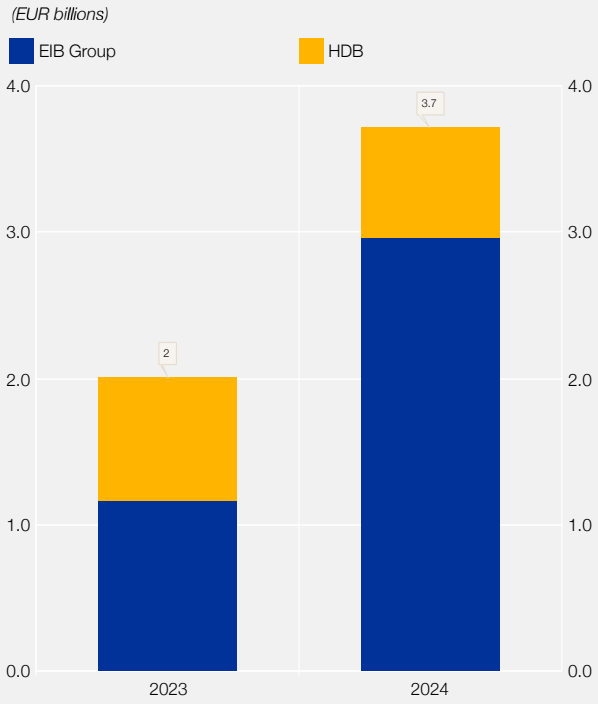
1 Including sole proprietors.
2 The EIB Group consists of the European Investment Bank (EIB) and the European Investment Fund (EIF).
3 In fact, all the funds made available through the HDB programmes were entirely targeted at SMEs.

Chart A Shares of financial instruments and the Recovery and Resilience Facility in bank credit to non-financial corporations



Sources: Hellenic Development Bank, Hellenic Bank Association and Bank of Greece calculations.
Note: Shares calculated as a ratio of bank loan disbursement value per individual financing scheme to total bank loans disbursed (including amounts originating from public funds).

Chartt B Disbursements of bank loans associated with financial instruments to NFCs and sole proprietors



Sources: Hellenic Development Bank, Hellenic Bank Association and Bank of Greece calculations.
Note: HDB: Hellenic Development Bank; EIB Group: European Investment Bank (EIB); and European Investment Fund (EIF).

Among scheme categories, the largest share in terms of disbursement value (60%) corresponded to guarantee schemes and the rest (40%) to cofinancing schemes and microcredit. Regarding loans associated with guarantee schemes, as the Greek State assumes part of the credit risk, credit institutions are obliged to reduce their collateral requirements. However, as higher borrowing rates in 2023 emphasised the importance of providing low-interest financing, several guarantee schemes were designed to also offer favourable pricing conditions.

As regards individual programmes, the most significant programme in terms of disbursement value in 2024 was "InvestEU SME Competitiveness" of the EIF, representing over 40% of bank loan disbursement value through financial instruments (EUR 1.5 billion).

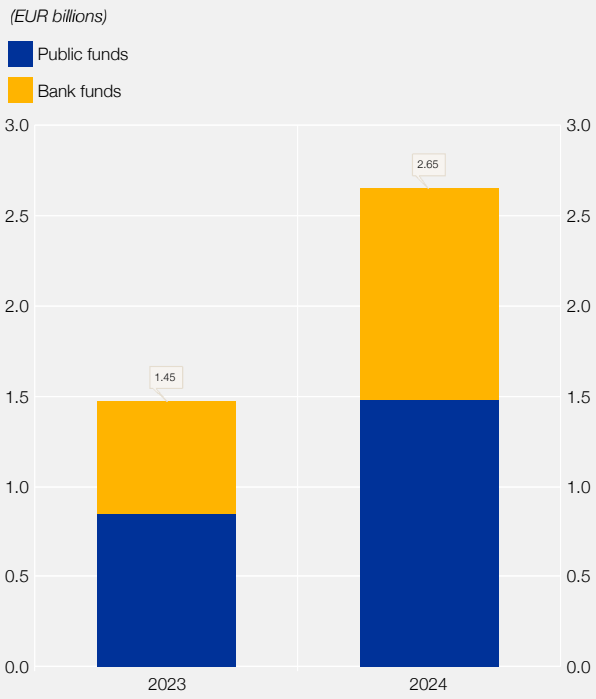
(b) Recovery and Resilience Facility

In addition to financial instruments, in the previous year domestic enterprises received low-interest financing through the RRF. Overall, in 2024, EUR 2.65 billion of business loans were disbursed under the loan segment[4] of RRF (2023: EUR 1.45 billion; see Chart C), of which EUR 1.5 billion were public funds and the rest were bank funds. Banks' and private investors' participation in the total investment costs was above the minimum defined by the programme's characteristics, which implies higher leverage of public funds.[5] The bulk of funds, over 95%, were channelled through six domestic commercial banks. Disbursements to final beneficiaries accelerated in

4 Including disbursements of business loans granted by domestic and foreign banks and co-funded by public and bank resources. Excluding equity financing.

5 The programme determines the co-financing arrangement in total investment expenditure as follows: up to 50% participation of public resources (RRF loans), a minimum of 30% banking leverage (bank loans) and a minimum of 20% own participation.

Charrtt C Disbursements of bank loans related to NRRP



Sources: Ministry of Economy and Finance, Hellenic Bank Association and Bank of Greece.

2024, as expected considering that loans under the RRF are credit lines disbursed gradually according to the process of investment projects. In total, aggregate loan disbursements reached 40% of the total amount to be disbursed in December 2024, against 22% at end-2023.

Available data so far do not suggest significant supply-side constraints as regards RRF loans. Timely payment requests submitted by the Ministry of Economy and Finance to the European Commission and rapid disbursement of relevant funds to credit institutions helped gradually increase the balance of public resources available to MFIs, which stood at EUR 5 billion at end2024. The percentage of concluded applications fluctuated throughout the year at around 50% of the value of submitted applications, while the percentage of rejected applications was significantly below the corresponding share for typical bank loans. By contrast, a drop in new applications from mid-2023 to October 2024 suggests a moderation on the demand side. This development was chiefly attributable to the Eurosystem's monetary policy tightening cycle during July 2022-September 2023. Although credit through public resources is linked with favourable pricing terms,[6] the interest rate may, under certain conditions, be set above the minimum, when aggregated payments to the borrower exceed the maximum defined in the General Block Exemption Regulation (EU) 651/2014.[7] In this case, the interest rate is set on the basis of IBOR[8] plus a fixed spread, while co-funded loans as a rule carry variable rates. Lower demand for new RRF loans was also driven by lack of investment projects under specific pillars, coupled with restrictions in the allocation of resources per pillar and per credit institution.

Cumulatively, from June 2022 (when the first loan agreement was signed) to end-2024, 405 loan agreements were concluded, amounting to EUR 11.8 billion.[9] Over half of the loan agreements and roughly 15% of their value was related to SMEs. The weighted average interest rate on RRF loans stood at 1.86%, i.e. around 350 basis points below the corresponding average annual rate on typical bank loans to businesses in 2024.[10]

Outlook

Support to firms' liquidity is expected to continue in the near future, both through the supply of RRF funds and through current and new initiatives anticipated in the context of modern financial instruments. Specifically:

6 The minimum fixed rate on loans financed by public resources (RRF loans) is set at 1%, while in the case of small and micro enterprises it is set at 0.35%. According to the provisions of Article 197(4) of Law 4820/2021, loans funded by RRF resources are exempt from the 0.60% levy on typical bank credit under Law 128/1975.

7 As provided for in Article 198 of Law 4820/2021, investment projects receiving state aid under the loan support regime of the National Recovery and Resilience Plan (NRRP) may also be subject to another state aid regime.

8 A benchmark rate used by the European Commission within the framework of the Community rules on state aid. Benchmark rates apply as representative of market rates, to calculate the grant equivalent of state aid. The basis for the calculation of benchmark rates is the annual IBOR (Interbank Offered Rate), which is in turn calculated on the basis of the annual money market rates, available in almost all Member States, while the European Commission reserves the right to use shorter or longer maturities (see Communication of the Commission 2008/C 14/02, 19.1.2008).

9 Press release by the Ministry of Economy and Finance "Public investment: Projects and reforms improving citizens' everyday life" (16.1.2025).

10 The weighted average interest rate on bank loans with agreed maturity to NFCs for common bank credit was 5.4% on average in 2024.

(a) Following the European Commission's approval of the revised National Recovery and Resilience Plan (NRRP) "Greece 2.0", the total European funds for the loan component of the Facility amounted to EUR 17.7 billion, of which EUR 11.4 billion have already been disbursed (including the 5th payment request) and over EUR 5 billion are available to cooperating banks for granting business credit. As mentioned previously, there appear to be no supply-side constraints, while recent ECB policy rate cuts are estimated to have a positive effect on demand for new credit, mainly by large enterprises, which face a more limited supply of other low-interest financing programmes.

(b) In the context of the implementation of the NSRF 2021-2027 and the Development Law (4887/2022) new programmes should be created, aiming to provide co-financed loans, guarantees, microcredit and equity financing. In addition to supporting SMEs, in the coming years particular emphasis will be placed on investment projects by large enterprises, in order to facilitate investment that contributes to changing the production model of the Greek economy. In this context, a new loan guarantee fund for large enterprises should be expected, as well as an expansion of activities that qualify as iconic investment, by including the shipbuilding industry, circular economy and critical raw materials. Moreover, equity financing should grow in the context of Equifund II, particularly for firms investing in life sciences and healthcare, as well as in sustainability and social impact projects. Lastly, co-financing of loans and grants should be expected, to the extent that they promote innovation, use of modern technology and green growth.

Box 12

FINANCING CONDITIONS FOR SMES: INSIGHTS FROM THE SAFE SURVEY

Since the first quarter of 2024, the Survey on the Access to Finance of Enterprises (SAFE) has been conducted both on a six-month and on a quarterly basis.[1] The results of the latest quarterly round point to a negative bank loan financing gap in Greece for most of the year, i.e. that firms' bank loan financing needs are lower than the availability of fixed-maturity bank loans, whereas in the euro area this indicator shows a widening of this gap in the first and fourth quarters of 2024. The responses of small- and medium-sized enterprises (SMEs) in Greece and the euro area as a whole reflect the effectiveness of the ECB's policy rate reduction decisions, as in the April-September 2024 round the percentage of enterprises reporting an increase in bank credit rates declined, and also in the fourth quarter of 2024 the majority of enterprises reported a decrease in interest rates.

Availability (supply) of bank financing to SMEs

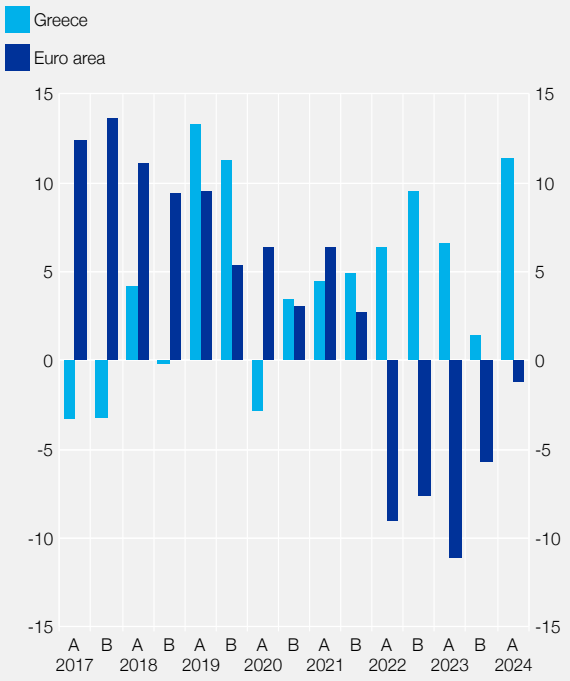
In the most recent six-month survey round covering the April-September 2024 period,[2] a positive net percentage of SMEs in Greece continued to report[3] increased availability (supply) of fixed-maturity bank loans (11%) (see Chart A), as well as credit lines or overdrafts (13%). On a quarterly basis, in the fourth quarter of 2024 firms in Greece continued to report improved availability of fixed-maturity bank loans (8%) (see Chart B), as well as credit lines or overdrafts (10%). By contrast, for the third consecutive round, in the 2024:A round euro area enterprises reported a reduction in the availability of bank loans (-1%), as well as credit lines or overdrafts (-3%). In addition, in the fourth quarter of 2024, firms' responses in the euro area continued to imply a negative net percentage in relation to the evolution of the availability of fixed-maturity bank loans (-3%), as well as credit lines or overdrafts (-1%).

With respect to factors affecting the availability of external financing, firms in Greece continued to perceive the impact from banks' willingness to provide credit as significantly positive (2024:A: 20%, and 2024:Q4: 25%), while in the euro area firms continued to report a muted positive impact (2024:A: 3% and 2024:Q4: 4%). In

1 The survey rounds that review developments in the first and third quarters, alongside with the quarterly results, also describe changes relating to the six-month periods of October-March (round B) and April-September (round A) respectively. The rounds relating to the second and fourth quarters only describe developments relating to the calendar quarters concerned.
2 Hereinafter referred to as the "2024:A round".
3 The results refer to net percentages of respondents, which are defined as the percentage of firms reporting that a given factor (e.g. availability of bank loans) increased minus the percentage of those reporting that it declined.

Chart A Six-month change in the availability of bank loans to SMEs in Greece and the euro area

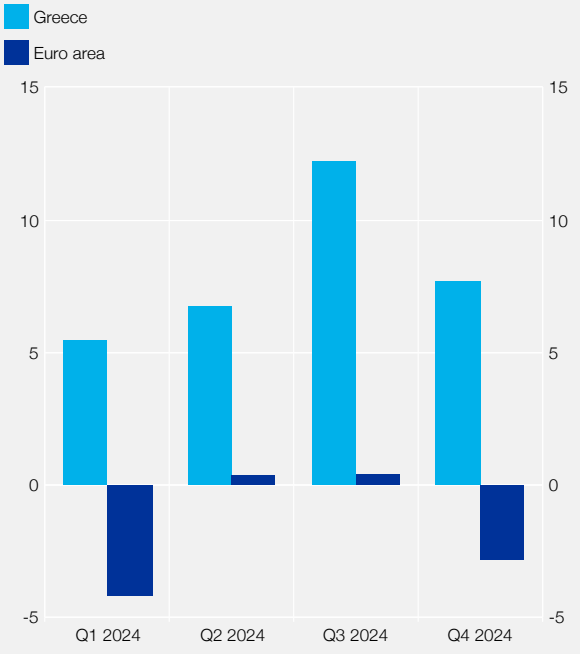
(in the corresponding period,[1] net percentage of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 The survey is conducted every six months and covers the periods of April-September (round A) and October-March (round B).
2 The net percentage is the percentage of firms reporting that the availability of bank loans increased minus the percentage of firms reporting that it decreased.

Chart B Quarterly change in the availability of bank loans to SMEs in Greece and the euro area

(in the corresponding period,[1] net percentage of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 Since 2024 the survey has also been conducted on a quarterly basis and covers the corresponding calendar quarters.
2 The net percentage is the percentage of firms reporting that the availability of bank credit increased minus the percentage of firms reporting that it decreased.

Greece, the overall impact of the factors determining firms' creditworthiness[4] was also significantly positive, while in the euro area firms perceived the impact of some of these factors to be negative. Regarding the direction of the impact of the general economic outlook,[5] firms in Greece reported mixed signs (2024:A: 2% and 2024:Q4: -4%), while firms in the euro area continued to report a significant negative impact (2024:A: -20% and 2024:Q4: -23%). Unlike successive previous findings after the April-September 2020 round indicating a stimulative role of public financial support[6] during the pandemic, from the April-September 2022 round until the last six-month round in the corresponding period of 2024, firms reported that access to public financial support did not help improve the availability of external financing (Greece: -5%, euro area: -11%), while a negative impact was perceived in all four available quarterly rounds of 2024.

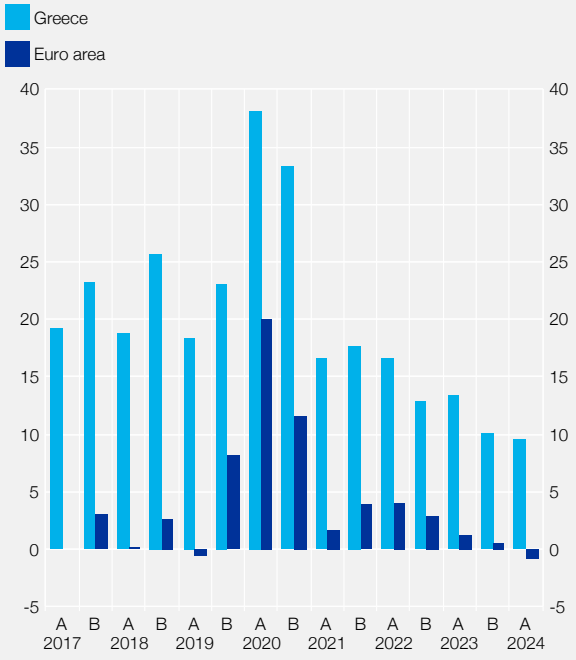
SMEs' bank financing needs (demand)

On a six-month basis, in the 2024:A round firms in Greece reported a weaker increase in their needs (i.e. demand) for fixed-maturity bank loans (9%) (see Chart C), but also a stronger (compared to the previous six months) increase in their needs for credit lines or overdrafts (19%). On a quarterly basis, in the fourth quarter of 2024 firms in Greece reported a weaker increase in their needs for both fixed-maturity bank loans (3%) (see Chart D) and

4 The percentage for "firm's creditworthiness" is a sum of the net percentages of three factors: (a) firm's credit history; (b) firm's capital position; and (c) firm-specific outlook.
5 The indicator measures the difference between the percentage of firms reporting that (a) the general economic outlook contributed to an increase in the availability of external financing over the six-month period under review and the percentage of firms reporting that (b) the general economic outlook did not contribute to an increase in the availability of external financing.
6 Firms' access to public financial support includes, *inter alia*, public co-financing or guarantee schemes for bank loans.

Chart C Six-month change in SMEs' needs for bank loans in Greece and the euro area

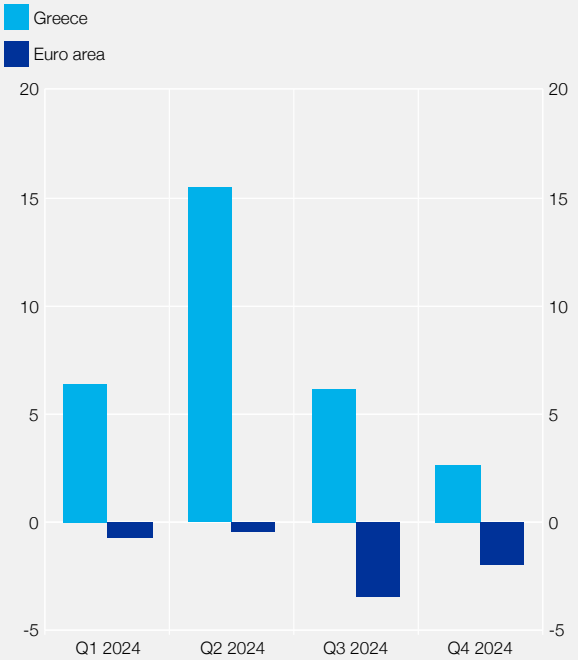
(in the corresponding period,[1] net percentage of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 The survey is conducted every six months and covers the periods of April-September (round A) and October-March (round B).
2 The net percentage is the percentage of firms reporting that their needs for bank loans increased minus the percentage of firms reporting that their needs decreased.

Chart D Quarterly change in SMEs' needs for bank loans in Greece and the euro area

(in the corresponding period,[1] net percentage of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 Since 2024 the survey has also been conducted on a quarterly basis and covers the corresponding calendar quarters.
2 The net percentage is the percentage of firms reporting that their needs for bank loans increased minus the percentage of firms reporting that their needs decreased.

credit lines or overdrafts (3%). In the euro area, in 2024:A SMEs reported a decrease in their needs for fixed-maturity bank loans (-1%) for the first time since the April-September 2019 round, while at the same time they continued to report an increase in their needs for credit lines or overdrafts (10%). In all quarterly rounds of 2024, firms in the euro area reported a decrease in their needs for fixed-maturity bank loans (2024:Q4: -2%) combined with a small increase in their needs for credit lines or overdrafts (2024:Q4: 4%).

External financing gap and financing obstacles

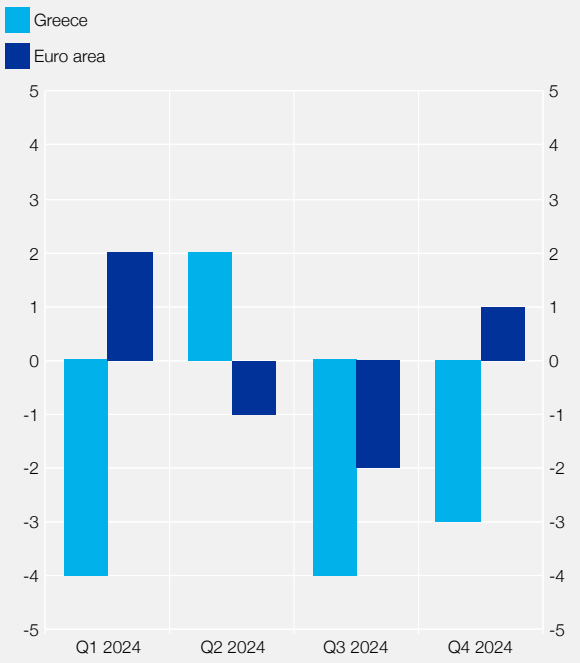
In the fourth quarter of 2024, an improvement in the availability of bank credit, coupled with firms' lower needs for fixed-maturity loans, contributed to a negative bank loan financing gap (-3%) in Greece, while over the same period in the euro area this indicator increased slightly (1%) (see Chart E). In addition, in the 2024:A round, firms reported that the overall financing obstacles indicator in Greece (17%) fell almost to an all-time low (2023:A: 15%) since the launch of the survey in 2009, while this indicator also declined slightly in the euro area (8%) (see Chart F).

Outcome of bank loan applications

In Greece, the percentage of enterprises that applied for a bank loan increased in both the 2024:A round (to 20%) and the fourth quarter of 2024 (to 19%). The survey results show that the percentage of firms that were discouraged from applying for fear of rejection fell in the 2024:A round (to 12%), but rose in the fourth quarter of 2024 (to 11%). The percentage of firms that did not apply because of sufficient availability of internal funds in the last six-month survey round reached the highest level (42%) recorded since the April-September 2010 round, while on a quarter-on-quarter basis this figure increased significantly in the fourth quarter of 2024 (52%). As regards firms in the sample that applied for bank loans in Greece, in the 2024:A round there was a decline in the percentage of firms reporting rejection (to 12%) as well as in the percentage of fully or mostly successful loan applications (to 40%). In the fourth quarter of 2024, a lower rejection rate coupled with an enhanced success

Chart E Quarterly change in the SMEs financing gap indicator in Greece and the euro area

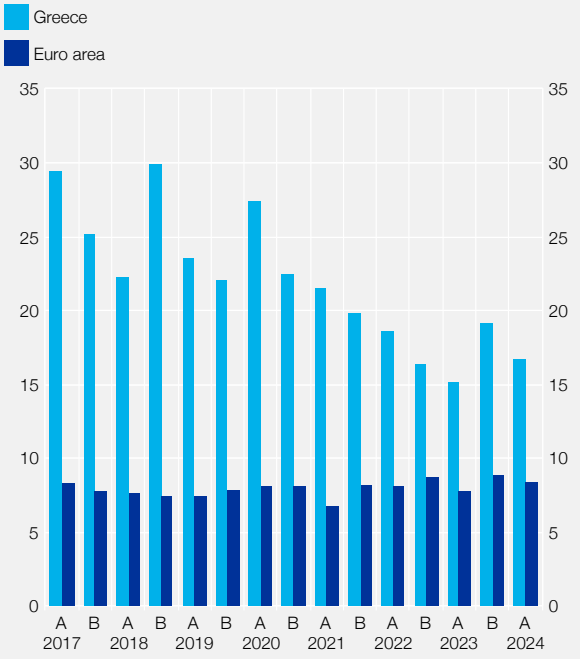
(in the corresponding period,[1] weighted net percentage of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 Since 2024 the survey has also been conducted on a quarterly basis and covers the corresponding calendar quarters.
2 On a quarterly basis, the indicator calculates the financing gap (needs minus availability) for fixed-maturity bank loans.

Chart F Six-month change in the SMEs overall financing obstacles indicator in Greece and the euro area

(in the corresponding period,[1] sum of net percentages of respondents[2])



Source: EC/ECB, Survey on the access to finance of enterprises in the euro area (SAFE).
1 The survey is conducted every six months and covers the periods of April-September (round A) and October-March (round B).
2 The overall financing obstacles indicator is the sum of the percentages of firms reporting the rejection of loan applications, loan applications for which only a limited amount was granted, and loan applications which resulted in an offer that was declined by the firms because the borrowing costs were too high, as well as the percentage of firms that did not apply for a loan for fear of rejection.

rate was recorded: 52% of firms reported that their bank loan application was mostly, if not fully, successful, while 7% of firms reported a rejection of their application.

In the euro area, the percentage of firms that applied for a bank loan increased marginally in the 2024:A round (to 19%), while it remained unchanged in the fourth quarter of 2024 (at 13%). The percentage of firms that were discouraged from applying for fear of rejection remained unchanged in both the 2024:A round (6%) and the fourth quarter of 2024 (4%), while the percentage of firms that did not apply because of sufficient availability of internal funds declined slightly in the 2024:A round (48%) and remained unchanged in the fourth quarter of 2024 (53%). As regards the outcome of bank loan applications, the rejection rate remained unchanged in the 2024:A round (9% of the firms that applied), while it decreased marginally in the fourth quarter of 2024 (to 5%, from 6% in the third quarter). A higher percentage of firms reported that their application was fully or mostly successful in the 2024:A round (72%) compared to the 2023:B round (69%), while this rate was marginally lower in the fourth quarter of 2024 (66%).

Bank financing terms and conditions

As regards bank financing terms and conditions, the survey results reflect the reduction in ECB policy rates, as the net percentage of SMEs reporting an increase in bank interest rates[7] declined significantly in the 2024:A

7 Respondents were asked to report whether the banks increased the level of interest rates on bank loans, overdrafts and credit lines.

round (Greece: 7%, euro area: 27%), while in the fourth quarter of 2024 firms reported a decrease in bank interest rates (Greece: -13%, euro area: -1%). For other costs of financing (charges, fees and commissions), although remaining at high levels, the net percentage of firms reporting an increase in the 2024:A round fell marginally in Greece (45%) and more in the euro area (38%), while in the fourth quarter of 2024 it decreased significantly compared with the previous quarter in both Greece (to 22%) and in the euro area (to 22% as well).

Conclusions

SMEs in Greece perceived the availability of bank loans to have increased, attributing this to banks' growing willingness to provide credit and to an improvement in the factors determining firms' creditworthiness. By contrast, firms in the euro area perceive the availability of bank loans to have declined on account of banks' reduced willingness to provide credit and the negative impact of some factors determining firms' creditworthiness, as well as the ongoing deterioration in the general economic outlook. According to the latest quarterly survey results, a negative bank financing gap is recorded in Greece, while this indicator increased marginally in the euro area. In the April-September 2024 round, firms in Greece reported that the overall financing obstacles indicator remained close to historical lows; they also reported a reduction in the rejection rate in the fourth quarter of 2024 and an increase in the success rate. In the April-September 2024 round, firms in the euro area reported a small decline in the overall financing obstacles indicator, while in the fourth quarter of 2024 a marginal decrease was recorded for both the rejection rate and the success rate. As regards financing terms and conditions, in Greece and the euro area as a whole the survey results reflect the effectiveness of the ECB's policy rate cuts, as in the April-September 2024 round a decline was recorded in the percentage of firms reporting an increase in bank lending rates; moreover, in the fourth quarter of 2024, the majority of enterprises reported a decrease in these bank rates.

Box 13

THE BANK LENDING SURVEY[1]

The latest rounds of the Bank Lending Survey, which look at developments in 2024 on a quarterly basis, provide mixed evidence of loan demand in Greece, as corporate loan demand increased, while consumer loan demand remained broadly unchanged. For housing loans, a decline in demand was reported in the last two quarters of the year compared with the immediately preceding quarters. In the euro area, there was overall a slight decrease in corporate loan demand in 2024, while for loans to households, banks reported some increase in both housing and consumer loans. On the supply side, banks in Greece reported that credit standards remained broadly unchanged,[2] but overall terms and conditions on loans to enterprises[3] eased somewhat. Terms and conditions remained broadly unchanged for consumer and housing loans. In the euro area, banks mostly reported a slight tightening in credit standards and a marginal easing of terms and conditions on corporate loans, while, overall, banks reported some easing in housing loans and a slight tightening in consumer loans in terms of both credit standards and terms and conditions.

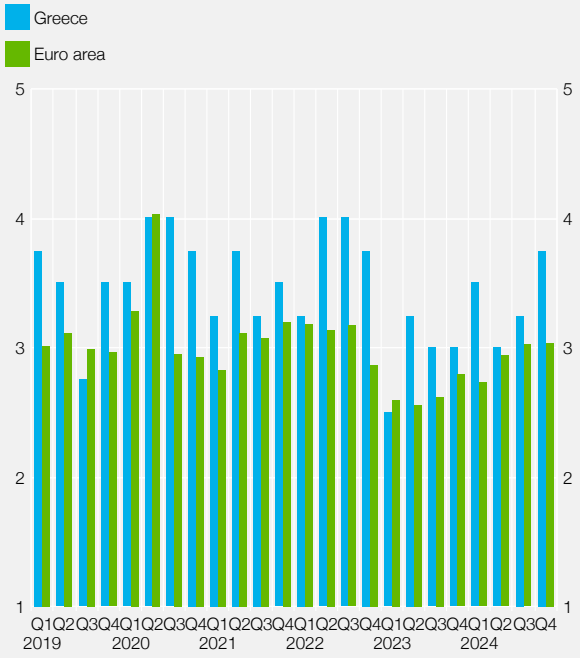
Loan demand

Credit institutions in Greece reported an increase in corporate loan demand in 2024 (see Chart A). Regarding the determinants of demand for loans to enterprises in Greece, banks reported a positive impact from the increase in firms' needs for financing fixed investment and for financing inventories and working capital, as well as in theirs need for financing mergers/acquisitions and corporate restructurings. At the same time, they reported some neg-

1 The Bank Lending Survey (BLS) is conducted by the Eurosystem on a quarterly basis, using a sample of about 150 banks across the euro area, including the four Greek systemic banks.
2 The survey defines credit standards as the internal guidelines and loan approval criteria shaping each bank's credit policy, such as new loans sought, geographical areas of activity, type of eligible collateral, etc.
3 Loan terms and conditions are defined as the actual terms and conditions agreed in loan contracts, such as the loan margin, the level of fees/commissions or other non-interest rate charges, maturity and size of loans, other loan clauses, etc.

Chart A Change in demand for loans by non-financial corporations in Greece and the euro area[1]

(in the corresponding calendar quarter; average[2])



Source: ECB/Bank of Greece, Bank Lending Survey.
1 Banks' perceived changes in demand for loans over the corresponding calendar quarter.
2 Average of banks' responses using a five-point scale, where demand for loans 1 = "decreased considerably", 2 = "decreased somewhat", 3 = "remained unchanged", 4 = "increased somewhat", and 5 = "increased considerably".

ative impact from firms' improved ability to finance their activities internally, while, as regards the impact of the general level of interest rates, credit institutions reported a mixed impact in the first half of the year and a slight positive impact in the fourth quarter of 2024.

Euro area banks reported a decline in corporate loan demand in the first half of 2024 (see Chart A), mainly stemming from the still high overall level of interest rates and a decrease in firms' needs for financing fixed investment and, to a lesser extent, their improved ability to finance their activities internally and lower needs to finance mergers/acquisitions and corporate restructurings. In the second half of 2024, credit institutions in the euro area reported a stabilisation in corporate loan demand and, at the same time, a neutral impact from all its determinants.

Banks reported mixed changes in households' demand for loans. Specifically, demand for housing loans in Greece stabilised in the first half of the year, while a decline was observed in the second half, which was mainly due to the still high general level of interest rates and the use of alternative sources of financing. In the euro area, demand for housing loans mostly rose in 2024, driven mainly by the lower general level of interest rates and an observed improvement in housing market prospects. As regards demand for consumer loans, credit institutions in Greece reported changes in both directions, leaving demand broadly unchanged and also reflecting the neutral impact of its determinants. In the euro area, demand for consumer loans increased slightly in all quarters of 2024, mainly driven by improved consumer confidence and rising consumer spending, as well as a decline in the general level of interest rates.

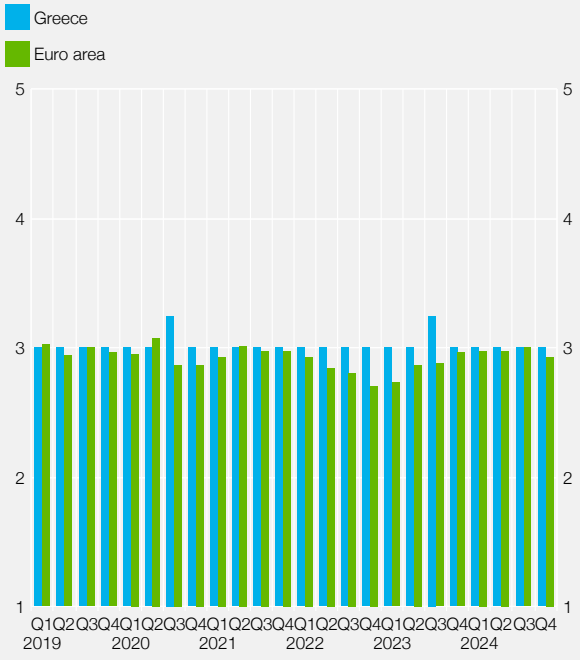
Loan supply

According to the banks surveyed, credit standards in Greece remained mostly unchanged across all loan categories, except for some easing reported in the third quarter in housing and consumer loans (see Chart B). Credit standard determinants had a broadly neutral impact, with the exception of the first quarter, for which banks reported that pressure from competition contributed to an easing in credit standards across all loan categories, and that an increase in risk tolerance led to an easing in credit standards for loans to households. In the euro area, credit standards for loans to enterprises recorded an overall slight tightening in 2024 (see Chart B), mainly due to the deteriorating general economic outlook, as well as due to industry- or firm-specific outlook. As regards loans for house purchase, credit standards in the euro area have eased somewhat overall, mainly reflecting pressure from competition and banks' slightly higher risk tolerance. By contrast, with regard to consumer credit, in the euro area credit standards tightened somewhat throughout the year, mainly driven by the deterioration in the general economic outlook and in consumers' creditworthiness, as well as banks' lower risk tolerance.

As regards terms and conditions on loans to enterprises in Greece, banks reported an easing in the first half (see Chart C), mainly stemming from reduced lending rates, as well as the narrowing of margins on medium- and high-risk loans. For the second half of the year, credit institutions reported a stabilisation of these terms and conditions. As for loans to households, banks in Greece reported that terms and conditions on consumer loans remained broadly unchanged, except for some tightening in the first quarter owing to an increase in non-interest rate charges. They also reported that terms and conditions on housing loans tightened in the first quar-

Chart B Change in credit standards on loans to non-financial corporations in Greece and the euro area[1]

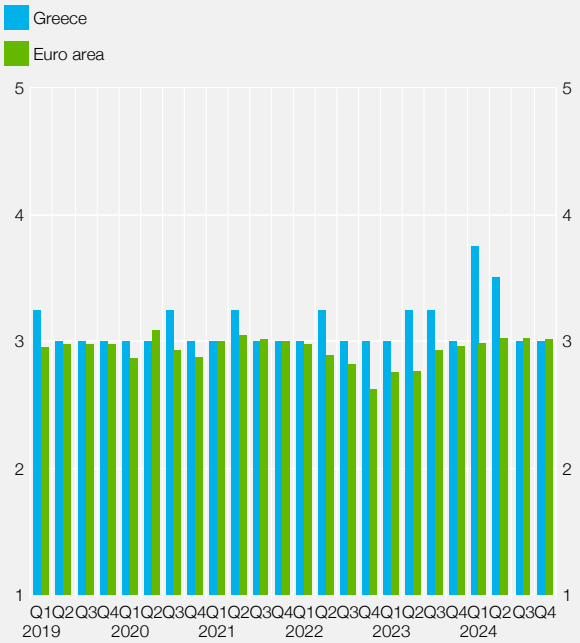
(in the corresponding calendar quarter; average[2])



Source: ECB/Bank of Greece, Bank Lending Survey.
1 Banks' perceived changes in credit standards on loans over the corresponding calendar quarter.
2 Average of banks' responses using a five-point scale, where credit standards 1 = "tightened considerably", 2 = "tightened somewhat", 3 = "remained unchanged", 4 = "eased somewhat", and 5 = "eased considerably".

Chart C Change in terms and conditions on loans to non-financial corporations in Greece and the euro area[1]

(in the corresponding calendar quarter; average[2])



Source: ECB/Bank of Greece, Bank Lending Survey.
1 Banks' perceived changes in terms and conditions on loans over the corresponding calendar quarter.
2 Average of banks' responses using a five-point scale, where terms and conditions on loans 1 = "tightened considerably", 2 = "tightened somewhat", 3 = "remained unchanged", 4 = "eased somewhat", and 5 = "eased considerably".

ter, also on account of increased non-interest rate charges, but stabilised during the second and third quarters. In the fourth quarter, there was an easing in terms and conditions on housing loans, driven by a contraction in the interest rate margin on average loans, as well as by a decline in non-interest rate charges. In the euro area, credit institutions reported a marginal easing of terms and conditions on loans to enterprises in 2024 (see Chart C), mainly because of a small decrease in the interest rate margin on average-risk loans. For consumer loans, banks in the euro area reported some tightening of terms and conditions, associated with banks' risk perceptions and lower risk tolerance. By contrast, for housing loans, banks in the euro area reported some easing of terms and conditions, mainly driven by competitive pressures and a narrowing of the interest rate margin on average loans.

Credit institutions in Greece responded that the share of rejected applications for loans remained unchanged in 2024 across all loan categories, with the exception of some increase in the first quarter for housing loans. In the euro area, the share of rejected applications increased slightly across all 2024 rounds of the survey for corporate and consumer loans, while for housing loans banks reported a small decline overall in 2024.

Survey results on ad hoc questions

In response to ad hoc questions, credit institutions in Greece reported mostly improved access to wholesale funding but, as regards access to retail funding, they reported some deterioration in short-term deposits in the first half of 2024. Credit institutions in Greece reported that changes in banks' excess liquidity holdings with the Eurosystem had a neutral impact on credit volumes, credit standards and terms and conditions. In addition, credit institutions in Greece and on average in the euro area reported that the evolution of the NPL ratio had a neutral impact on credit standards or terms and conditions across all loan categories. With regard to their profitability, they reported that it was negatively affected to some extent by their participation in TLTRO III op-

erations,[4] while changes in the ECB's monetary policy asset portfolio[5] had no impact. At the beginning of the year, credit institutions in Greece reported that key ECB interest rate decisions had a positive impact on their profitability, as net interest income improved due to widened interest rate margins, while banks reported a neutral impact from the second quarter of 2024 onwards. To the question gauging the impact of climate change on bank credit in mid-2024, banks reported a stronger increase in loan demand over the past 12 months by "green firms" (firms that do not contribute or contribute little to climate change) and "firms in transition" (firms that contribute to climate change, but are making considerable progress in the transition), while they reported a small tightening of credit standards towards "brown firms" (firms that contribute significantly to climate change and have not yet started the transition or have made little progress).

In the euro area, banks mostly reported improved access to wholesale and retail funding, with the exception of some slight deterioration in short-term deposits. Credit institutions noted that in the first half of 2024 changes in banks' excess liquidity with the Eurosystem had a small negative impact on credit volumes, as well as on credit standards and terms and conditions, while in the second half of the year their impact was neutral for credit standards and marginally supportive for credit volumes, as well as for terms and conditions. In the euro area, banks reported that the NPL ratio contributed to a slight tightening of credit standards and terms and conditions on corporate and consumer loans, while it had a broadly neutral impact on housing loans. In 2024, credit institutions in the euro area overall reported that their profitability benefited from their participation in TLTRO III operations, while changes in the ECB's monetary policy asset portfolio negatively affected it in the first half of the year, but had a marginally supportive impact in the second half of 2024. At the beginning of the year, credit institutions in the euro area reported that key ECB interest rate decisions had a positive impact on their profitability, as their net interest income grew due to wider interest rate margins, but from the second quarter of 2024 onwards banks recorded a small negative impact. In addition, banks reported an increase in loan demand and an easing in credit standards, as well as in terms and conditions on loans to "green firms" and "firms in transition", while with respect to "brown firms" they recorded a decline in loan demand and a tightening in credit standards and terms and conditions.

Conclusions

In 2024, Greek banks reported an overall neutral change in credit standards across all loan categories and terms and conditions to households, while an easing was recorded on loans to enterprises. Over the same period, credit institutions in the euro area reported overall a slight tightening of credit standards, coupled with a marginal easing of terms and conditions on loans to enterprises, while some easing was also recorded on housing loans and a slight tightening on consumer loans in both credit standards and terms and conditions. In terms of demand for loans, credit institutions in Greece reported that demand for loans to enterprises increased in 2024, while demand for housing loans declined somewhat and demand for consumer loans remained broadly unchanged. Over the same period, the euro area reported overall a small decline in demand for loans to enterprises, whereas banks recorded a slight increase for housing and consumer loans.

In response to ad hoc questions, credit institutions in Greece and the euro area mostly reported improved access to wholesale funding, while for retail funding banks reported some deterioration in their access to short-term deposits. In addition, banks in Greece reported that the evolution of the NPL ratio had a neutral impact on credit standards and on terms and conditions across all loan categories, while in the euro area it contributed to a slight tightening of credit standards and of terms and conditions on corporate and consumer loans, but had a broadly neutral impact on housing loans. At the beginning of the year, credit institutions in Greece and overall in the euro area reported that key ECB interest rate decisions had a positive impact on their profitability, but since the second quarter of 2024 banks in Greece have reported a neutral impact, while in the euro area they reported a small negative impact.

4 In 2024, the conditions for liquidity provision to banks by the Eurosystem remained restrictive. Excess liquidity declined, as banks continued to repay the liquidity raised through TLTRO III operations and, by the end of 2024, these operations were fully repaid.

5 Reinvestments of the principal payments from maturing securities purchased by the Eurosystem under the pandemic emergency purchase programme (PEPP) started to decrease from the second half of 2024 on and were discontinued at the end of the year. It should be noted that reinvestments under the expanded asset purchase programme (APP) had already been discontinued in July 2023.

Box 14

THE REVISED EUROPEAN FRAMEWORK FOR THE OPERATION AND SUPERVISION OF INSURANCE UNDERTAKINGS (SOLVENCY II REVIEW)

Directive 2009/138/EC on the taking up and pursuit of the business of insurance and reinsurance (Solvency II) needed to be reviewed, after a reasonable period of implementation. The starting point for this review was an opinion of the European Insurance and Occupational Pensions Authority (EIOPA) in 2019, which led, following a lengthy negotiating process between the European Commission, the Council and the European Parliament, to the adoption and publication of the revised Directive[1] in January 2025.

The revised framework for the operation and supervision of insurance and reinsurance undertakings contributes significantly to enhancing the proportionality, sustainability and soundness of the insurance industry in the European Union (EU). In line with the principle of proportionality, it reduces supervisory requirements and the administrative burden for "small and non-complex insurance undertakings", while, where necessary, processes are simplified and the frequency of reporting is reduced. At the same time, cooperation between supervisors for the supervision of significant cross-border activities and of insurance groups is enhanced. In addition, new requirements are introduced, such as short-term liquidity risk management plans and sustainability risk plans, while long-term climate scenarios will be part of the Own Risk and Solvency Assessment (ORSA) report. Overall, the adaptability of both insurance undertakings and supervision to current and future insurance and financial sector challenges is enhanced.

The key aspects of the revised supervisory framework for the operation and supervision of insurance undertakings are:

- Application of the proportionality principle to small and non-complex undertakings: Supervisory requirements and administrative obligations are reduced, which will help alleviate administrative costs for these insurance undertakings. Moreover, by reducing unnecessary complexity in the supervisory monitoring of these undertakings, supervisors will be able to allocate their resources more efficiently, applying more adequately risk-based criteria to the prioritisation of their supervisory activities.

- Compared to the current regime and in order for insurance undertakings to improve their competitiveness and their ability to take up insurance risks, changes are foreseen to increase their capital efficiency. Indicative changes in this direction include: (a) the reduction of the cost of capital (CoC) rate in the risk margin; (b) improvements in the functioning of the volatility adjustment; and (c) the introduction of simplified criteria for the classification of equity holdings as long-term investment, contributing to the long-term financing of the economy as a whole.

- Strengthening cooperation between supervisory authorities: Priority shall be given to improving cooperation between supervisory authorities in monitoring cross-border activities and for more effective supervision of insurance groups. Moreover, through well-structured communication between supervisors, the exchange of expertise on supervisory practices is favoured and financial stability is further safeguarded.

- Monitoring of systemic risks: New tools are adopted for macroprudential considerations, building on the experience of the recent past (pandemic impact, low-for-long interest rates, inflationary pressures), which can affect the insurance market as a whole. In addition, mechanisms are introduced for the management of liquidity and sustainability risks, as well as financial risks related to the impacts of climate change (higher incidence of floods and wildfires).

1 Directive (EU) 2025/2 of the European Parliament and of the Council of 27 November 2024 amending Directive 2009/138/EC as regards proportionality, quality of supervision, reporting, long-term guarantee measures, macroprudential tools, sustainability risks, group supervision and cross-border supervision, and amending Directives 2002/87/EC and 2013/34/EU.

Finally, it should be noted that, in parallel with the changes introduced by the review of Solvency II, the insurance market will have to comply in the near future with the requirements of the Insurance Recovery and Resolution Directive.[2] The magnitude of the challenge is increased by the fact that these Directives should be transposed uniformly into the national laws of the EU Member States within the next two years, with a view to enhancing the resilience of the industry and maintaining a high level of protection of policyholders and beneficiaries.

2 Directive (EU) 2025/1 of the European Parliament and of the Council of 27 November 2024 establishing a framework for the recovery and resolution of insurance and reinsurance undertakings and amending Directives 2002/47/EC, 2004/25/EC, 2007/36/EC, 2014/59/EU and (EU) 2017/1132 and Regulations (EU) No 1094/2010, (EU) No 648/2012, (EU) No 806/2014 and (EU) 2017/1129.

Box 15

OCCUPATIONAL PENSION FUNDS AND THEIR CONTRIBUTION TO THE GREEK PENSION SYSTEM

Occupational Pension Funds (OPFs) are part of the second pillar of insurance and were introduced in Greece under Law 3029/2002. OPFs are non-profit legal entities governed by private law which are established by social partners (employers, employees) of individual professional sectors. Their objective is to provide the insured and beneficiaries with occupational insurance protection, in addition to that provided by compulsory social security, indicatively, for the risks of old age, death, disability, accident, illness or dismissal. The benefit involves periodic or lump-sum payment or a combination thereof. OPFs follow a funded financing system, i.e. accumulation of capital through contributions, which is then invested and, together with returns, finances pensions.

There are currently 28 OPFs in Greece, which manage EUR 485 million and comprise around 55 thousand members from the public, the shipping and the banking sectors, along with more specialised sectors, such as those of economists, geotechnical engineers, police officers/fire service/coast guard personnel, urban transport employees, etc.

As Greece faces demographic challenges, such as a declining birth rate and an ageing population, the public social security system is under strong pressure. OPFs contribute to a long-term and sustainable solution in the face of these challenges, as they can enhance the income of pensioners, thereby improving their living standards, while at the same time contributing to nurturing a savings and investment culture, especially among younger employees.

Moreover, it is expected that the development of this institution will result in the accumulation of a significant capital stock, which can enhance productive investment in the country. This will contribute to increasing productivity and boosting GDP. It is worth noting that the Foundation for Economic and Industrial Research (IOBE) estimates that, if 50% of the country's workforce were insured in OPFs, this could lead to a higher GDP by EUR 2.7 billion per year over a 20-year period.

New Law 5078/2023, which introduced uniform rules of good governance and new transparency requirements, similar to those required for other entities in the financial sector, aims to shield and strengthen the institution of occupational insurance. In addition, organisational changes are introduced, broadly transposing the requirements of the European legislator.[1] Finally, a number of provisions are introduced to enable timely and modular supervisory intervention, at all stages of the operation of these funds, proportional to the degree of non-compliance and with a view to protecting the members and beneficiaries.

In particular:

1 Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs).

Provision was made for the establishment of multi-employer occupational funds. Thus, employees of small and medium-sized enterprises can now reap the benefits of occupational insurance at an affordable cost, taking advantage of the economies of scale that these funds can develop. This arrangement effectively removes internal restrictions, which distorted healthy competition between domestic OPFs and OPFs based in other EU countries.

In addition, the new law introduces a modern OPF governance system. One of the innovations envisaged in this context is the adoption of the dual governance model, with the establishment of a Supervisory Board, a body independent from the respective Board of Directors, which acts as a safety valve for the sound and transparent management of the fund.

With regard to the key functions, i.e. actuarial, risk management and internal audit, whose role is crucial to the protection of OPF members and beneficiaries, conditions are set for the independent exercise of the relevant duties, while the key function holders will be scrutinised for their knowledge and reliability.

In addition, transparency requirements are specified, such as the obligation to provide information to OPF members and beneficiaries both in the pre-retirement phase and in the pay-out phase of pensions.

A significant change introduced by Law 5078/2023 is the assignment of OPFs' supervision to the Bank of Greece as of 1.1.2025. The transition from trilateral supervision, applicable under the previous legislative regime, to single supervision by the Bank of Greece ensures greater flexibility and stability, providing legal clarity and simplifying the communication of OPFs' managements with the supervisor.

The Bank of Greece can play a key role in the development of the institution in Greece, indicatively by speeding up the procedures for establishing occupational pension funds and for the provision of supervisory approvals, so as to avoid delays in the smooth operation of the funds and enhance their adaptability.

In conclusion, the institution of Occupational Pension Funds has room for development in Greece and can become a tool for enhancing the Greek economy's growth and the sustainability of the country's pension system. At the same time, it is expected to open up new prospects for improving workers' living standards, as it will significantly boost their post-retirement income. In addition, it can contribute to raising labour productivity, by allowing employers to provide additional incentives to employees, as well as to attracting and retaining a competent workforce.

Box 16

THE OUTLOOK OF THE GREEK ECONOMY'S SOVEREIGN CREDIT RATINGS

Credit ratings are a crucial criterion in international investors' decisions to invest both in securities (bonds and equities) and directly in the real economy. Thus, studies about the impact of credit ratings on the structure of investment portfolios, as well as on foreign direct investment (FDI) flows, find that both investment categories grow significantly following an upgrade of the sovereign credit rating of the underlying economy.[1]

1 For investment portfolio holdings and their relationship with credit ratings, see, inter alia, Baghai, R., B. Becker and S. Pitschner (2023), "The use of credit ratings in the delegated management of fixed income assets", *Management Science*, 70(5), 3059-3079. As regards investment in the real economy, the study by Chen, S.-S., H.-Y. Chen, C.-C. Chang and S.-L. Yang (2013), "How do sovereign credit ratings affect private investment?", *Journal of Banking and Finance*, 37, 4820-4833, suggests that FDI increases by 5 pps as a percentage of total private investment in the year during which an upgrade has taken place, and by +8 pps three years later. Similar findings are presented in Cai, P., Q. Gan and S.-J. Kim (2018), "Do sovereign credit ratings matter for foreign direct investments?", *Journal of International Financial Markets, Institutions and Money*, 55, 50-64, suggesting that upgrades have a significant and positive effect on FDI flows, while in high income economies (OECD members) investors show greater risk aversion and, as a result, economies with a higher credit rating attract greater FDI flows.

As regards the Greek economy, the impact of the sovereign credit rating upgrades to investment grade status is already visible. Specifically, international investment funds increased their positions in Greek bonds and equities by EUR 5 billion from the fourth quarter of 2022 to the third quarter of 2023. This rise is explained by expectations of an upgrade of the sovereign credit rating to investment grade.[2] Furthermore, based on Greece's international investment position data, from the third quarter of 2023 up to the third quarter of 2024 investment portfolios increased their positions in Greek equities by EUR 5.6 billion and in Greek bonds by EUR 7.7 billion. Heightened demand for Greek bonds and equities by international investment funds owing to the aforementioned upgrades is estimated to have greatly contributed to reducing the cost of borrowing for the Greek government, banks and non-financial corporations, as well as to improving financing conditions through these funds' participation in the share capital of Greek firms, thereby supporting investment activity in the real economy. Hence, also in the case of the Greek economy, the major impact of credit rating upgrades on both portfolio investment and the real economy is confirmed.[3]

Outlook for Greece's sovereign credit ratings

The prospects for further upgrades of the sovereign credit rating are mostly positive. In particular, S&P has changed its outlook on Greece's rating to positive, while Moody's, Morningstar DBRS and Scope recently upgraded Greece's credit rating, having assigned a positive outlook before the upgrades.[4] This box analyses the parameters and their outlook, taking into account expected developments in economic activity and public finances, in order to draw conclusions on the upgrades of the Greek economy in the course of 2025 and their potential evolution. The analysis focuses on the three major rating agencies (Fitch, Moody's and S&P), for each of which a relevant econometric model has been constructed for estimating the scores assigned to the fundamental indicators of rated sovereigns, including Greece. These scores form the quantitative component of credit ratings.[5]

Despite methodological differences among the three agencies, the fundamental indicators considered in sovereign credit assessments can be classified as follows: (a) macroeconomic factors; (b) external finances; (c) public finances; and (d) structural factors. Nevertheless, it should be pointed out that these categories carry a different weight for each credit rating agency, while differences also exist in the methods they use for extracting their scores.

So, for simplification purposes, the scores shown in Chart A are the average scores of the three rating agencies for each category. As clearly illustrated in Chart A, after the pandemic, i.e. since 2021, a continuous upward trajectory is observed in the public finances and macroeconomic factors scores and, to a lesser extent, in the external finances score.

In this respect, the improvement in these four parameters over the years 2022-2024 has added around 1.4 notches to the score, with almost half of the increase (0.74 notch) stemming from the reduction in the public debt-to-GDP ratio and the improvement in the budget balance. Moreover, lower GDP volatility and positive real

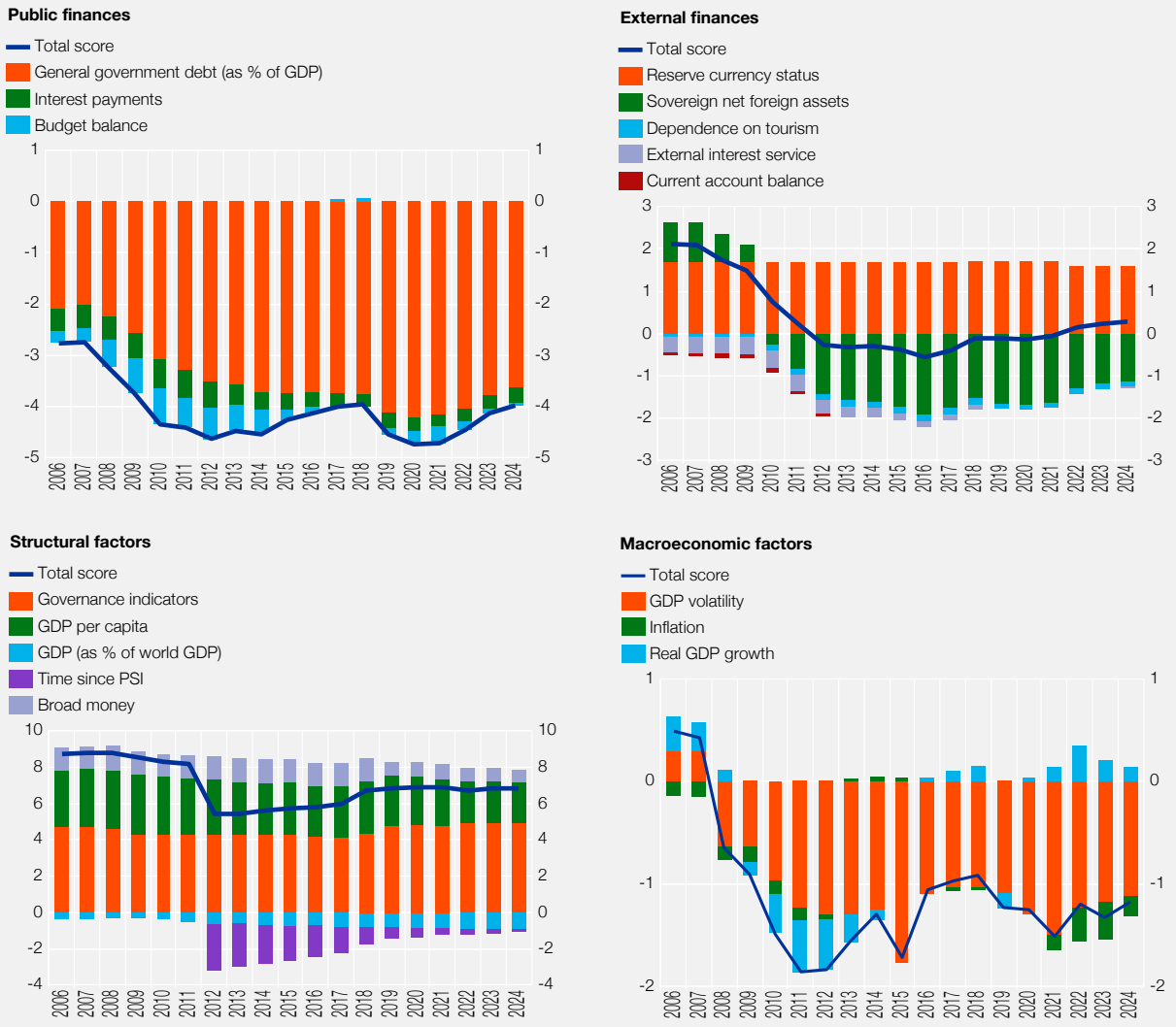
2 This increase is calculated net of the effect of the rise in equity and bond prices over the same period. See Giannakidis, H., L. Karathanos, A. Kontinopoulos, A. Lampousis and P. Migiakis (2024), "The investment grade and funds' portfolio allocation in Greek assets", Bank of Greece, *Economic Bulletin*, 59, 7-24.

3 Besides, based on past experience with upgrades to investment grade, the positive effect is expected to be a 2.5% higher GDP level and a 0.48% lower GDP volatility level. See Anastasatou, M., H. Balfoussia, Z. Bragoudakis, D. Malliaropulos, P. Migiakis, D. Papageorgiou and P. Petroulas (2023), "Effects of a sovereign credit rating upgrade to investment grade on the Greek economy", Bank of Greece, *Economic Bulletin*, 58, 7-28.

4 In particular, Moody's had assigned a positive outlook in its rating for the Greek economy before upgrading it to Baa3 (corresponding to BBB-) from Ba1 (corresponding to BB+) on 14 March 2025. Similarly, a positive outlook was assigned by Scope Ratings and Morningstar DBRS in their ratings for the Greek economy, before they upgraded it to BBB from BBB- on 6 December 2024 and on 7 March 2025, respectively.

5 For more details, see Malliaropulos, D. and P. Migiakis (2020), "Sovereign credit ratings and the fundamentals of the Greek economy", Bank of Greece, *Economic Bulletin*, 51, 43-69. In summary, the final credit rating for each debt issuer is the result of quantitative criteria combined with a qualitative assessment. The quantitative component yields individual scores, based on fundamental economic indicators, and is followed by a qualitative assessment, resulting in an overall score which corresponds to one of the rating scales used by international credit rating agencies.

Chart A Evolution of the scores of the Greek economy's variables



Sources: Credit rating agencies and Bank of Greece calculations.

GDP growth rates have reduced the negative contribution of macroeconomic factors by around 0.33 notch, while the external finances parameter has also made a positive contribution of around 0.35 notch.[6]

In order to draw conclusions for upcoming developments, the rating agencies' assumptions on the key parameters of macroeconomic factors and public finances are analysed. Specifically, credit rating agencies incorporate macroeconomic forecasts in the quantitative component of their sovereign credit rating assessments (see table).

As shown in the table, the forecasts on economic activity and the fiscal indicators of the Greek economy vary considerably among the three credit rating agencies, especially for 2026, while they also differ from the projections included in the Medium-Term Fiscal-Structural Plan of the Greek Ministry of Economy and Finance. Hence, the inclusion of forecasts on the course of the Greek economy has a positive contribution to the quantitative component of the assessment of around 0.3 notch in the case of Fitch and of about 0.8 and 0.5 notch in the case of S&P and Moody's, respectively (see Chart B). In all three cases, the positive contribution to the assessment is

6 The improvement in the external finances parameter is almost entirely explained by the gradual repayment of the official sector debt, which has mitigated the negative contribution of sovereign net foreign assets.

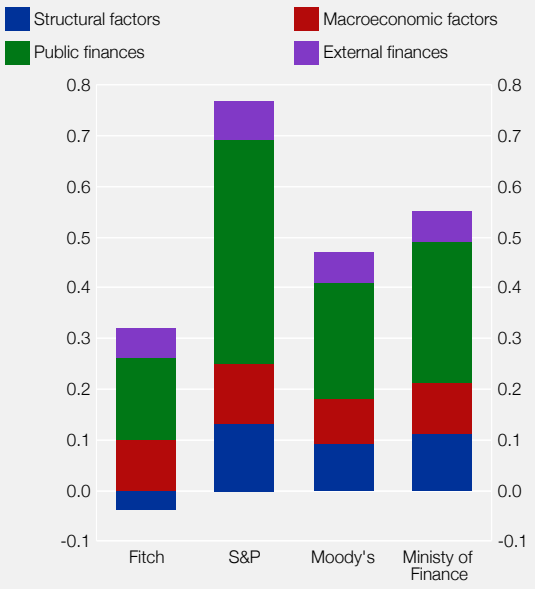
Estimates of macroeconomic factors

	Fitch			S&P			Moody's			Ministry of Economy and Finance (MTP 2025-2028)		
Date of forecasts	6.1.2025			21.10.2024			November 2024			October 2024		
	2024	2025	2026	2024	2025	2026	2024	2025	2026	2024	2025	2026
GDP growth (%, constant prices)	2.2	2.4	1.9	2.6	2.5	2.4	2.1	2.3	2.0	2.2	2.3	2.0
Inflation (%)	2.7	2.1	1.9	2.8	2.1	2.0	2.8	2.2	2.1	2.8	2.1	2.0
Government debt (% of GDP)	159.3	152.9	148.5	150.9	142.1	134.2	156.1	149.2	143.1	153.7	149.1	143.1
Interest payments (% of revenues)	6.9	6.6	6.4	6.6	6.1	5.9	6.9	6.9	6.7	6.9	6.6	6.3
Budget balance (% of GDP)	-1.1	-1.0	-0.9	-1.0	-0.8	-0.6	-1.3	-1.3	-1.3	-1.0	-0.6	-0.8

Sources: Credit rating agencies and Ministry of Economy and Finance.
Note: In the columns that refer to the forecasts of the Greek Ministry of Economy and Finance, data are drawn from the Medium-Term Fiscal-Structural Plan 2025-2028 (MTP 2025-2028) published by the Ministry of Economy and Finance on 16 October 2024, except for interest payments as a percentage of revenues, a field for which the simple arithmetic average of the forecasts of Fitch, Moody's and S&P is taken for each year.

mainly explained by the improvement in the public finances parameter (by 0.16 notch for Fitch, 0.44 notch for S&P and 0.23 notch for Moody's). Macroeconomic factors add another 0.1-0.12 notch to the scores of the rating agencies for 2024. Finally, based on the projections contained in the Medium-Term Fiscal-Structural Plan (MTP) 2025-2028, an improvement of around 0.3 notch is expected due to a higher score in public finances, and, additionally, an overall improvement of around 0.28 notch in the remaining parameters. Therefore, achieving the MTP targets is expected to bring about a considerable improvement in the scores of the fundamental indicators used by the agencies, contributing positively to the final rating of the Greek sovereign.

Chart B Expected changes in parameters for 2025 in relation to the BBB- credit rating



Sources: Credit rating agencies and Bank of Greece estimates.
Notes: The chart shows the additional contribution of the scores of public finances, macroeconomic factors, structural factors and external finances to the credit ratings assigned by Fitch, Moody's and S&P, based on their forecasts for the corresponding fundamental indicators for 2025. The last bar shows the respective contribution of these parameters, after taking into account the projections of the Ministry of Economy and Finance in the Medium-Term Fiscal-Structural Plan 2025-2028.

All the above help explain why S&P has recently changed its outlook on the Greek economy to positive and why Moody's has proceeded to an upgrade, as the anticipated improvement in public finances will positively affect Greece's credit ratings. On the contrary, the improvement in public finances expected by Fitch is not as large as the one expected by the two other rating agencies, and its effect on the score of this parameter in Fitch's model is not the same as the effect in the models used by the other two agencies. As a result, the improvement in the quantitative component of Fitch's rating is expected to be smaller.[7]

Finally, in order to estimate the impact of expected changes in the scores of Greece's fundamental indicators on its final sovereign credit rating, the existing gap between each agency's scores and final ratings ("adjustment gap") needs to be taken into account. In particular, based on the credit rating agencies' reports, the quantita-

7 As far as Fitch is concerned, a very important parameter is the one calculated on the basis of structural factors. Therefore, reforms that will improve Greece's relative position in the World Bank's governance indicators are expected to have a particularly positive effect on the scores of this rating agency.

tive assessment currently corresponds to the following ratings: BBB- for Fitch, BBB+ for S&P and from Baa3 (corresponding to BBB-) to Baa1 (corresponding to BBB+) for Moody's. The final ratings assigned for the time being, after having taken under consideration the qualitative factors at the agencies' rating committees level, are: BBB- from Fitch, BBB- from S&P and Baa3 (corresponding to BBB-) from Moody's. Therefore, the adjustment gap for the Greek sovereign is 2 notches for S&P and 0 to 2 notches for Moody's. This being so, the expected macroeconomic and fiscal developments will have a significant upward effect on the scores assigned by S&P and Moody's, leading to further improvements in the creditworthiness of the Greek economy. In today's global environment of heightened uncertainty, achieving the macroeconomic and fiscal targets becomes even more essential, as any further upgrades would act as a backstop to possible adverse developments in international financial markets.

Conclusions

The improvement in public finances and the strong growth rates of the Greek economy have led to enhanced fundamental indicators considered by credit rating agencies, resulting in the upgrades of the Greek sovereign credit ratings in recent years. A further improvement is expected for 2025 in, mainly, the public finances parameter and secondarily in the macroeconomic factors parameter. Of course, in the current environment of heightened international uncertainty, credit rating agencies are expected to adopt a more cautious stance. In such an environment, potential further upgrades are expected to contribute to strengthening the resilience of investment in the Greek economy. Therefore, further improvements are crucial for upgrades to continue. As regards the structural factors and external finances parameters, in particular, there is considerable room for improvement; this could be achieved by pushing forward with structural reforms and improving the current account balance, respectively.

Box 17

FINANCING FLOWS TOWARDS INVESTMENT FUNDS AND MONETARY POLICY

Investment funds are pooled investment entities that source individual investors' capital and invest it collectively in equity shares, bonds and other securities portfolios, while the management of these portfolios is delegated to professional fund managers. This box examines the dynamics of global flows into investment funds and their relationship with economic and monetary developments over the 2021-2024 period. In particular, we analyse capital flows to non-bank financial intermediaries, focusing on the positions of fund management companies investing in bonds, equities and the money market in the euro area and the United States. The aim is to analyse flows into investment funds in relation to policy rate changes by the European Central Bank (ECB) and the Federal Reserve System (Fed).

Investment fund flows estimation on the basis of portfolio allocation

Investment funds (IFs) are financed by means of capital inflows by investors who purchase shares/units, whereas liquidation of these shares/units leads to capital outflows. Net flows to IFs are positive when demand for their shares/unit is greater than supply, and they become negative when share/unit-holders liquidate their shares/units to an extent that exceeds demand. Therefore, capital flows to IFs provide information on demand by institutional and retail investors for each IF.[1]

An important question that arises with regard to net capital flows is how these can be linked to the purchase of securities (bonds and equity shares) and other assets of a particular country or group of countries. For this reason, net flows are calculated as the difference between inflows and outflows for each IF. The analysis is

1 Demand for IF shares/units is not necessarily equal to demand for every single asset in the IF portfolio, as it is affected by a number of factors, including past performance, the size of assets under management, etc. Net capital inflows to an IF constitute a proxy measure based on changes in net assets under management and its portfolio performance. The return on the IF portfolio is calculated on the basis of IF assets and their allocation, while capital gains/losses, dividend or interest income, exchange rate differences, reinvestments and management fees are taken into account.

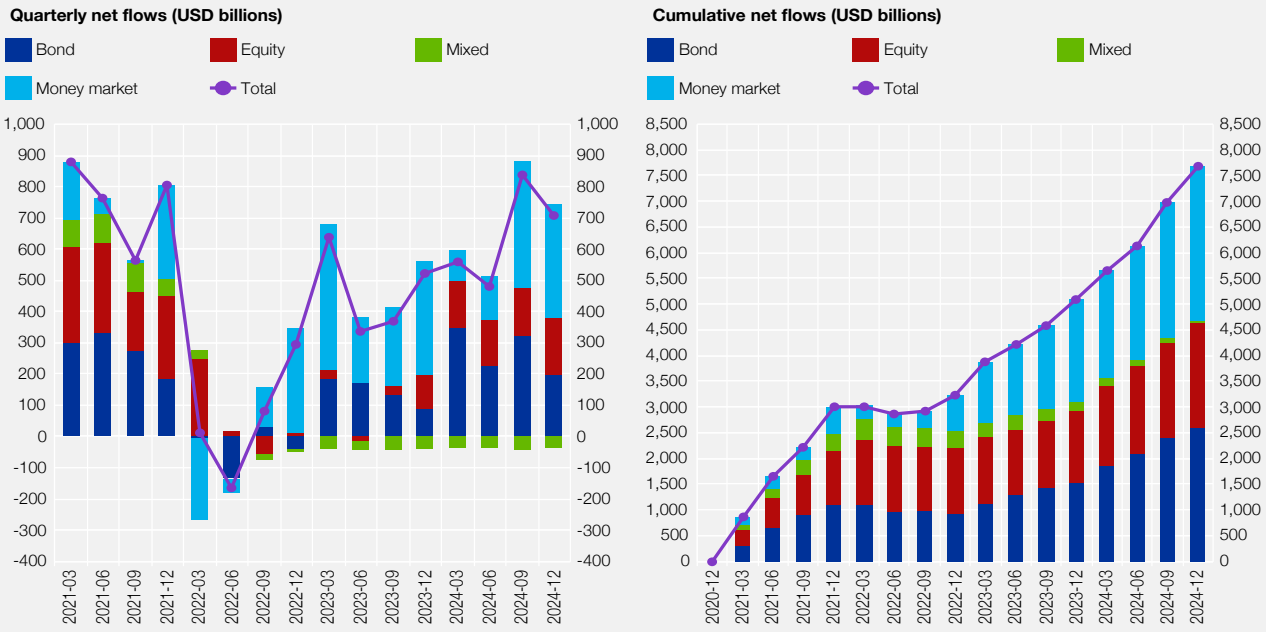
carried out for IFs investing in the money, bond and equity markets in the euro area and the United States, using monthly data for the period from December 2020 to December 2024.[2] We analyse data from 77,197 IFs of various categories, such as mutual funds, pension funds, exchange-traded funds (ETFs), insurance and hedge funds, which invest in bonds, in equity, in a combination of these and in the money market.

In more detail, total net flows to a particular economy are calculated as the sum of net flows towards each IF ($KPK_{j,t}$) multiplied by the portfolio share invested by the IF in that economy over the previous period ($\omega^{i}_{j,t-1}$)[3]. This measure captures quite accurately the portfolio structure of securities in terms of country of risk, as it is based on the IFs' overall investment positions in each economy. Geographical focus data for each IF identify the country or countries where the largest share of IF assets is invested. The countries/group of countries analysed herein include the United States, the euro area, Greece, France and Germany.

Net investment fund flows

During the monetary tightening cycle (2021-2024), capital flows to IFs rose by about USD 7.5 trillion (see Chart A). The increase was mainly driven by flows into money market funds between Q4 2022 and end-2024, supported by higher inflation expectations and interest rate hikes by the Fed. Following the fall in bond market prices in early 2022, bond funds attracted significant capital flows in 2023, as lower bond valuations (higher yields) encouraged investors to increase their bond positions. Out of the total global net capital flows to bond funds in 2021-2024, 45% was directed to the United States, while the euro area attracted 16%. With regard to

Chart A Flows to investment funds worldwide



Sources: Lipper and Bank of Greece calculations.
Notes: On the left-hand side panel, net flows to investment funds (IFs) worldwide are calculated as the sum of monthly data for each quarter of the December 2020-December 2024 period. The right-hand side panel shows cumulative flows for the specific period. Flows in bond IFs are shown in dark blue, in equity IFs in red, in mixed IFs in green and in money market IFs in light blue. The purple line shows total flows for all these IF categories.

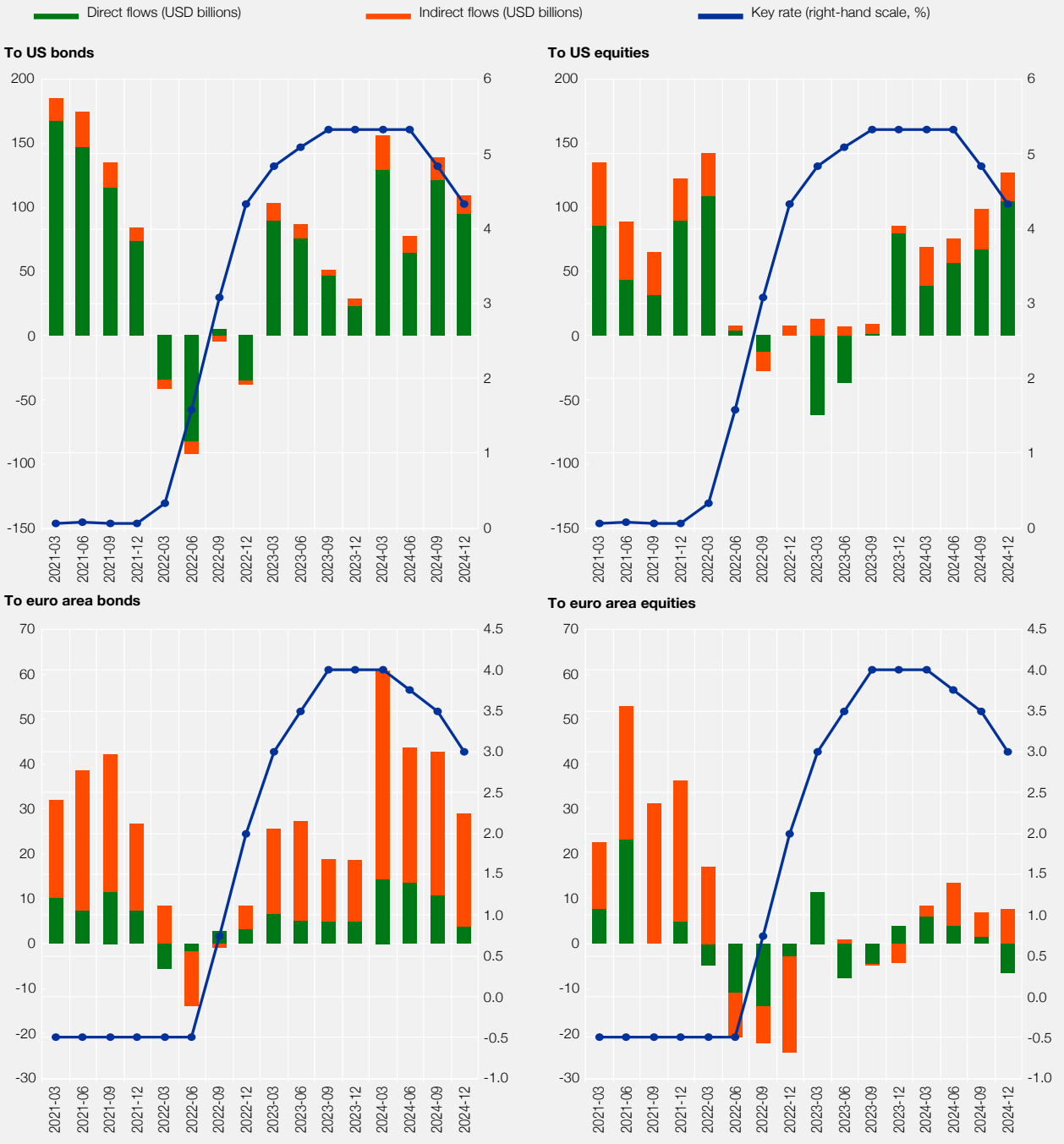
2 Data were provided by LSEG Lipper for Investment Management. The dataset includes estimates of net flows into IFs in US dollars, adjusted for total costs, entry and exit charges and taxes. In addition, income from capital gains as well as dividend or interest income are reinvested on the ex-dividend date. The analysis includes IFs with assets under management or total net assets of at least USD 100 million. In the case of incomplete reporting, missing data are approximated to the latest available data.

3 Based on the estimated net flows in period t for IF j, $KPK_{j,t}$, the proxy of net capital flows is constructed for its portfolio allocation towards a particular economy i using its portfolio share of the previous month $\omega^{i}_{j,t-1}$. In general, for the available investment funds j=1,…,N, we compute the following equation: $\widehat{KPK^{i}_{j,t}} = KPK_{j,t} \times \omega^{i}_{j,t-1}$

equity funds, net flows to the euro area represented only 5.7% of the corresponding global flows by the end of 2024, while the share of net flows to US equities was much higher, reaching 46%.

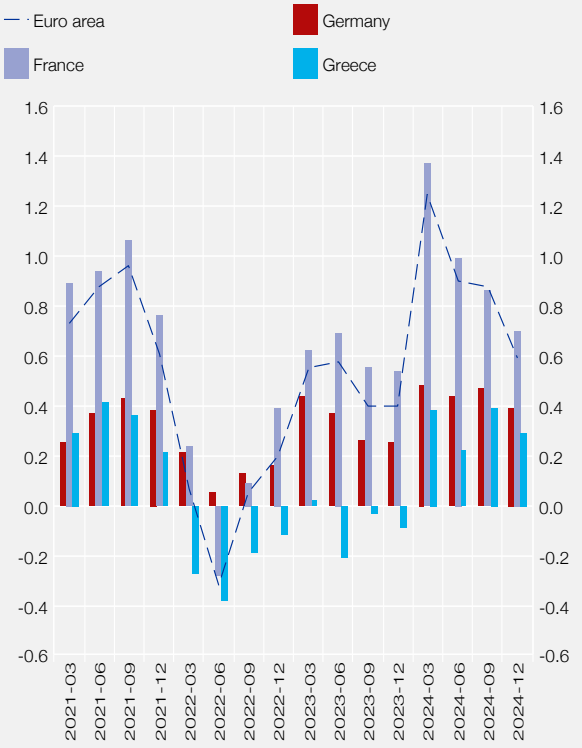
Chart B shows aggregate net flows into investment funds by country of risk and type of security. This breakdown takes into account net flows to IFs as well as their portfolio allocation with respect to security type and country of risk.

Chart B Net flows to US and euro area bonds and equities



Sources: Lipper and Bank of Greece calculations.
Notes: The panels show quarterly net flows to bond IFs (left-hand side panels) and equity IFs (right-hand side panels), investing in US (top panels) or European securities (lower panels). The blue curved line in each panel shows the Fed and ECB policy rates respectively. Moreover, green bars (direct flows) show flows to IFs investing the largest share of their portfolios in the US or euro area economy, times the respective porfolio allocation, while orange bars (indirect flows) show the corresponding flows to both economies' securities that are calculared on the basis of the product of net inflows in such funds, multiplied by the share they invested in US and euro area bonds and equities.

Chart C Annualised net flows to bond IFs as a percentage of nominal GDP



Sources: Lipper and Bank of Greece calculations.
Notes: The chart shows the moving 4-quarter sum of net flows in bond IFs according to the level of their investment in French (purple bars), German (red bars), Greek (light blue bars) and euro area bonds (blue dashed line) as a percentage of the annual nominal GDP of each country or of all countries respectively.

Net flows to IFs investing in bonds, both in the United States and in the euro area, increased significantly since the end of Q1 2024, i.e. when investors shifted their expectations towards interest rate cuts. This observation is consistent with the fact that bond prices, and therefore the market value of IFs investing in them, increase with the decline in their yields. At the same time, in an environment of interest rate cuts, bond yields are expected to decline.

On the other hand, there is a significant rise in inflows to IFs that invest their portfolios in US equities, while the same is not to the case for IFs investing in euro area equities. This observation may indicate that investors opt for these funds on the basis of the outlook for economic activity in the United States, as the US economy has so far been showing growth rates significantly above expectations. By contrast, as the large euro area economies have fallen significantly short of investor expectations, there are no considerable inflows to IFs investing in euro area equities.

Demand for IFs investing in Greek bonds followed demand for IFs investing in other European bonds, though with a time lag (see Chart C). Specifically, from Q1 2022 to Q4 2023, a net decline was observed in investor flows into IFs holding Greek bonds. Of course, the flows of share/unit-holders to IFs do not reflect the IF's own positions in Greek bonds, which had risen over the same period in anticipation of the Greek economy's upgrade to investment grade.[4] By contrast, in 2024, i.e. after the upgrade, demand for IFs investing in Greek bonds rose significantly.

At the same time, it is quite interesting to note that the large gap observed between net flows to IFs investing in German bonds and IFs investing in French bonds exhibits a clear downward trend since the beginning of 2024. This gap is possibly associated with the higher yields on French bonds compared with German bunds, combined with the relative safety offered by the latter vis-à-vis other euro area bonds.

Conclusions

Global flows into investment funds rose by USD 7.5 trillion between 2021 and 2024. These flows were initially channelled towards money market funds and, more recently, when investors started to anticipate interest rate cuts in the euro area and the United States, towards IFs investing in US and euro area bonds. This observation is consistent with the expectation that, in an environment of declining interest rates, bond prices will rise. On the other hand, net flows into IFs investing in equity markets seem to be mainly related with the economic outlook. Thus, there is an increase in inflows to IFs investing in US equities, while flows into IFs investing in euro area equities are very weak. Finally, it appears that inflows to IFs investing in Greek bonds have increased significantly since the upgrade to investment grade. In this connection, we highlight the importance of this development, in relation to the significantly strengthened role of investment funds in financing the world economy through global capital markets. This trend is indeed expected to continue, especially because further interest rate cuts are expected in the euro area.

4 See Box IX.1 "The allocation of investment funds' portfolios in Greece and internationally", Bank of Greece (2024), *Annual Report* 2023.

Box 18

MONETARY POLICY IMPACT ON BANKS' NET INTEREST INCOME

Banks' net interest income[1] is a key source of total bank income and is determined by various factors, including the flow of lending to the economy, the level of credit risk and the level of policy rates. In economies with stable credit flows and low credit risk, the level of policy rates is the key determinant of banks' net interest income. In this context, the ECB's rate hiking cycle that started in 2022 triggered a recovery in net interest income, which in turn made a larger contribution to banks' performance indicators. Meanwhile, as Greek banks had already largely improved the quality of their loan portfolios, they were more affected than in the past by changes in the single monetary policy.

Thus, against the backdrop of higher policy rates, the net interest income of Greek and other European systemically important institutions followed an upward path (see Chart A, left-hand panel), with the increase for Greek banks being significantly larger than the European average – almost double in size. At the beginning of the review period (2016-2024) the net interest margin of Greek banks was well above that of other European banks (on average 2.8%, compared with 1.4% in the euro area), as it is calculated as the ratio of net interest income to total interest-bearing assets, i.e. mainly loans, largely reflecting the weak financing of the economy rather than the pricing of loans. This becomes more visible if credit expansion is also taken into account, as the increase in the net interest income of Greek banks is reduced by about 25%. By contrast, the net interest income of Greek banks from 2022 onwards has increased to roughly the same extent as that of other European banks with similar asset size and business model classification, that is small (by European standards), retail-oriented banks benefiting, among other things, from a stronger transmission of monetary policy to their lending rates than to their funding costs (see Chart A, left-hand panel).[2]

At the same time, given that the credit risk stemming from the Greek economy is higher compared with the rest of the euro area, Greek banks take this into account when pricing their loans, so they incorporate a higher risk premium in their interest rates on new loans. This box summarises the evolution of Greek banks' net interest income in the context of the European banking market and the prevailing monetary policy conditions, while highlighting the challenges for banks from recent and prospective interest rate cuts.

Banks' net interest income and profitability

Banks determine their interest rate policy taking into account both idiosyncratic elements and external factors, including the level of economic activity and the monetary policy stance. Thus, in periods of low short-term interest rates and a relatively flat yield curve, the margin resulting from the conversion of short-term liabilities (deposits) into long-term assets (loans) narrows, depressing net interest income.[3] However, overall bank profitability is also determined by other factors that may be positively affected by low interest rates, such as the cost of funding in capital markets and the level of credit risk.[4]

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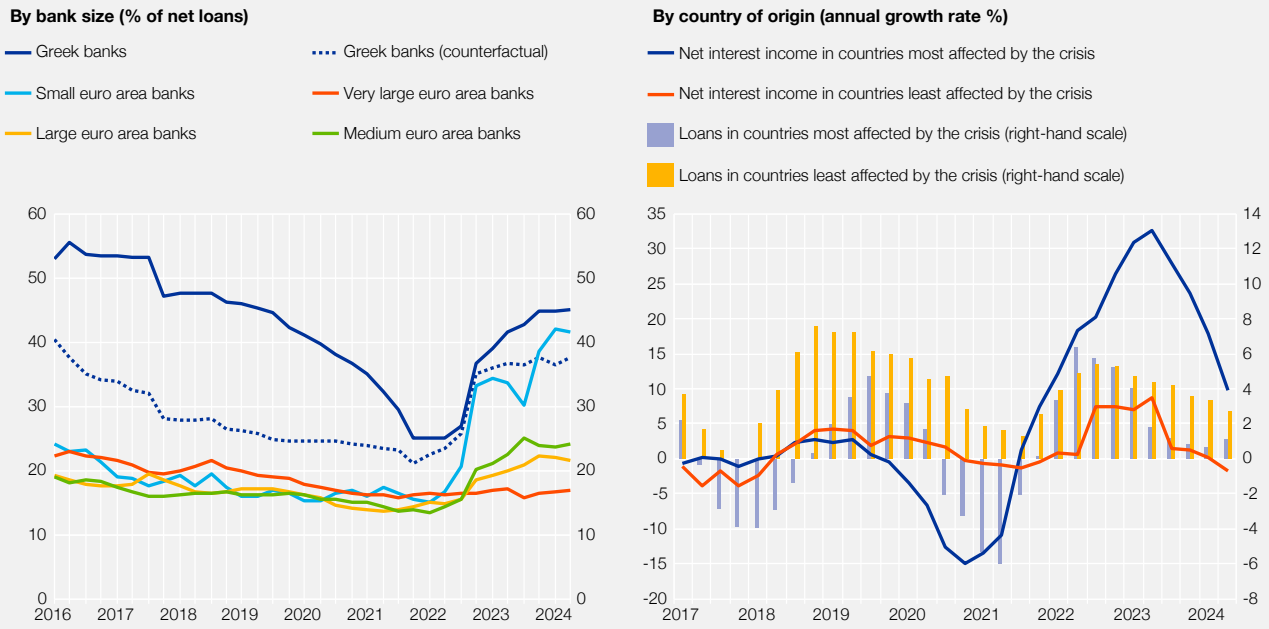
1 Net interest income is the revenue generated from interest on loans and other assets minus interest expenses on deposits, debt securities issued and other financial liabilities.

2 The weaker transmission to deposit rates in the euro area is related, *inter alia*, to liquidity and competition conditions. This has been empirically investigated in related studies (see, for example, Beyer, R.C.M., R. Chen, C. Li, F. Misch, E.O. Ozturk and L. Ratnovski (2024), "Monetary policy pass-through to interest rates: Stylized facts from 30 European countries", IMF Working Paper WP/24/9).

3 The relationship between monetary policy and banks' profitability is evidenced by relevant studies: see, *inter alia*, Flannery, M.J. (1981), "Market interest rates and commercial bank profitability: An empirical investigation", *The Journal of Finance*, 36(5), 1085-1102; and Hancock, D. (1985), "Bank profitability, interest rates, and monetary policy", *Journal of Money*, Credit and Banking, 17(2), 189-202. Empirical studies also highlight the negative effects of low interest rates and unconventional monetary policies on banks' net interest margin (see, for instance, Claessens, S., N. Coleman and M. Donnelly (2018), " 'Low-For-Long' interest rates and banks' interest margins and profitability: Cross-country evidence", *Journal of Financial Intermediation*, 35, 1-16; and English, W.B., S.J. Van den Heuvel and E. Zakrajšek (2018), "Interest rate risk and bank equity valuations", *Journal of Monetary Economics*, 98, 80-97).

4 See Altavilla, C., M. Boucinha and J.-L. Peydró (2018), "Monetary policy and bank profitability in a low interest rate environment", *Economic Policy*, 33(96), 531-586.

Chart A Net interest income of European banks



Sources: ECB and Bank of Greece calculations.
Notes: In the left-hand panel, calculations are based on the ECB's grouping of banks by asset size (Small: banks with assets up to EUR 30 billion; Medium: banks with assets of EUR 30-200 billion; Large: banks with assets above EUR 200 billion; and Very large: global systemically important banks, G-SIBs). The dashed line refers to the hypothetical evolution in Greek banks if their net loans at the beginning of the period had followed the path of comparable European banks (with assets of EUR 30-100 billion). In the right-hand panel, calculations are based on a grouping of countries most affected by the debt crisis (Greece, Ireland, Spain, Italy and Portugal) and those least affected (other European countries with available data). Weighted averages are calculated for net interest income and loans for the period Q2 2017-Q3 2024 on a 4-quarter rolling basis, with weights being total bank assets per country.

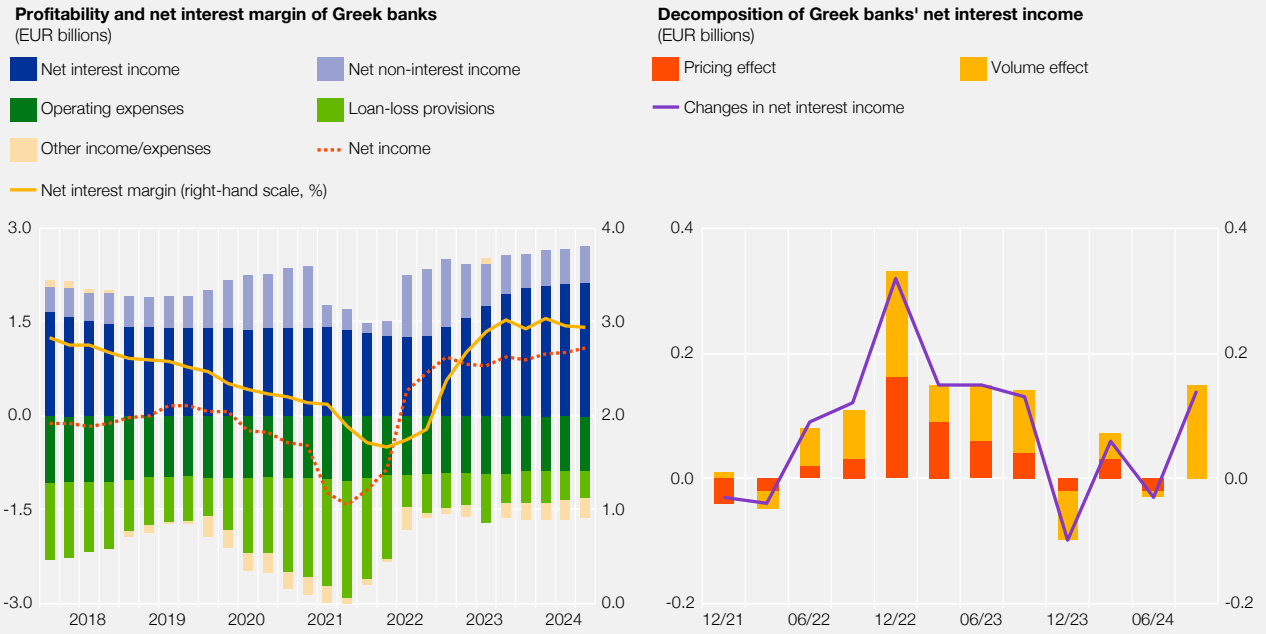
In the period following the euro area debt crisis, banks' core profitability faced headwinds from weak macroeconomic conditions and high levels of cost of risk, especially in the hardest hit countries. As a result, euro area banks' net interest income rose only modestly, mostly supported by credit growth in countries that were relatively less affected by the crisis, as low interest rates and increased competition exerted downward pressure on net interest margins (see Chart A, right-hand panel). However, the shift of the monetary policy stance to expansionary led to a widening of banks' net interest margin, particularly due to higher lending to corporates, which has so far remained above the ten-year average, thus improving net interest income. Greek banks' profitability has also strengthened significantly, initially and to a large extent driven by lower loan-loss provisions, reflecting improvements in the quality of their loan books, and, since the start of the hiking cycle, by rising net interest income to levels above the decade average (see Chart B, left-hand panel).[5]

Greek banks' net interest income was driven by an increase in interest-earning assets (of around EUR 0.7 billion during the rate hiking cycle) and by a cumulative widening of around 110 basis points in net interest margin over the same period (see Chart B, right-hand panel). Indeed, for Greek banks, the interest rate margin, although comparatively higher than the European average (as it largely reflected adverse changes in banks' loan portfolios and the relatively higher cost of risk), was on a downward path during the adjustment period of the Greek banking system, before being lifted by the rapidly increasing policy rates (see Chart B, left-hand panel). Prior to interest rate hikes, the favourable pricing terms of TLTROs also contributed positively to interest rate margins.

Overall, the strengthening of Greek banks' net interest income was mainly underpinned by the positive macroeconomic environment and the features of the Greek banking system that favour the generation of net interest

5 As a result, Greek banks' net profitability increased by around EUR 2.3 billion between the fourth quarter of 2021 and the third quarter of 2024, with reduced credit risk and increased net interest income contributing almost entirely to this development (by EUR 1.2 billion and EUR 0.8 billion, respectively).

Chart B Profitability and net interest income of Greek banks



Sources: ECB and Bank of Greece calculations.
Notes: The left-hand panel shows the components of Greek banks' net income for the period Q4 2017-Q3 2024 on a 4-quarter rolling basis. The net interest margin is calculated as the ratio of net interest income to interest-bearing assets. The right-hand panel shows quarterly changes in net interest income for the period Q4 2021-Q3 2024, decomposed into the estimated change in interest-bearing assets (volume effect) and their respective pricing (pricing effect).

income amid high policy rates. Thus, the financing of the economy, largely through business loans with floating rates (directly linked to a benchmark rate, e.g. the 3-month Euribor), resulted in a staggered increase in interest income as policy rates kept rising. In addition, continued improvements in the quality of banks' loan portfolios reduced the drag from provisions for credit risk on their profit and loss accounts and, coupled with the significant footprint of net interest income in total operating income (80%, against 60% in the euro area), led to an increase in the net profitability of Greek banks. On the other hand, as Greek banks have adopted the traditional bank business model, i.e. they rely heavily on deposits for funding, and as the pass-through of interest rate hikes was smaller to deposits than to new loans, the impact of policy rate increases on interest expenses was weaker than on interest income, thereby increasing Greek banks' net interest income.[6] This was also supported by smaller increases in banks' market funding costs following upgrades in their credit ratings.[7]

Challenges for banks' profitability levels amid declining interest rates

The successive cuts in ECB monetary policy rates since mid-2024 have worsened the outlook for the profitability of European banks, as perceived by market analysts. The contribution of net interest income is expected to ease, to the extent that banks transmit policy rate cuts to lending rates similarly to past hikes. In this case, the reduction in net interest margin, owing to the pricing of new loans with lower interest rates, is expected to outweigh any positive impact from the expansion of banks' loan portfolios.

Greek banks should therefore manage the challenges posed by lower interest rates to their operating income. The resilience of Greek banks' net interest margin is expected to be supported, *inter alia*, by higher lending to corporates, including through disbursements under the Recovery and Resilience Facility. It is worth noting that long-term financing with fixed rates contributes to increases in net interest income directly, by raising the level of interest-bearing assets, as well as indirectly, by reducing the sensitivity of the interest rate income to policy rate

6 See Box VI.4 "Determinants of Greek banks' funding costs", Bank of Greece, *Annual Report 2023*, April 2024.
7 See Box VII.2 "Greek banks' credit rating upgrades", Bank of Greece, *Monetary Policy – Interim Report 2024*, December 2024.

changes. Fixed-rate financing also entails significant benefits for borrowers (corporates and households), facilitating the assessment of future cash flows and investment projects in present value terms, while protecting their balance sheet positions from unexpected inflationary pressures.

Moreover, the higher contribution of income from other core profitability items is also expected to mitigate the impact of interest rate cuts on banks' operating income. Such a development could result both from the benign economic environment and from greater market penetration of insurance products and investment portfolios, which could partially compensate for the lower yields of interest-bearing items (e.g. deposits) amid interest rate cuts.[8]

Conclusions

Greek banks continue to post positive financial results in an improved operating environment, having succeeded major improvements in the quality of their loan portfolios. This has reduced the drag from increased credit risk provisioning and associated costs and has allowed a closer link between banks' profitability levels and their net interest income. This development is particularly important, as bank profitability is crucial for the economy, not only in order to maintain a robust and resilient banking system, and reinforce its intermediation capacity, but also to preserve financial stability. The transition from low interest rates and unconventional monetary policy measures to the post-pandemic period, marked by high interest rates, facilitated an increase in the interest rate margins of European and Greek banks, which in turn supported higher levels of net interest income. However, with the reversal of interest rate hikes, Greek banks need to focus on pricing policies that will reduce the sensitivity of their financial results, with a view to maintaining their profitability indicators at sustainable levels.

8 Only 20% of Greek banks' fee and commission income comes from investment, insurance and other advisory activities, compared with an average of 49% for euro area banks.

Box 19

FINANCING CLIMATE CHANGE ADAPTATION AND THE ROLE OF CENTRAL BANKS AND SUPERVISORY AUTHORITIES

Climate change mitigation refers to actions aimed at limiting greenhouse gas emissions and preventing further increases in the planet's average temperature.[1] Climate change adaptation focuses on managing and reducing the adverse social, environmental and economic impacts caused by climate change. These impacts are expected to intensify as long as greenhouse gas concentrations in the atmosphere remain high and as environmental degradation and the climate crisis continue to escalate.[2]

Adaptation to climate change can yield multiple benefits. In particular, it helps reduce the losses associated with climate change, increases resilience and strengthens the capacity of society, the economy and the ecosystem to recover from extreme weather events. These benefits are often referred to as the "triple dividend" of resilience, which includes: (i) avoiding losses, (ii) stimulating economic activity and development, and (iii) delivering broader social and environmental co-benefits.[3] According to studies, investments in adaptation measures can yield substantial economic gains, especially over the long term. Notably, it is estimated that every US dollar invested in adaptation could generate up to USD 12 in total economic gains within this decade.[4]

1 IPCC (2022), *Climate Change 2022: Mitigation of Climate Change* (see also FAQs).
2 IPCC (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability* (see also FAQs).
3 Tanner, T., S. Surminski, E. Wilkinson, R. Reid, J. Rentschler and S. Rajput (2015), *The Triple Dividend of Resilience: Realising development goals through the multiple benefits of disaster risk management*.
4 United Nations Office for Disaster Risk Reduction (UNDRR), Standard Chartered Bank and KPMG International (2024), "Guide for adaptation and resilience finance".

Adaptation is not only necessary but also a legal obligation under European legislation. Specifically, the EU's Strategy on Adaptation to Climate Change, which was adopted in 2021,[5] aims to promote smarter, more systemic and swifter adaptation, while stepping up international action. This strategy complements the EU's mitigation efforts and its targets for climate neutrality by 2050. It is also fully aligned with the Paris Agreement and the European Climate Law.[6]

Additionally, at the national level, Greece's revised National Energy and Climate Plan (NECP) was approved in December 2024. The NECP serves as a strategic framework and a key tool for planning and implementing climate and energy policies. It outlines the country's priorities for adaptation to climate change and for transition to a sustainable energy system, while providing a detailed roadmap to achieve specific energy and climate targets by 2030, ultimately leading to climate neutrality by 2050. The NECP aims to ensure the social and environmental efficiency as well as the cost-effectiveness of policy measures by reducing energy costs, protecting consumers and enhancing the climate resilience of energy infrastructure, while also safeguarding the adaptability of the energy system to changing climate conditions.[7]

The analyses and reports of the Bank of Greece's Climate Change Impacts Study Committee (CCISC) consistently highlight the benefits of adaptation to climate change. As early as 2011,[8] the CCISC stressed the need for Greece to address the adverse effects of the climate crisis with timely actions – aimed not only at mitigating these effects but also at ensuring that key sectors of the economy, such as agriculture, tourism and infrastructure, adapt effectively to climate change.

Despite the growing need of adapting to climate change, adaptation finance remains disproportionately low compared to mitigation finance. It is estimated that in 2021-2022, only 5% of total global climate finance (USD 1.3 trillion) was allocated to adaptation.[9] Moreover, adaptation finance is predominantly sourced from public funds.[10] At the national level, Greece's climate adaptation efforts rely almost entirely on public resources, including European and national funding mechanisms, such as the Partnership Agreement for Regional Development (NSRF) 2021-2027, the Common Agricultural Policy (CAP) Strategic Plan 2023-2027, the Recovery and Resilience Facility (RRF), EU competitiveness programmes (notably Horizon and LIFE) and the Green Fund. A key initiative in this effort is the project "LIFE-IP AdaptInGR – Boosting the implementation of adaptation policy across Greece", which supports central government, regional and local authorities, research institutions and civil society in implementing the National Strategy for Adaptation to Climate Change.[11]

One reason explaining why climate adaptation financing remains low is the lack of adequate data to evaluate the costs and benefits of adaptation projects. Additionally, the complexity and specificity of financing needs for such projects, coupled with the absence of suitable financial instruments, likely reduce their appeal to investors.[12] Furthermore, recent actions by the newly elected US administration, which undermine global efforts to address climate change, could hinder international cooperation in securing the necessary financing for adaptation. In early 2025, the United States formally announced its withdrawal from the Paris Agreement and its intention to further invest in fossil fuels, while the Federal Reserve withdrew from the Network for Greening the Financial System (NGFS).[13] Moreover, several major US financial institutions pulled back from key inter-

5 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change", 24 February 2021.
6 *Questions and Answers: New EU strategy on adaptation to climate change*.
7 National Energy and Climate Plan – Revised Edition, Government Gazette B 6983/19.12.2024 (in Greek).
8 Climate Change Impacts Study Committee (CCISC) (2011), *The environmental, economic and social impacts of climate change in Greece*, Bank of Greece.
9 The remaining 95% of total global climate finance was allocated to climate change mitigation (91%) and to actions addressing both mitigation and adaptation (4%) (see "Global Landscape of Climate Finance 2023", Climate Policy Initiative).
10 Global Center on Adaptation and Climate Policy Initiative (2024), "State and Trends in Climate Adaptation Finance 2024".
11 IOBE (2023), "Climate change adaptation: Challenges and opportunities for the Greek economy" (in Greek).
12 NGFS (2024), "Conceptual Note on Adaptation".
13 Federal Reserve Board, press release, 17.1.2025.

national banking and investment initiatives, including the Net Zero Banking Alliance and the Net Zero Asset Managers initiative.

Studies indicate that insufficient adaptation to climate change could negatively impact, among other things, economic growth, price stability and financial stability, posing challenges for central banks and supervisory authorities. For instance, natural disasters may disrupt supply chains, damage infrastructure and increase inflation, while also reducing output and disposable income. In contrast, investments in adaptation and increased insurance coverage for natural catastrophe risks can deliver substantial benefits by mitigating the impacts of the climate crisis, supporting faster recovery after disasters, easing fiscal burdens and strengthening the resilience of both the financial system and the wider economy.[14]

Central banks and supervisors can play a pivotal role, within their mandates, in supporting adaptation to climate change; however, the primary responsibility for addressing climate change and its impacts rests with governments. In the ECB's updated action plan on climate change and nature-related risks, adaptation is identified as an important area of research, particularly for analysing the economic impact of adaptation measures and the associated financing needs.[15] The NGFS has recently published the Conceptual Note on Adaptation, outlining the challenges of adaptation finance and the role of central banks and supervisors in climate change adaptation.[16] In particular, this publication highlights that central banks and supervisors can promote the adoption and implementation of enhanced risk management practices within the financial system, as well as support insurance uptake,[17] in order to strengthen economic resilience to the impacts of climate change. Four key areas of future actions are proposed for central banks and supervisors to address climate change adaptation: (i) developing metrics and tools to measure and disclose the impact of adaptation measures; (ii) incorporating these issues into the institutional and supervisory framework of the financial system; (iii) fostering conditions that encourage the financing of adaptation actions;[18] and (iv) collaborating with local, national and international bodies.

The Bank of Greece actively underscores the importance to strengthen the financing of climate change adaptation. Specifically, as a partner in the project "LIFE-IP AdaptInGR – Boosting the implementation of adaptation policy across Greece", it contributes to an initiative focused on mobilising resources for adaptation finance. As the Greek competent supervisory authority for insurance undertakings, the Bank of Greece is progressively incorporating climate change adaptation issues into its supervisory responsibilities and has consistently emphasised the critical role of private insurance in mitigating the effects of climate change and the necessity of reducing the insurance gap for natural catastrophes. In addition, the Bank of Greece participates in the Council for Private Insurance against Natural Disasters (Law 5116/2024).

There is a growing need to scale up adaptation finance, and the involvement of the financial system is crucial to this end. Mobilising private sector resources is of paramount importance, but it requires an enabling environment that encourages and supports the funding of adaptation projects. Against this background, central banks and supervisors are increasingly focused on enhancing the financing of climate change adaptation through a broad range of initiatives.

14 Mongelli, F.P., A. Ceglar and B.A. Scheid (2024), "Why do we need to strengthen climate adaptations? Scenarios and financial lines of defense", ECB Working Paper No. 3005.
15 "ECB steps up climate work with focus on green transition, climate and nature-related risks", press release, 30 January 2024.
16 NGFS (2024), "Conceptual Note on Adaptation".
17 ECB and EIOPA (2024), "Towards a European system for natural catastrophe risk management".
18 For example, through relevant research, data reporting on risks and opportunities related to climate change adaptation and the establishment of common standards, disclosure rules and an adaptation finance taxonomy.

Box 20

SOCIAL IMPLICATIONS OF THE NEW EU EMISSIONS TRADING SYSTEM

The Emissions Trading Scheme (EU ETS),[1] introduced in 2005 by the European Union (EU), is central to reducing greenhouse gas (GHG) emissions and generating revenues to support the green transition and is therefore often referred to as the cornerstone of the EU's climate policy. The EU ETS applies to all EU Member States, as well as Iceland, Liechtenstein and Norway, and has been linked to the Swiss ETS since 2020. The system covers key sectors of the economy, such as electricity production, manufacturing, aviation and shipping, which together are responsible for around 40% of total EU emissions. Since its introduction in 2005,[2] the EU ETS has contributed to a 37.3% reduction in GHG emissions from these sectors.

The EU ETS operates on the "cap-and-trade" principle, establishing a ceiling on GHG emissions from key sectors of the economy. This limit corresponds to a fixed number of GHG emission allowances, each of which permits the holder to emit one tonne of carbon dioxide equivalent (CO_2eq). Allowance prices are set by the market through supply and demand, with two main mechanisms enhancing market stability: the Linear Reduction Factor (LRF) and the Market Stability Reserve (MSR).[3] The LRF sets the annual rate at which the cap is reduced, thereby contributing to the achievement of the EU's annual GHG emission reduction targets. The MSR stabilises the supply of GHG emission allowances in the market, absorbing surplus allowances during periods of oversupply and releasing additional allowances when demand exceeds supply, thus helping to stabilise prices within desired limits.

As climate change is a global issue, the risk of "carbon leakage" could significantly undermine global climate efforts. Specifically, European companies may relocate their operations to countries with looser environmental standards, or carbon-intensive products may be imported from third countries, replacing European-made goods. To address carbon leakage and ensure fair carbon pricing for goods produced outside the EU, the Carbon Border Adjustment Mechanism (CBAM) was introduced as a complement to the EU ETS. Scheduled to become fully operational by 2026, the CBAM will equalise the carbon costs between EU products and imported goods, ensuring that the EU's climate objectives are not compromised by the relocation of production to countries with less stringent climate policies.

As part of the EU's efforts to achieve the GHG reduction targets outlined in the European Green Deal,[4] a new Emissions Trading System (EU ETS2) was introduced in 2023, scheduled for full implementation by 2027.[5] This new system builds on the existing framework by extending coverage to sectors such as building heating, construction and road transport, which are major "polluters" in the EU, accounting for approximately one-third of its total emissions.[6]

The full economic and social impacts of the EU ETS2 remain uncertain, as inflation and economic growth are likely to be affected in the coming years,[7] depending however on multiple factors. National green discretionary fiscal measures, particularly those related to carbon pricing and energy taxes, are expected to increase inflation by approximately 0.2 percentage points (pp) in 2025 and by 0.1 pp in 2026, with their impact coming close to zero in 2027. Moreover, these measures are expected to dampen real GDP growth by 0.05 pp in 2025 and by 0.1 pp in 2026 and 2027. In particular, upstream producers will need to pay for emissions from their products, and the costs are likely to be passed on to consumers. Vulnerable groups[8] and consumers, who spend a large share of their income on energy and transport or lack access to affordable alternatives, are at risk of being dis-

1 Directive 2003/87/EC of the European Parliament and of the Council.
2 European Commission, Report on the functioning of the European carbon market in 2022.
3 European Commission, Market Stability Reserve.
4 European Commission, The European Green Deal.
5 European Commission, ETS2: buildings, road transport and additional sectors.
6 LIFE ETX (2024), EU ETS 101 – A beginner's guide to the EU's Emissions Trading System.
7 ECB, "Eurosystem staff macroeconomic projections for the euro area, December 2024".
8 WWF (2022), SCF and ETS2 impact studies.

proportionately affected by carbon price volatility. These impacts may be stronger in geographically isolated communities, such as islands, rural and mountainous areas, or in remote and less developed regions.

In this context, unless effective social protection mechanisms are put in place and revenues from GHG emissions trading are redistributed, significant pressures on heating and transport costs may arise. Measures to mitigate and adapt to climate change, along with each country's energy mix – which shapes energy production costs – will play a key role in this regard. Economies experiencing delayed energy transitions and a strong reliance on lignite reserves or other fossil fuels may be more vulnerable to the risks associated with rising carbon pricing.

To address the social impacts of the EU ETS2 and ensure a fair transition to climate neutrality, EU Member States have established the Social Climate Fund.[9] This Fund provides financial assistance enabling Member States to support the green transition of vulnerable groups affected by "energy and transport poverty," such as micro-enterprises, transport users and households.[10] The Fund's revenues will be used, inter alia, to improve buildings' energy efficiency, support the decarbonisation of buildings' heating and cooling, including through the integration of renewable energy generation and storage, and enhance access to zero- and low-emission mobility and transport solutions.

Each Member State is invited to submit a Social Climate Plan to the European Commission by June 2025, setting out a coherent package of existing or new national measures and investments aimed at addressing the social implications of climate change. To support Member States in developing their plans, the European Commission has launched a dedicated initiative under the Technical Support Instrument.[11] Funding from the Social Climate Fund will be disbursed once Member States meet the milestones and targets set out in their approved plans. National authorities responsible for preparing the plans have been designated by each Member State, so as to facilitate the Fund's operation;[12] in Greece, the Ministry of Environment and Energy has been appointed as the competent authority.

The Fund is expected to mobilise approximately EUR 65 billion from the auctioning of emission allowances under the new EU ETS2 for the period 2026-2032.[13] An additional EUR 50 million in allowances will be made available from the current EU ETS. Member States will be required to contribute at least 25% of the estimated total cost of their Social Climate Plans. In total, the Fund's budget for the 2026-2032 period is expected to reach no less than EUR 86.7 billion.

As an evolution of the EU ETS, the EU ETS2 is poised to become a driving force in the EU's transition to a low-carbon, sustainable economy. While the system has proven effective in reducing emissions, its extension to sectors with direct social impacts presents a new, complex challenge. To ensure a smooth transition, it is crucial for Member States to closely monitor carbon price developments, assess the economic and social costs and take appropriate preventive and mitigating measures. The implementation of transition plans towards climate neutrality, together with the adoption of sustainable practices and energy-efficiency measures, will enhance economic resilience and mitigate climate change impacts.

9 Regulation (EU) 2023/ 995 of the European Parliament and of the Council.
10 European Commission, Social Climate Fund.
11 European Commission, 2024 Flagship Technical Support Project.
12 European Commission, List of Member States authorities responsible for the preparation of the Social Climate Plans.
13 European Commission, Social Climate Fund: Structural set-up of the programme.

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