ANNUAL REPORT
2023

APRIL 2024

BANK OF GREECE
EUROSYSTEM

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Presented to the 91st General Meeting of Shareholders
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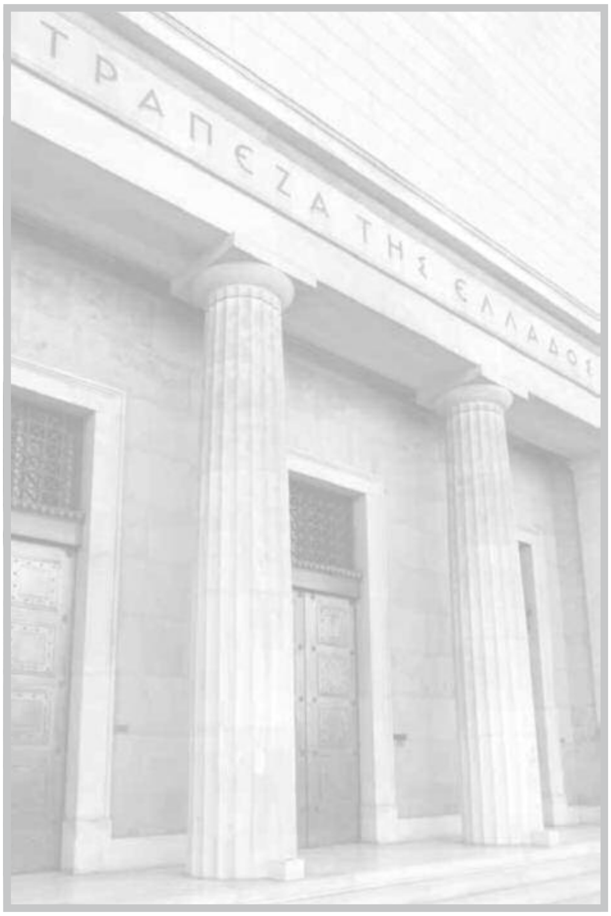

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FOREWORD BY THE GOVERNOR

In 2023, the world economy faced a spate of challenges related to an increasingly complex interplay between economic, climate and geopolitical risks. The gradual withdrawal of fiscal support measures, tighter monetary conditions, the fallout from the unprecedented surge in international energy prices and a resurgence of uncertainty triggered by geopolitical tensions in the Middle East have all weighed on global economic activity, with divergences across economies. Nevertheless, the world economy turned out to be more resilient than expected and the risk of stagflation receded following decisive interventions by monetary and fiscal authorities. In the euro area, the effectiveness of monetary policy is reflected in rapid disinflation, as shown by the latest data. Yet, risks to the growth and inflation outlook for the global and the European economy linger on.

In 2023, the Greek economy continued to expand at a robust but slowing pace, significantly higher than the euro area average. Real GDP grew by 2%, mainly driven by private consumption, exports and investment. Headline inflation declined sharply, chiefly as a result of falling energy prices. The labour market strengthened, with the unemployment rate falling further, though more moderately. In the second half of the year however, consumer expectations were affected by the natural disasters that hit the country, mounting global uncertainty and persistent food inflation. Despite the adverse international environment, the Greek economy is on a positive track and is projected to continue growing faster than the euro area economy, while inflation is anticipated to decline further.

The most important development in 2023, which has a positive effect on the prospects of the Greek economy, was undeniably the Greek sovereign's recovery of investment grade, on the back of steadily improving fiscal performance and restored confidence among international investors. At the same time, despite interest rate increases, risks to public debt sustainability are contained in the medium term. However, the road that leads to strong, sustainable and balanced economic growth is difficult and requires resolute policy action for positive expectations to materialise and exogenous risks to be averted. Key to sustaining the growth momentum are the maintenance of fiscal credibility and a focus on building sufficient fiscal buffers over time, coupled with the effective use of available EU and national resources on research, innovation, green and digital investment, the implementation of the necessary reforms and the strengthening of institutions.

This year is a milestone for the euro area central banks, as it marks 25 years since the creation of the euro, which was unquestionably the most important step towards European integration. Over these years, the single monetary policy has faced multiple challenges. Yet, the experience gained has offered valuable lessons, which we should use to shield against future crises. In a world hit by successive supply-side shocks, mainly due to geopolitical tensions, effective risk management should be a top policy priority. Against this backdrop, monetary policy needs to be characterised by prudence, flexibility and gradualism, as well as constantly assess its available tools in the light of incoming economic data and the prevailing circumstances. But first and foremost, for monetary policy to be effective, it should be supported by appropriate fiscal and structural policies.

The Bank of Greece continued to serve as custodian of price stability and financial stability, ensuring smooth liquidity conditions for the Greek credit system. Throughout the year, the Bank monitored and analysed economic developments and prospects, contributing to the formulation of the single monetary policy. Furthermore, it continued to invest in high-quality research and participate in the Eurosystem's research activities, as well as actions aimed at the assessment and management of climate-related risks. In 2023, the Bank of Greece started disclosing the climate footprint of its non-monetary policy portfolios, in line with the Eurosystem's common stance for applying sustainable and responsible investment principles in the management of such portfolios.

Meanwhile, it pressed forward with the digitalisation and technological upgrading of its processes, seeking at the same time to reduce operational risk and enhance cybersecurity. Moreover, the Bank continued to invest in skill and competence building among its staff, fully respecting its employees. Lastly, to ensure transparency and accountability, it placed emphasis on compliance and corporate governance issues, modernising and streamlining its procedures and policies.

As part of its corporate social responsibility, the Bank of Greece continued to incorporate sustainability principles in its operations and to implement relevant projects, as well as to disseminate culture through the work of its Centre for Culture, Research and Documentation. With a view to promoting financial literacy, it launched a series of initiatives, such as educational programmes at the Bank of Greece Museum, and participated in similar Eurosystem-wide initiatives.

We are particularly proud to have organised a very successful external meeting of the Governing Council of the European Central Bank in October 2023. Besides, for us at the Bank of Greece the word "Eurosystem" is a key component of our identity. For the years ahead, we shall continue to work methodically and responsibly, espousing a set of lofty values.

2024 is a year of hopes and challenges. Effectively addressing all these challenges warrants commitment and adherence to the central bank's vision. This vision is shared and served in the best possible way by the Bank of Greece employees, who are key to maintaining the Bank's high prestige and quality output. This is why I would like to sincerely thank them and encourage them to keep up the good work. Also, I would like to wish a successful career to all newcomers who joined our family in 2023. Last but not least, I would like to thank the members of the General Council for their support and cooperation.

Yannis Stournaras

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1 INTRODUCTION

The world economy seems to be heading for a soft landing, exhibiting high resilience to the recent crises, while the risk of stagflation has receded following decisive and timely interventions by monetary and fiscal authorities.

Nevertheless, the international economic environment continues to be characterised by heightened uncertainty. The tightening of monetary policy, the phasing-out of fiscal support, inflation exceeding the target of 2%, albeit declining, high debt, the fallout from the war in Ukraine, geoeconomic fragmentation and a new surge of uncertainty since October, triggered by geopolitical tensions in the Middle East, are all having adverse effects on economic activity and expectations.

The experience of the 2021-23 inflationary shock is particularly useful for addressing similar future supply-side shocks. The marked decline in global inflation recorded in 2023 is mainly due to falling energy prices and weakened activity, as well as central banks' forceful policy response. Specifically, the timely tightening of monetary policy with sizeable and abrupt increases in key interest rates has played a decisive part in taming inflation and containing inflation expectations. At the same time, it has helped rein in second-round inflationary pressures arising from wage increases, as the path of inflation in almost all advanced economies was not accompanied by an upward wage-price spiral. It should be noted that disinflation was achieved without significantly harming economic activity and employment.

In the euro area in particular, the tightening of monetary policy made it possible to curb very high inflation, without any major side effects on the real economy and financial stability. The key interest rate hikes by the European Central Bank (ECB) were unprecedented both in speed and in magnitude, and were forcefully transmitted into financing conditions at first and subsequently into the economy. Considerable increases are already visible in bank lending rates for firms and households. This led to a decline in loan demand, which, compounded by banks' tight credit standards, brought about a significant slowdown in credit growth. Tighter financing conditions have dented demand, contributing to an easing of inflationary pressures. The effectiveness of monetary policy is mainly reflected in rapid disinflation. Euro area inflation fell from 10.6% in October 2022 to 2.6% in February 2024. Meanwhile, the scenarios for a recession in the euro area economy did not materialise. Despite a significant slowdown in economic activity, the intended soft landing of the economy appears to have been achieved.

The year 2023 marked a milestone for the Greek economy, as it signalled the Greek sovereign's return to investment grade rating, while its growth rate remained well above the euro area average. The return to investment grade was the culmination of successive upgrades by major credit rating agencies over the past few years. This positive development actually came at a time of unprecedented crises (such as the pandemic, widespread geopolitical instability, the energy crisis, the surge in inflation and the strong tightening of monetary policy, as well as the recent experience with the devastating effects of climate change). The fact that it took 13 years for the country to return to investment grade suggests that confidence in the prospects of the domestic economy and the credibility of the economic policy pursued are crucial factors that, once lost, are very difficult to recoup and thus call for consistency and prudent policies.

The positive assessments of the Greek economy amid multiple crises, which warrant an analysis of the economic outlook taking into account various risks, demonstrate the resilience of the economy to negative shocks. Therefore, at the current juncture, it is imperative to further strengthen the resilience of the economy, as the long-term benefits from credible medium-term policy planning, structural fiscal adjustment, political stability and the implementation of major reforms (e.g. in the pension and tax systems, in the labour and product markets, and in the public sector), even at a possible short-term cost, are all too evident.

The country's fiscal credibility has been largely restored, while the deep crisis of the recent past has raised high fiscal awareness among policymakers. The reduction in public debt over the past few years has been remarkable and unparalleled by historical and international standards. Real GDP growth, on a cumulative basis, has played a key role, also greatly supported by inflation and the gradual elimination of primary deficits, following the timely withdrawal of the temporary expansionary fiscal measures adopted in 2020-22.

Greece stands out as a prime example of fiscal resilience among high-debt countries in Europe. The new EU fiscal rules, as well as the economic outlook analyses by major rating agencies, take into account not only the medium-to-long-term projections for public debt, but also its sensitivity to various risks. All sustainability analyses show that, in several adverse scenarios, the downward path of public debt is not impaired. On the one hand, this is due to the favourable profile of the Greek public debt and to effective risk management, which hedged against interest rate risk in a timely manner, while other countries are burdened with increased interest payments in a higher interest rate environment. On the other hand, the downward path of public debt is associated with the country's favourable structural-fiscal position and the far-reaching reforms in the management of public finances and the pension system, which ensure primary surpluses and considerably mitigate fiscal risk from population ageing over the course of many decades.

The consolidation of the baking sector was another driver of Greece's upgrade to investment grade rating. In recent years, the banking sector has made notable progress in overcoming its past weaknesses, with the cleanup of loan portfolios, the reduction of non-performing loans (NPLs), improvements in capital adequacy ratios and banks' return to strong profitability. The above developments, coupled with the upgrade to investment grade, enabled the Greek government to divest from the sector. More specifically, the disinvestment of the Hellenic Financial Stability Fund (HFSF) from significant Greek banks, with the participation of credible institutional long-term investors, signals the banking sector's return to normality, facilitates banks' access to capital markets and helps attract investors' funds, thereby ensuring the financing of sound investment projects, while testifying to market confidence in the prospects of the Greek economy. At the same time, the return of significant banks to purely private ownership, with an ensuing profit (of around EUR 9 billion) for the government, provides extensive benefits to the domestic economy, increasing the liquidity and effectiveness of the Greek capital market and creating opportunities for direct investment in the Greek banking sector. It should be noted that the timing of the HFSF's successful disinvestment was particularly favourable, given the positive investor sentiment towards Greece, despite an international environment of heightened uncertainty and increased geopolitical risks.

The positive effects on the Greek economy from the upgrade to investment grade are substantial:

- The impact of rising interest rates on sovereign and private funding costs is partly offset;
- Borrowing at comparatively lower interest rates reduces public debt servicing costs, thereby freeing up public resources;

- The investor base of Greek bonds broadens, attracting more high-quality and long-term investment funds, which will lead to increased investment flows and ultimately greater confidence in the prospects of the Greek economy;

- The ability to effectively manage public debt is further strengthened. Increased demand for Greek bonds enhances liquidity in the sovereign bond market and reduces bond price volatility in the secondary market. Easier market access provides flexibility for the management of cash reserves, liquidity needs and financing requirements, thus contributing to the mitigation of risks associated with borrowing and refinancing needs;

- Greek bonds are now subject to the regular haircuts applied by the Eurosystem on eligible collateral that is accepted in its credit operations, and to the same terms and criteria as for other euro area bonds. The fact that Greek bonds are no longer subject to special (higher) haircuts facilitates the management and the provision of liquidity to the Greek banking system, as well as the smooth transmission of monetary policy;

- According to Bank of Greece projections, GDP will grow by 2.5% in the long run, with lower financing costs per se contributing to an estimated 1.3% increase in GDP.

Nevertheless, there is no room for complacency, as there is still a long way to go for Greece's credit rating to converge to the average rating of euro area countries. Maintaining investment grade status and obtaining further upgrades require prudent economic policies, characterised by consistency, medium-term rational planning and measurable targets. Continued reforms, in particular to bolster institutions and the structural competitiveness of the economy, are also essential. Furthermore, sustainable primary surpluses are set to ensure debt reduction and help build the necessary fiscal buffers dictated by counter-cyclical fiscal policies.

2 WORLD ECONOMY

In 2023 the growth momentum of the world economy weakened, as a result of the slowdown in advanced economies, although emerging market and developing economies preserved their robust growth rates. However, the world economy seems to be heading for a soft landing, exhibiting remarkable resilience to the recent crises, while the risk of stagflation has receded following decisive and timely interventions by monetary and fiscal authorities. According to the latest IMF forecasts, global GDP growth weakened to 3.1% in 2023 (from 3.5% in 2022) and is expected to remain unchanged in 2024. Recovery from the fallout of the pandemic crisis, the war in Ukraine and the subsequent rise in living costs has been uneven across major economies. In advanced economies, activity slowed overall, with the exception of the US and the Japanese economy. Particularly in the euro area (mainly in Germany and Italy) and the United Kingdom, economic slowdown was steeper, reflecting: (i) subdued international demand, which led to substantially lower growth in global trade; (ii) high input costs, despite the unwinding of pandemic-related supply chain disruptions; (iii) tight financial conditions, mainly affecting investment; and (iv) a further decline in real incomes owing to a faster rise in the cost of living, despite emergency fiscal support. By contrast, growth in emerging market and developing economies remained robust. In this group of countries as well, macroeconomic developments were also quite uneven: the Russian economy exited the recession, India's economy slowed and economic growth in China quickened.

Global inflation declined, as international energy prices followed a downward path. According to the IMF, in 2023 global inflation fell by around 2 percentage points compared with 2022 to 6.8% and is expected to drop further to 5.8% in 2024 and 4.4% in 2025. In advanced economies, inflation decelerated faster (from 7.3% in 2022 to 4.6% in 2023), while for 2024 it is expected to decline by a further 2 percentage points to 2.6%. The decline of inflation in advanced economies from the 40-year high recorded in 2022 is due to the impact of falling international energy prices, as well as the timely and largely coordinated response of central banks. The factors pushing down inflation differ as to their relative importance across economies, but overall – and to a larger extent in 2024, as expected – they will be associated with declining core inflation on the back of restrictive monetary policy, signs of labour market slackening and the gradual pass-through of lower international energy prices in 2023 to the domestic general price level.

World trade is estimated to have decelerated significantly in 2023. Persisting heightened uncertainty and growing geopolitical risks shaped an overall adverse external environment for world trade, while global demand also weakened considerably. The IMF estimated that global trade volumes (goods and services combined) grew by a mere 0.4%, compared with a strong increase of 5.2% in 2022. The main factors behind the contraction in world trade flows were: (i) a decline in global economic activity and weak global demand; (ii) increased trade restrictions that were adopted by several countries and remained above pre-pandemic levels; and (iii) geoeconomic fragmentation. World trade is projected to recover in 2024 and 2025, but its growth rate will fall short of the 2000-19 average. Recent developments at the Suez Canal – which handles 11% of global trade – following repeated attacks on cargo vessels in the Red Sea and traffic disruptions, as well as at the Panama Canal because of the drought, are creating global supply bottlenecks. These incidents have increased delivery times and shipping costs, heightening the risks to global trade.

Global commodity prices, especially gas prices, declined sharply from the historic highs seen in 2022. More specifically, the international price of natural gas of all types plunged by 63% in 2023 from the historically high levels of 2022, affected by reduced demand amid slower growth rates and higher production. In Europe in particular, milder weather conditions, the acceleration of green transition and the historically high gas inventory levels have also contributed to lower gas prices. Meanwhile, the average international price of crude oil dropped by 17% in 2023 year-on-year, mainly on account of the global economic slowdown and a deterioration in the economic outlook for China in the first half of the year. According to IMF forecasts, international crude oil prices are projected to fall slightly in 2024, partly owing to weaker demand.

The fiscal stance remained supportive in advanced economies and neutral in emerging market and developing economies. In advanced economies, the fiscal stance was slightly expansionary (with the exception of the euro area), despite the phasing-out of the emergency income support measures related to the energy crisis, mostly owing to strong fiscal expansion in the United States. The public debt-to-GDP ratio, although declining from the historic highs seen in 2020-21, continues to be above its pre-pandemic levels, and in 2023 it is estimated to have reached 112% of GDP in advanced economies and 67% of GDP in emerging market and developing economies. For 2024 the fiscal stance is expected to tighten in several economies around the world, so as to stem the upward dynamics of the public debt-to-GDP ratio and mitigate fiscal risks over the medium term.

Monetary policy tightening continued in 2023, albeit at a slower pace in most economies, due to a faster-than-expected fall in inflation and concerns about a further weakening in aggregate demand. Interest rate hikes by major central banks helped keep inflation expectations anchored at low levels, with no significant impact on the labour market, which has generally remained resilient. However, tighter monetary policy had a dampening effect on investors' expectations about the economic outlook (especially in the euro area).

In the euro area, economic activity weakened visibly in 2023, amid tight financial conditions, reduced consumer confidence and lower domestic demand. At the same time, weaker foreign demand and cost competitiveness losses due to the appreciation of the euro weighed on exports of goods. In annual terms, GDP only grew by 0.5%, compared with a robust growth rate of 3.4% in 2022, reflecting: (i) the impact on demand from tighter financing conditions; (ii) uncertainty and a deterioration in economic sentiment; (iii) the impact of the energy crisis and high inflation on consumption; as well as (iv) lower investment due to slower credit growth and increased uncertainty related to geopolitical developments. According to the March 2024 ECB staff macroeconomic projections, real GDP growth should pick up slightly by 0.6% in 2024, supported by increasing real incomes, a resilient labour market and a gradual recovery in foreign demand, which however will remain subdued. Tight financing conditions, despite an anticipated easing, the withdrawal of fiscal support measures and global supply disruptions are likely to keep the growth momentum muted in the near term.

The labour market in the euro area remained resilient, despite a marked deceleration in economic activity and mounting uncertainty, supporting real wages. In 2023 total employment increased by 1.4% (2022: 2.3%), while in 2024 it is projected to rise modestly by 0.5%. Unemployment declined further to 6.5% (from 6.7% in 2022), remaining at historically low levels. In 2024 the unemployment rate is projected to rise slightly to 6.7% amid subdued economic growth.

In 2023, headline inflation in the euro area declined significantly. Headline HICP inflation dropped by 3 percentage points to 5.4% in 2023. The main factors that drove down inflation were: (i) improved supply conditions, with an unwinding of constraints observed since the beginning of the year; (ii) lower energy inflation, on the back of falling international energy commodity prices; (iii) the continued tightening of monetary policy; (iv) weaker aggregate domestic demand, due to the negative impact from high inflation on consumption, uncertainty related to geopolitical developments and tighter financing conditions; and (v) firms' limited capacity to raise prices by increasing profit margins, in the face of lower demand. Besides, consumer prices were pushed downwards by the euro's appreciation, which reduced import prices, and upwards by labour market tightness, which led to higher nominal wages. According to the March 2024 ECB projections, euro area inflation is expected to decline further to 2.3% in 2024, mainly owing to receding food inflation, while the withdrawal of energy-related support measures will exert temporary upward pressures on energy inflation. Inflation is projected to continue declining, reaching very close to 2% in the first half of 2025 and remaining at levels compatible with the ECB's target until the end of 2026.

However, core inflation kept rising in 2023, despite signs of a deceleration in the second half. Annual HICP inflation excluding energy and food averaged 4.9% in 2023, against 3.9% in 2022, mainly due to more persistent services inflation and rising wage costs. Food inflation remained high, as earlier input cost surges (transport costs, fertiliser prices) were passed on to the prices of final goods. Services inflation also remained elevated, fuelled by wage increases and strong private consumption on travel services, which started after the withdrawal of health restrictions. Tight financing conditions, the elimination of fiscal support measures and the unwinding of bottlenecks in global value chains might contribute to a faster-than-expected decline in core inflation. In 2024, core inflation is anticipated to fall to 2.6%.

Finally, with regard to developments in international capital markets, financial conditions have improved since the fourth quarter, amid higher expectations of disinflation. Market-based measures of inflation expectations are suggesting that inflation should further subside in 2024 and 2025. Against this backdrop, investors are expecting sizeable interest rate cuts during 2024 both by the ECB and the US Federal Reserve. Yet, there is great dispersion of expectations regarding interest rates, reflecting increased uncertainty surrounding such expectations. Disinflation expectations, coupled with expectations of substantial policy rate cuts by central banks, led to an easing of global financial conditions in the second half of 2023, after a tightening observed in the beginning of the year. Government and corporate bond yields declined, while equity prices rose markedly worldwide. Nevertheless, investors in the first quarter of 2024 revised their initial expectations about the path of key interest rate cuts by central banks in the euro area and the United States, and are now expecting fewer cuts and higher-than-anticipated levels of interest rates until the end of 2024. The upward correction in benchmark bond yields partly reversed the sharp decline observed at the beginning of 2024.

3 THE SINGLE MONETARY POLICY

Throughout 2023 the Governing Council of the ECB assessed that inflation, albeit declining, would remain too high for too long, compared with its 2% medium-term target. Domestic inflationary pressures continued to be considered significant and, during that time, were mainly due to a surge in unit labour costs amid rising wage and falling productivity growth. In any event, most measures of longer-term inflation expectations currently stand at around 2%.

In the context of the single monetary policy, the Governing Council of the European Central Bank continued to raise key interest rates until the third quarter of 2023. Key interest rates were increased six times during 2023, bringing the deposit facility rate to 4% as of September 2023. Specifically, the key rates were increased twice in the first quarter by 50 basis points each time and four times in the second and third quarters by 25 basis points each time, while since September 2023 they have been kept unchanged. The Governing Council of the ECB continued in 2023 to follow a data-dependent and meeting-by-meeting approach to its interest rate decisions, based on a continuous assessment of the state of the euro area economy, in particular the inflation outlook. In September it was announced that the key ECB interest rates are at levels that, if maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to its target. Keeping interest rates at sufficiently restrictive levels should gradually reduce inflation by dampening demand and pre-empting any sustained upward shift in inflation expectations.

In addition, measures were adopted to gradually reduce the Eurosystem's balance sheet size. From mid-2023 onwards, reinvestments of the principal payments from maturing securities purchased by the Eurosystem under the asset purchase programme (APP) were discontinued. It should be recalled that from March to June the APP portfolio was steadily decreasing by a monthly average of EUR 15 billion. Moreover, it was decided to gradually reduce the pandemic emergency purchase programme (PEPP) portfolio over the second half of 2024, by EUR 7.5 billion per month on average, until year-end and to discontinue reinvestments thereafter.

Finally, as of late September 2023, the remuneration of banks' minimum reserves held with national central banks (NCBs) was set at 0%. It should be recalled that until then these holdings were remunerated at the deposit facility rate, which has reached historically high levels. This decision ensures a full pass-through of key Eurosystem interest rate changes to money market rates. It also enhances the efficiency of the single monetary policy by reducing overall interest expenses stemming from reserves while achieving the same degree of monetary restriction.

Key interest rate hikes had already since 2022 contributed to tight financial and monetary conditions in the euro area, which continued into 2023. Banks' funding costs increased, subsequently leading to higher interest rates on business and housing loans. The growth of credit to firms and households moderated, as a result of lower loan demand and supply. In parallel, monetary dynamics weakened significantly.

As a result of monetary policy tightening, excess liquidity in the banking system gradually declined in 2023 from its November 2022 peak. This reduction largely reflected voluntary early repayments and the maturing of TLTRO III operations. It should be noted that a further reduction in excess liquidity is set to assist in reducing NCBs' balance sheets over the medium term.

Monetary policy tightening by the Eurosystem, with a view to achieving the primary objective of price stability in the euro area, had an adverse side effect on the profitability of the ECB and the NCBs, including the Bank of Greece (which however remained in profit). It should be stressed though that central banks are public institutions, with the specific mandate of ensuring price and financial stability, and are not profit-oriented. The projected losses are expected to be temporary and to be soon recouped by future profits. It should also be noted that such losses are significantly lower compared with the potential macroeconomic costs that could have emerged if the ECB had not addressed decisively challenges to price stability and risks of recession both before and after the outbreak of the pandemic. The credibility of central banks mainly hinges on their ability to fulfil their primary objective and contribute to macroeconomic and financial stability, while any temporary losses do not prevent them from fulfilling their mandate.

In March 2024, the Governing Council of the ECB announced changes to the operational framework for implementing monetary policy. This framework determines how the Governing Council will be steering short-term money market rates closely in line with its monetary policy decisions as the Eurosystem balance sheet normalises. These changes establish a set of key principles and parameters on the provision of central bank liquidity, as excess liquidity in the banking system, while remaining significant over the coming years, gradually declines. The new framework will ensure that the implementation of the Eurosystem's monetary policy continues to be effective, flexible and efficient in the future as the Eurosystem balance sheet normalises.

4 THE GREEK ECONOMY: DEVELOPMENTS AND PROSPECTS

Macroeconomic environment

In 2023, the Greek economy grew at a slowing but robust rate, significantly higher than the euro area average. GDP growth at constant prices in 2023 turned out at 2% (compared with 5.6% in 2022), outpacing the respective euro area rate by four times. Exports, private consumption and investment were the main drivers of growth. More specifically, exports of goods and services increased, albeit at a slowing pace, supported by a buoyant tourism sector, which continued to grow strongly. Tourism receipts in 2023 outperformed the historically high receipts of 2019, dispelling any doubts aired at the beginning of the year mainly owing to the erosion of European households' incomes by high inflation. Private consumption growth also moderated after its post-pandemic highs, due to the fading effects of pent-up demand. Households' consumer spending was supported by an increase in their real disposable income. Investment growth continued to rise into 2023, as the positive prospects of the Greek economy prompted firms to press ahead with their investment plans. Investment in transport equipment and housing rose markedly. On the other hand, higher imports, largely due to rising private consumption and investment, had a negative contribution to GDP growth. Most indicators of economic activity, such as manufacturing output, construction, services and car sales, continued to suggest positive growth rates, while some indicators captured a deceleration or even decline, such as retail sales volumes. Nevertheless, business and consumer confidence indicators were adversely affected in the second half of the year by the natural disasters that hit the country, heightened international uncertainty due to geopolitical developments in the Middle East, as well as persistent food inflation.

Rising inflation in 2022-23 took its toll on household savings, which returned to negative pre-pandemic levels. Sustained consumer demand, despite households' lower purchasing power amid high inflation, resulted in a reduction of household savings accumulated during the pandemic period. 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/tax obligations also weighed heavily on household savings.

Headline inflation declined sharply, as a result of falling energy commodity prices. But core inflation continued its upward path, reflecting upward pressures on the prices of non-energy industrial goods and of services. HICP inflation declined to 4.2% in 2023 (from 9.3% in 2023), below the euro area average. This sharp decline is solely attributable to the energy component, since all other inflation components trended upwards, as evidenced by the pick-up in core inflation (HICP excluding energy and food) to 5.3% in 2023 (from 4.6% in 2022), above the euro area average. The disinflation of the energy component (-13.4%) is due to lower energy prices relative to 2022, government subsidies and strong downward base effects. Conversely, food inflation (9.9%) picked up marginally in 2023 (from 9.7% in 2023) but stood at lower levels than the euro area average, while services inflation remained unchanged year-on-year (4.5%). Core inflation was higher than headline inflation throughout 2023, but has been inching downwards since mid-year.

The labour market continued to strengthen in 2023, albeit at a slower pace. Total employment growth increased by 1.3% in 2023 (compared with 5.4% in 2022). It should be noted that the rise in employment was stronger for women relative to men, as well as for the 45-64 age group, thus contributing to higher shares in total employment, whereas the 30-44 age group saw a negative growth rate and the respective share shrank. The share of part-time work in total employment dropped in 2023 to 7.5% (from 8.2% in 2022). The unemployment rate fell to 11.1% (from 12.4% in 2022), with the long-term unemployment rate declining considerably. Compared with the recent past, signs of a labour market tightening are increasingly evident, as firms, particularly in the sectors of construction, manufacturing, trade, tourism and agriculture, find it difficult to hire workers matching their needs, despite a significant increase in wages in 2023.

Growth in average wages strengthened, while the increase in total compensation of employees was roughly as high as in 2022, because of weaker increases in total and dependent employment. Besides, given the slower economic growth rate, labour productivity growth was muted and, as a result, unit labour costs increased considerably. In 2023, compensation per employee grew by 5.5% year-on-year (2022: 2.8%), productivity per employee by 1.0% (2022: 3.0%) and unit labour costs by 4.5% (2022: -0.2%).

Increased input costs over the past few years contributed to a significant rise in profit margins, despite a decline observed in 2023. In 2021-22, the relevant indicators outperformed their historical highs, especially in the industrial sector, construction and services. Higher profit margins during this period were due to the high prices charged by firms to offset their increased production costs, as well as to excess demand following the pandemic period and the reopening of the economy. The relatively small size of the domestic product market and the delayed implementation of adequate structural changes in this market are factors that discourage competition and favour higher profit margins when economic conditions allow it.

The international competitiveness of the Greek economy, after the significant improvement seen during the previous years, seemed to stagnate or even decline slightly in 2023, amid a deteriorating international trade environment. The considerable appreciation of the euro, partly fuelled by the rapid increase in key interest rates in the euro area and the progressive narrowing of the interest rate spread vis-a-vis the United States, negatively affected the price competitiveness of the Greek economy in 2023. This negative effect offset the competitiveness gains arising from lower domestic inflation compared with the weighted average inflation of Greece's main trading partners, both inside and outside the EU. On the other hand, competitiveness in terms of unit labour costs continued to improve. This is due to the fact that the rise in nominal labour costs in Greece was smaller than in the euro area, amid strong increases in nominal wages per employee and limited or negative changes in labour productivity. In terms of structural competitiveness, Greece's ranking in the relevant composite indicators shows stagnation or even decline, following strong progress in the previous period (2020-22). The pace of reform implementation in areas such as public administration, delivery of justice and cutting red tape appears to fall short, with Greece lagging behind other countries on the basis of the relevant indicators.

The current account deficit narrowed significantly in 2023 to 6.3% of GDP (from 10.3% of GDP in 2022). This was mainly driven by: (i) the improved balance on fuels and other goods, since the relevant imports fell more than the corresponding exports, chiefly reflecting lower international energy commodity prices; (ii) a higher surplus in the travel balance, owing to buoyant tourism performance; and (iii) the improved secondary income account. However, these trends were partly offset by: (i) the higher deficit in the primary income account, largely as a result of increased interest payments; and to a lesser extent (ii) the lower surplus in the sea transport balance, mainly as a result of reduced freight rates. It should be noted that foreign direct investment (FDI) flows were lower in 2023 (EUR 4.6 billion or 2.1% of GDP) relative to 2022 (EUR 7.5 billion or 3.6% of GDP), with the real estate sector attracting more than 40% of total inflows. Lower FDI flows primarily reflect: (i) global economic uncertainty; (ii) high interest rates; (iii) increased energy costs; (iv) foreign investors' limited participation in capital increases, mergers and acquisitions of domestic companies; and (v) stagnation of the Greek economy's competitiveness according to relevant indicators.

The Greek real estate market continued to attract investor demand in 2024, particularly for prime properties, further pushing prices upwards. The uncertainties seen over the past two years amid growing geopolitical instability did not reverse the upward trend in property prices and, so far, do not seem to greatly affect construction and investment activities. Investor interest was mainly focused on the residential real estate sector, and investment housing in particular, with the respective prices posting very high growth rates. Residential construction activity increased markedly, while positive business confidence rose further relative to 2022. Both the overall cost of building new residential properties and the prices of building materials continued to grow. In the commercial real estate sector, property prices continued to increase in the first half of 2023, especially for prime properties. Total construction activity for commercial real estate recorded positive growth rates in the year to November.

Turning to capital markets, developments in Greek securities were driven by the Greek sovereign's credit rating upgrades to investment grade during 2023. Greek government bond yields declined more strongly than those of the remaining euro area government bonds. As a result, their yield spreads vis-a-vis other euro area government bonds narrowed significantly. Notably, the spread of the Greek 10-year bond over its German counterpart fell in 2023 (by 98 bps to 105 bps), well below the respective spread of the Italian bond. Underlying this development was also a considerable rise in international funds' holdings of Greek government bonds, which led to compressed borrowing costs. Greek corporate bond yields also declined. It should be stressed that the issuance of new senior debt by Greek banks at lower borrowing costs will significantly boost both the profitability and the resilience of the Greek banking system. Regarding the equity market, the Athens Exchange share price index by far outperformed the US and euro area indices, amid a large increase in average daily trading volumes. These trends were mainly associated with the Greek sovereign rating upgrade to investment grade, as well as with banks' higher profitability and credit rating upgrades. Rising equity prices are also explained by a sharp increase in international investment funds' holdings of Greek shares from the fourth quarter of 2022 onwards, basically pricing in an upgrade to investment grade.

Fiscal developments

During the second half of 2023, three of the four credit rating agencies recognised by the Eurosystem upgraded the Greek sovereign's credit rating to investment grade. This is an important milestone that signals acknowledgement of the credibility of the economic policies pursued in recent years and the resilience of the Greek economy, despite a deteriorating international environment and increased uncertainty. Key factors behind these upgrades were a steadily improving fiscal performance, supported by positive and strong economic growth rates above the euro area average, as well as rating agencies' assessment that the clear election outcome led to political stability with prospects for maintaining the reform efforts.

Against this backdrop, the year 2023 was a milestone for fiscal management. The higher primary fiscal surplus and the Greek sovereign's upgrade to investment grade strengthened international investors' confidence in the prospects of the Greek economy. This is attributable to the country's steadily improving fiscal position, mainly on the back of past reforms and the timely reversal of expansionary measures introduced in 2020-22, as well as to the government's commitment to swiftly implement its ambitious investment-oriented reform agenda. Overall, the fiscal management of the exceptional circumstances of the past four years has highlighted the benefits of past fiscal-structural reforms, particularly in terms of designing the support measures and financial management, but also in terms of State Budget monitoring, execution and control.

The ample fiscal space that was created in 2023 enabled the financing of emergency fiscal measures, without impairing the fiscal path. Over the course of the year, emergency fiscal measures totalling around 1% of GDP were adopted, with a view to supporting incomes against the protracted energy crisis and the consequences of the climate change-related weather extremes. Such interventions, along with the already enacted measures under the 2023 Budget and in combination with the withdrawal of past support measures, implied a cumulative fiscal burden of 3.1% of GDP in 2023. However, according to the 2024 Budget forecasts, despite the adoption of additional measures, the general government primary surplus in 2023 is estimated to increase to 1.1% of GDP (against 0.1% of GDP in 2022), overshooting the initial projection of the 2023 Budget for a primary surplus of 0.7% of GDP.

The projected increase in the primary surplus in 2023 relative to 2022 is attributed to the timely withdrawal of pandemic- and energy-related fiscal measures, as well as to the overperformance of tax revenue. Revenue from taxes and social security contributions rose on the back of the better-than-expected economic activity and higher inflation, as well as an increase in electronic transactions and tax audits that improved tax efficiency and compliance. It should be noted that revenue from income tax (direct taxation) increased visibly, owing to higher wages and pensions and the ensuing increase in withholding tax (in the case of individual income tax) as well as firms' improved financial results in the previous financial year (in the case of corporate income tax). According to the revised projection of the Bank of Greece, which takes account of the latest available fiscal data, the primary surplus is expected to turn out at 1.4% of GDP or higher in 2023, well above the forecast in the 2024 Budget, mostly reflecting reduced primary expenditure and, to a lesser extent, better-than-expected performance of tax revenue.

Despite the higher primary surplus and continued fiscal adjustment, the fiscal stance in 2023 is estimated to be expansionary. This is due to increased spending on public investment backed by the Recovery and Resilience Facility. Excluding this impact, the fiscal stance is estimated to be neutral. In the light of the above, fiscal policy made a balanced contribution to monetary policy efforts to contain inflation, reversing emergency support measures while at the same time boosting growth-enhancing investment expenditure necessary for strengthening the economy's growth momentum, in line with the European Commission's recommendations.

The reduction of public debt continued in 2023, outperforming most euro area countries. According to Bank of Greece estimates, general government debt is expected to decline by 10.7 percentage points of GDP relative to 2022 and reach a post-2010 low of 161.9% of GDP. The largest contribution to this reduction is estimated to come from the interest rate-growth differential (snowball effect), reflecting both nominal GDP growth and the stock of debt. The improved primary surplus is also set to have a debt-reducing effect.

With regard to debt issuance, the Greek government increased its medium-to-long-term funding from international capital markets in 2023, compared to 2022. Overall, the Public

Debt Management Agency raised a total of EUR 11.5 billion, maintaining high cash reserves. Bond issues in 2023 saw a higher weighted average yield relative to 2022, in line with rising government bond yields globally. Although interest rates remained elevated amid further monetary policy tightening, the yield spreads of Greek government bonds over their German counterparts followed a downward path. It should be noted that, in the recent bond issues in early 2024, the Greek government's borrowing costs decreased significantly, reflecting its upgrade to investment grade, which translates into higher demand for Greek government bonds by international investors. Regarding the liquidity of the government bond market, trading volumes on the secondary market increased in 2023 compared to 2022. Government bond issues in 2023 were characterised by the strong presence of long-term institutional investors, confirming their confidence in the growth prospects of the Greek economy and the effective public debt management strategy.

Greece remains one of the top performers in Recovery and Resilience Facility (RRF) funds disbursements in the EU, which provide a significant fiscal impulse to the economy. In total, Greece has received 41% of the available funds (EUR 15 billion, of which EUR 7.7 billion in grants and EUR 7.3 billion in loans) and is one of the few countries to have received three tranches of grants and loans, after fulfilling 26% of the agreed targets and milestones of its programme. Following the final revision of the National Recovery and Resilience Plan in November 2023, which includes new investment projects to absorb additional resources totalling EUR 5.8 billion under the RePowerEU programme, total available resources increased to EUR 36 billion, of which EUR 18.2 billion refers to grants and EUR 17.7 billion to loans. However, there are delays in the disbursement of grants to firms, reflecting administrative hurdles to the implementation of investment plans at the regional and the local government level. Besides, although the amount of loans for signed contracts has increased substantially, disbursements to firms remain relatively low.

Banking sector

Bank interest rates rose further in 2023, in line with the tightening of the single monetary policy stance. The pass-through of the ECB policy rate hikes was uneven across loan categories and in any case was not full. More specifically, borrowing costs for non-financial corporations (NFCs) rose significantly, as interest rates on corporate loans are mostly variable, directly linked to a benchmark rate. Notwithstanding this, their rise is smaller than the increase in key ECB interest rates. As a result, the weighted average interest rate on corporate loans stood at 5.8% in 2023 (up from an average of 3.5% in 2022). But bank-based financing conditions for firms were in fact more favourable than what is suggested by bank interest rate statistics, on account of 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-backed loans. Turning to household loans, interest rate increases were more limited than for loans to NFCs, mostly because the bulk of lending rates for households are fixed, determined according to banks' pricing policies rather than benchmark rates. Furthermore, bank lending rates for households had already started to increase long before the tightening of the single monetary policy stance. In greater detail, the weighted average interest rate on housing loans stood in 2023 at 4.1% (up by 96 bps relative to 2022), while the respective rate on consumer loans with a defined maturity increased to 11.3% (up by 78 bps relative to 2022). In real terms, bank lending rates turned positive in 2023, although remaining at relatively low levels compared with the past.

Compared with the European average, the rise in nominal lending rates in Greece was weaker for both NFCs and households. First, the liquidity conditions of Greek banks have improved, as evidenced by the rise in the deposit-to-loan ratio for several years. The structure of Greek banks' liabilities, which is tilted towards cheaper funding sources, and the greater relative importance of lower-cost retail deposits as a source of funding allowed lending rates to converge to lower levels. As a consequence, increases in Greek banks' funding costs were weaker compared with the euro area banks. This development was also supported in recent years by the progress achieved in the clean-up of bank balance sheets from non-performing exposures, improvements in the institutional framework for the protection of creditors' rights and the tapping of alternative sources of funding. Finally, the crucial importance of Greece's sovereign credit rating upgrade to investment grade should not be overlooked, as it broadens the range of available sources of funding for Greek banks and lowers their funding costs. As a result of the above effects, the differential in the weighted average cost of borrowing between Greece and the euro area narrowed both for loans to firms and for housing loans to households.

In 2023, time deposit rates increased and overnight deposit rates remained marginally posi-tive. In greater detail, given the satisfactory liquidity conditions of credit institutions, ECB policy rate hikes were passed through to time deposits only to a small extent. The weighted average interest rate on time deposits by households and NFCs came to 1.8% in 2023 (against an average of 0.2% in 2022). Compared with the euro area, increases in time deposit rates were smaller in Greece. Thus, for the first time since 2003, the interest rate on time deposits in Greece is, from mid-2022 onwards, lower than the corresponding euro area average.

Annual bank credit expansion to the private sector slowed overall in 2023, after a significant acceleration in 2022. This largely reflects a weaker increase in loans to NFCs and a steeper decline in housing loans to households, despite a pick-up in consumer credit growth.

The growth rate of bank lending to firms was slower (6.5%) in 2023 compared with 2022 (8.3%). The main drivers of this slowdown were lower GDP growth and considerably higher interest rates on loans to NFCs, on average, which weakened demand for bank loans. Developments in new bank loans to businesses in 2023 were mostly affected by the contribution of credit to large firms. The average monthly gross flow of loans to large firms decreased sharply year-on-year. By contrast, the respective flow to SMEs rose slightly year-on-year, also supported by the contribution of the EIB Group and HDB financing tools. The net flow of bank loans to businesses remained positive in 2023, for the seventh year in a row, and was chiefly directed to the industrial, energy and trade sectors.

Bank loans to households continued to contract year-on-year in 2023 (-2.4%), at a marginally stronger rate than in 2022 (-2.2%). This largely reflects the stronger contraction in housing loans (-3.7%), despite an acceleration in consumer loans (2%) compared with one year earlier. Higher interest rates on housing loans in 2023 dented household demand for new loans. On the other hand, developments in consumer loans were consistent with the uptrend in private consumption.

Private sector deposits continued to grow, yet at a more moderate pace than in 2022, amid a shift from overnight deposits to time deposits. More specifically, bank deposits grew by a cumulative EUR 5.8 billion in 2023 (compared with an increase of EUR 8 billion in 2022) and came to EUR 194.8 billion, i.e. their highest level since mid-2011. The slower growth in private sector deposits was driven by overnight deposits. On the other hand, the annual growth rate of time deposits returned to positive territory after 3.5 years, mainly reflecting the upward path of households' time deposit balances. These changes broadly suggest a restructuring of firms' and households' liquid asset holdings towards time deposit accounts, given the higher remuneration they offer in the context of the greater pass-through of policy rate increases to time deposit rates. The rise in time deposits with domestic banks is a strong sign of confidence in the Greek banking system after the recent turmoil in foreign banking systems over the first months of 2023. Still, the bulk of banks' deposit base continues to consist of liquid assets held in overnight accounts (74% of private sector deposits).

In 2023, bank deposits held by both households and firms grew more moderately than in 2022. The slowdown in the growth of household deposits was due to lower real income growth in 2023 (compared with 2022) and households' high consumption expenditure, also given the level of inflation. At the same time, a rise was observed in households' holdings of alternative investment options such as Greek Treasury bills and mutual fund shares/units, which offered considerably higher yields. Furthermore, the real (weighted average) interest rate on total household deposits in 2023 remained negative, discouraging households from saving. Business deposits continued to grow at a markedly slowing pace in 2023, partly reflecting a decline in credit expansion to NFCs.

The fundamentals of Greek banking groups improved in 2023. Profitability strengthened year-on-year, mirroring a significant increase in net interest and fee income amid rising key ECB interest rates, as well as reduced loan-loss provisions due to a decrease in the stock of non-performing loans (NPLs). On the other hand, profitability was adversely affected by lower net income from financial operations, which had benefited from non-recurring income in the past year, and to a lesser extent by higher operating expenses. Greek banks' liquidity ratios rose compared with December 2022, remaining higher than those of euro area banks, despite a reduction in Eurosystem funding (via TLTRO operations). Capital adequacy ratios improved compared with December 2022, yet they were still below of the euro area average. In particular, the Common Equity Tier 1 (CET1) ratio rose to 15.5% in December 2023, from 14.5% in December 2022, and the Total Capital Ratio (TCR) to 18.7% from 17.5%, respectively. Greek banking groups improved their loan portfolio quality further, but the ratio of NPLs to total loans remains significantly higher than the euro area average. According to the latest available provisional data, the NPL ratio dropped further to 6.6% in December 2023 (from 8.7% in December 2022), compared with a euro area average of 2.3%. In 2023, the stock of NPLs for Greek banks decreased by EUR 3.3 billion to EUR 9.9 billion and related chiefly to business loans (68%) and, to a lesser extent, housing loans (23%) and consumer loans (9%).

Overall, the favourable domestic environment is making it easier for banks to effectively address challenges. The resilience of the Greek economy and Greece's upgrade to investment grade contributed to the revision of Greek banks' outlook by credit rating agencies from stable to positive, whereas the outlook for European banks is broadly neutral or negative. These developments have lowered banks' funding costs from capital markets, making it easier for them to meet the minimum requirement for own funds and eligible liabilities (MREL).

2023 was also marked by the HFSF's divestment from Greek significant banks. This echoes the progress that the banking sector has made in addressing its past weaknesses and achieving recurring operating profits. The HFSF's successful divestment from the four significant banks testifies to their improved attractiveness and prospects. The Greek government received a total of EUR 2.8 billion from the HFSF's divestment (between October 2023 and March 2024).

Projections

The Greek economy is projected to continue expanding in 2024, at a higher rate relative to 2023 and well above the euro area average. According to the latest Bank of Greece estimates, economic activity will grow by 2.3% in 2024, with private consumption and investment remaining key drivers of growth, whereas the contribution of the external sector will be marginally negative. In particular, private consumption (+1.7%) will be driven by an anticipated rise in households' real disposable income, on the back of higher labour income, continued recovery in employment and further disinflation. Investment (+11.1%) will keep rising strongly, backed by the available EU resources, which, coupled with the banking sector's high liquidity, will attract private funds. The high growth rates of investment reflect the improvement in economic sentiment, especially after the upgrade of the Greek sovereign' credit rating to investment grade and the considerable disinvestment observed over the past ten years. Exports (+3.7%) will continue to rise significantly in the years ahead, despite weak growth in the euro area economy, while the loss of competitiveness arising from higher unit labour costs will dampen export dynamics. However, the contribution of the external sector to GDP growth will be slightly negative, as strong investment activity will considerably raise imports (+3.5%).

The outlook for tourism is once again positive this year, despite ongoing international uncertainty. The contribution of tourism receipts to the Greek economy is sizeable, as, among other things, they support private consumption and exports of services, thereby containing the growth of the current account deficit. Leading tourism indicators that are favourable for Greece, such as seat scheduling in international incoming flights and hotel bookings, confirm the positive outlook for the tourism industry, creating expectations for another booming year.

Labour market prospects remain positive over the medium term. Employment is expected to rise further (by 1.3% year-on-year) and the unemployment rate is anticipated to fall (to 10.4%) in 2024, reflecting the ongoing recovery in economic activity.

Headline and core inflation are both projected to decline in 2024, as all components are trending downwards. Despite the uncertainty caused by geopolitical developments, HICP inflation is expected to fall further to 2.8% in 2024, while core inflation is anticipated to decline sharply to 3%.

Stronger growth dynamics is expected to have a positive effect on labour productivity, whereas wage growth developments may weigh on competitiveness. The rise in labour productivity is projected to remain muted in 2024 at 1.0% (as in 2023). On the other hand, average wages and unit labour costs will continue to grow at a similar pace as in 2023. According to the Bank of Greece, in 2024 compensation per employee is estimated to increase by 5.4% (2023: 5.5%) and unit labour costs by 4.4% (2023: 4.5%). These trends are expected to exert downward pressures on firms' profit margins. Wage growth in 2024 will be affected by the rise in compensation of civil servants, as well as by the reinstatement of seniority-based increases (for every three years of work experience) in private sector wages, which had been suspended in the context of the economic adjustment programmes. In addition, the minimum wage setting process was expedited, with a view to delivering a new increase as of 1 April 2024, which – as announced on 29 March – will be as high as 6.4%.

In 2024, the current account deficit is projected to further improve to 6.0% of GDP (compared with 6.3% of GDP in 2023). The factors behind this improvement are the following: (i) Exports of goods, despite their weakness in 2023, maintained and further increased their market share, paving the way for even better performance in the coming years; (ii) The expected slowdown in domestic consumer spending, coupled with further declines in energy prices, will limit imports of goods; (iii) An even higher surplus in the services balance is to be anticipated, as travel receipts are expected to rise modestly in 2024, without being significantly affected by developments in the Middle East, mainly on the back of the extension of the tourist season, the promotion of alternative forms of tourism and the strengthening of the cruise industry. In parallel, the recent geopolitical developments in the Red Sea are believed to lead – at least in the short term – to higher freight rates and hence higher sea transport receipts; (iv) The anticipated interest rate cuts, paired with the country's credit rating upgrade to investment grade, will contribute to lower interest payments, thereby improving the primary income account; (v) EU financing, especially in the form of grants (e.g. funds under the European recovery instrument NextGenerationEU – NGEU), will have an immediate positive impact on the current account balance, via the primary and secondary income accounts; (vi) Foreign direct investment is set to remain robust, reflecting the speeding-up of privatisations, inflows from EU funds and an improved business climate. Conversely, needs for imports of investment goods are expected to weigh on the current account deficit.

The outlook of the Greek real estate market remains positive. In the short term, as foreign demand remains strong, real estate prices are expected to continue rising in the prime market segment, driving upwards prices in secondary markets as well.

Monetary policy in 2024 will continue to be restrictive, maintaining interest rates at sufficiently high levels for as long as necessary. Based on its current assessment, the ECB Governing Council considers that the key ECB interest rates have reached levels that, if maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to the 2% target.

The fiscal stance is estimated to remain slightly expansionary in 2024, in line with the European Commission's fiscal policy guidance. The fiscal stimulus comes from increased public expenditure on investment backed by RRF funds. Excluding this impact, the fiscal stance is expected to be neutral, complementing the restrictive stance of monetary policy and the effort to curb inflation. Based on available data and the policy measures so far announced, the Bank of Greece expects the primary surplus to increase to 2.1% of GDP in 2024. The improvement of the primary balance is mainly explained by a projected rise in tax and social security contribution revenues on the back of strong economic growth. This projection takes into account the adopted measures for 2024, having a cumulative fiscal cost of 2.6% of GDP, which is lower than that of the policy measures of 2023. Public debt is projected to decrease further to 152.3% of GDP in 2024, at a slower pace than in the previous three years, as the decline in the GDP deflator is expected to offset both the acceleration in real GDP and the dampening effect of the widening primary surplus. Moreover, public debt is projected to decline in nominal terms for the first time since 2019 and for just the fifth time in the 29-year period for which national accounts data are available.

The debt-to-GDP ratio is expected to remain on a steadily declining path over the medium-to-long term. The baseline scenario of the Bank of Greece foresees that, assuming adherence to the achievement of fiscal targets and effective use of EU funds, the debt-to-GDP ratio follows a steady downward trajectory, which is only temporarily halted in 2033 for purely technical reasons associated with the inclusion of deferred interest on part of the EFSF loan in public debt.

Turning to the financial sector, the conditions for a decline in domestic bank interest rates will be favourable in 2024, as inflation gradually approaches its medium-term target of 2% and the ECB starts cutting key interest rates. The financial sector is expected to benefit from the following factors: (i) ongoing improvements in the labour market and consequently in prospective borrowers' creditworthiness; (ii) developments in the real estate market, implying higher collateral value; and (iii) the relatively recent sovereign credit rating upgrade to investment grade, which improves the liquidity conditions of Greek banks, pushing downwards banks' cost of funding from the capital markets.

The outlook for bank credit to the private sector depends on the future path of benchmark interest rates. In 2024, credit growth will initially continue to be adversely affected by past increases in bank lending rates. In the course of the year, with the ECB rates unchanged or lowered, credit growth should eventually pick up, but only gradually, given the estimated time lags. If the growth rate of economic activity in 2024 stays at the very least similar as in 2023, loan demand by firms and households will strengthen further. The more favourable investment environment after the upgrade to investment grade is set to have a positive impact on demand for bank loans. At the same time, bank loan supply will continue to be greatly supported by the low-interest loans from the RRF, the MFF 2021-2027 programmes and the new co-funding and guarantee schemes of the HDB and the EIB Group. Such financing tools will facilitate the promotion and funding of investment projects, some of which are long-term investments by large firms. Against this background, annual growth in bank credit to NFCs is expected to remain broadly the same, on average, as in 2023.

The maintenance of robust growth rates for economic activity and bank credit to firms is anticipated to contribute to a further rise in bank deposits. A potentially higher pass-through of policy rate increases to domestic deposit rates in the near term, especially if coupled with an expected decline in inflation, will also encourage saving and boost demand for interest-bearing deposits. If the anticipated policy rate cuts go hand in hand with inflation stabilising at low levels and with stronger economic activity and credit growth, then deposits will continue their upward trend.

The outlook for credit institutions is also positive. The prospects of banks' credit ratings appear to be positive, assisted by Greece's upgrade to investment grade and the resilience of the Greek economy, as well as by developments in banks' fundamentals such as the improved quality of their loan portfolio (with the reduction of the NPL ratio) and the strengthening of their capital adequacy, profitability and liquidity. A further improvement in banks' performance is expected to be supported by the containment of their funding costs amid continued bank bond issuance, which also helps sustain bank profitability. By contrast, a potential reduction in interest rates is expected to have a relatively small impact on bank profitability.

5 SOURCES OF RISK AND UNCERTAINTY

Risks surrounding the global economic outlook appear to be balanced, as the risks of stagflation or recession are fading and the negative shocks to aggregate supply are gradually waning. Upside risks include: (i) a faster-than-projected decline in inflation would allow monetary authorities to normalise their policy stance sooner; (ii) in China a swift implementation of reforms and restructuring in the real estate market is likely to speed up recovery in the country's economy and hence in world trade and global exports; (iii) artificial intelligence and innovation in production may have beneficial effects over the medium term on labour productivity and total factor productivity, particularly in advanced economies. On the other hand, there are downside risks to the global economic outlook such as: (i) The risk of more persistent inflationary pressures remains significant, amid disruptions to the global supply of goods and raw materials and higher international commodity prices. A possible deterioration in world trade conditions and global supply chains might push upwards international food and fuel prices, as well as the cost of imported intermediate and final goods. Other factors may also work in the same direction, such as an escalation of geopolitical tensions in the Middle East and the Red Sea, though which a significant part of world trade passes, traffic disruptions in the Panama and Suez canals, and increased voluntary reductions in oil production; (ii) The slowdown in China's economy is likely to be steeper than expected if the implementation of credible restructuring measures in its over-indebted real estate sector is delayed; (iii) The pace of the necessary fiscal adjustment in several major economies should be gradual yet credible, so as to avert the risk of a more violent adjustment with higher interest rates on public debt in the event of abrupt movements in market risk sentiment.

Risks to the euro area economic outlook are slightly tilted to the downside, although the likelihood of a hard landing in the economy has waned. A potential aggravation of geopolitical tensions in the Middle East and Ukraine, as well as the continuation of attacks in the Red Sea would heighten the risk of renewed global supply disruptions and increases in food and energy prices and in transport costs, leading to higher inflation and lower growth rates. Further geoeconomic fragmentation might also hamper cross-border flows of merchandise, adding to international commodity price volatility and resulting in a weaker-than-expected recovery in external demand. Moreover, a tightening of global financial conditions would affect domestic demand, public finances and financial stability. Extreme weather events are likely to dampen productivity and raise the fiscal cost, in an environment of high debt levels and borrowing costs, thus worsening the economic outlook. On the contrary, a greater-than-expected moderation in wage costs, owing to a faster labour market slackening, should bring down inflation sooner. Such a moderate growth in wage costs is not anticipated to pass through to prices, as it will be absorbed by firms' profit margins, which are expected to narrow. In parallel, a more front-loaded implementation of policies for green and digital transitions should support investment.

The persistence of labour market tightness in the euro area increases the risk of wage and inflation pressures and calls for increased vigilance on the part of monetary authorities. A persistently tight labour market in certain sectors of the economy, particularly in labour-intensive services, can keep services inflation high for longer and thereby delay the decline in core inflation. In a macroeconomic environment where core inflation remains high, higher-than-expected increases in nominal wages and a smaller compression of firms' profit margins would lead to more persistent inflation, a stronger monetary policy response and lower growth rates.

In spite of the above, recent data suggest that the risk of a generalised upward wage-price spiral in the euro area remains contained. As inflation falls and short-term inflation expectations return to the 2% inflation target, recent marginally positive real wage growth implies lower wage demands in the future. The slowdown in nominal wage growth, paired with an expected rise in labour productivity growth, is estimated to dampen unit labour costs in the coming years, limiting wage pressures on inflation. At the same time, firms' increased profit margins after the pandemic should continue absorbing part of wage increases, also easing any second-round effects of wages on inflation. Moreover, given that monetary policy changes have a lagged effect on aggregate domestic demand and subsequently on the labour market, the effects of past monetary policy tightening on the labour market are expected to become more visible in the coming quarters. Therefore, in the absence of new external shocks, the risk of a wage-price spiral in the euro area appears to remain less likely as economic activity slows down, inflation falls and the labour market is rebalanced.

Central banks continue to face major uncertainties regarding monetary policy conduct. On the one hand, monetary authorities should avoid normalising the monetary policy stance too early, as this would probably lead to a resurgence in inflation and undermine their credibility. On the other hand, there is increasing evidence that a tighter-for-longer monetary policy puts a strain on the economy in sectors that are highly sensitive to interest rate changes, such as hard-hit construction and manufacturing, with negative repercussions for economic growth.

As regards the Greek economy, achieving robust growth rates is the key challenge. The risks surrounding the GDP growth forecast are mainly tilted to the downside and relate to: (i) a further slowdown in the European economy; (ii) growing uncertainty due to adverse geopolitical developments in Ukraine and the Middle East and its impact on the global economic environment; (iii) possible delays in the implementation of the NGEU programme and slower absorption of relevant funds; (iv) reform fatigue, with negative implications for productivity and competitiveness; and (v) the impact of potential natural disasters related to the climate crisis. Conversely, GDP growth would benefit from a better-than-expected performance of tourism. More specifically, the allocation of travel flows into more regions, the extension of the tourist season, the unwinding of labour shortages in the country's hotels and the implementation of new infrastructure projects are challenges that, if overcome, could further upgrade the Greek tourism product, strengthening an already favourable outlook.

Increased uncertainty arising from recent geopolitical turbulence represents an upside risk to the inflation outlook, with adverse distributional effects. Persisting inflationary pressures and a possible continued rise in food and housing prices would hit more severely lower-income households, which spend a relatively higher share of their income on those needs. However, the government's targeted measures to support the more vulnerable households in the face of rising prices are expected to provide some relief. At the same time, recent legislative interventions to ensure price rationalisation and transparency, as well as to enhance competition are anticipated to ease inflationary pressures and support consumer spending, especially by vulnerable households.

In parallel, challenges to the labour market are growing. The declining unemployment rate makes it more difficult for employers to find workers, thereby leading to a tighter labour market, particularly in construction, tourism, manufacturing and the primary sector. 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. It should be noted that the natural unemployment rate in Greece is estimated at around 13%, which is twice as high as in many EU countries, indicating the existence of serious distortions and structural problems.

Risks to the improvement of the current account balance remain significant. The main source of concern is weakening global demand, especially from the major destinations of Greek goods, which does not point to a significant improvement in exports in 2024. Geopolitical developments, a possible resurge in fuel prices and the re-emergence of inflationary pressures constitute additional risks.

Despite the positive outlook for the Greek real estate market in the period ahead, there are still significant uncertainties that are related with geopolitical instability worldwide. Property price developments and the recent corrections in European and international real estate markets, amidst high inflation, increased energy costs and higher interest rates, if maintained, are expected to lead to weaker growth or even to some correction in the prices of the domestic real estate market in the near term.

Given the high uncertainty, the medium-term planning of fiscal policy should place greater emphasis on risk assessment. This ensures that sufficient fiscal buffers are built over time, capable of shielding the economy in times of crisis. A risk management-based framework should: (i) encourage the build-up of buffers, even in the absence of immediate high risk to debt sustainability; and (ii) pursue more ambitious fiscal adjustment targets in the case of high-debt countries, provided that a procyclical policy is avoided.

In particular, the sustainability of Greek public debt exhibits high resilience to a series of adverse shocks over the medium term. Both public debt and gross financing needs score well in different adverse scenarios, deviating slightly from the baseline scenario of the Bank of Greece up until early 2030. The likelihood of a reversal in the downward course of the debt-to-GDP ratio is estimated to be little over the medium term, as the likelihood of gross financing needs is exceeding the 15% and 20% of GDP limits. On the basis of the above, risks to public debt sustainability are estimated to be contained over the medium term, subject to adherence to fiscal targets and effective utilisation of EU funds. This is largely due to the favourable repayment profile of official sector debt, which accounts for the bulk of total debt, coupled with the past hedging swap contracts, which locked in historically low interest rates.

In the long term, however, there is increased uncertainty, and fiscal prudence and responsibility are needed, given the major fiscal challenges. In a high interest rate environment globally, focusing on achieving a fiscal position that ensures long-term sustainability is crucial, as rising borrowing costs (relative to the pre-pandemic period) and slowing growth rates limit the debt-reducing impact of the interest rate-growth differential (“snowball effect”) and gradually weaken the initial beneficial effect of inflation on the reduction of the debt-to-GDP ratio. Fiscal prudence is therefore necessary so as not to undermine the downward path of public debt. 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, leaving no room for fiscal policy relaxation. Therefore, the next decade provides a unique window of opportunity to rapidly reduce Greek public debt. In order to use this window of opportunity, fiscal credibility must be safeguarded and EU funds must be effectively utilised. This will ensure not only the maintenance of investment grade status, but also the further gradual improvement of the country’s credit rating.

Concerning the banking sector, the significant improvement in asset quality over the past few years should not lead to complacency. The NPL ratio, despite its considerable decline, remains well above the average of euro area banks. Meanwhile, there is a high private debt overhang, reducing the scope for new borrowing and dampening investment.

6 POLICY RECOMMENDATIONS

In an environment of heightened uncertainty, credible medium-term economic policy planning is of crucial importance. Against this background and with a view to improving economic resilience and addressing the medium-to-long-term challenges as well as the chronic weaknesses of the Greek economy, economic policy should focus on the following areas:

Monetary policy

The so far successful monetary policy, which managed to bring inflation down without causing a recession and without impairing financial stability, is expected to remain realistic and gradualist. The response of monetary policy to the new circumstances should be flexible, data-dependent and state-dependent. In other words, the assessment of the way forward by monetary authorities needs to be continuous and meticulous. Any adjustments in the conduct of monetary policy have to follow a step-by-step approach, in order to avoid disorderly movements in the markets. This includes not only policy rate decisions, but also decisions about the balance sheet size of the Eurosystem and, by extension, the market footprint of the central bank.

The ECB remains focused on achieving its inflation aim. Monetary policy must remain restrictive for as long as needed to achieve the inflation target of 2% over the medium term. This will prevent a de-anchoring of inflation expectations and second-round effects from strong wage pressures. Therefore, developments in labour costs, firms' profit margins and inflation expectations warrant close monitoring at the current juncture.

In the first half of 2024 there will be enough evidence to decide on monetary policy normalisation moves in the course of this year and avoid an excessive tightening of financial conditions. On the one hand, the effects of past monetary policy tightening are already evident and will continue to be transmitted to some extent this year and next year, due to time lags. Thus, although key interest rates have remained stable since September 2023, a sizeable part of past interest rate increases should continue to be transmitted to financing conditions, affecting lending rates and credit growth, as well as to the real economy, further reducing demand and inflation. In addition, the further shrinking of the ECB's balance sheet through TLTRO repayments and the gradual reduction of the APP and PEPP securities portfolios is also contributing to tightening financial conditions. On the other hand, economic growth in the euro area remains sluggish and weaker than expected. Headline inflation has receded markedly, while core inflation continues to decline and risks are now more balanced. Nominal wage increases are moderate and corporate profits appear to be absorbing the increase in wage costs. Therefore, taking into account all available data for the first half of 2024, the appropriate time to start lowering key ECB interest rates will be assessed, without jeopardising the progress towards price stability achieved so far.

Fiscal policy

The year 2023 is a milestone for fiscal policy credibility, which must be safeguarded. Overachievement of fiscal targets, resulting in a considerably wider primary surplus without harming economic growth, and the recovery of investment grade status are major policy successes. However, this should not lead to complacency, but instead motivate policymakers to step up efforts to ensure fiscal prudence and obtain further upgrades of the country's sovereign credit rating. Adherence to fiscal responsibility is crucial, especially as the achievement of primary surpluses in the long term will become more challenging, given the projected slower growth rates, while the positive impact of inflation on public finances will wane.

Experience from the management of past crises has demonstrated the major importance of counter-cyclical fiscal policies for strengthening the resilience of economies. Such policies, in good times, can help build the necessary buffers and fiscal space for the adoption of discretionary fiscal policies in bad times. In this context, it is estimated that a cyclically adjusted primary surplus of 2% of GDP is required in order to build the necessary fiscal buffer.

Medium-term planning enhances the credibility of the policy pursued. A credible medium-term fiscal strategy is of crucial importance in an environment of successive crises and heightened uncertainty, with increased geopolitical risks and the impacts of climate change becoming more and more evident. Key to designing a medium-term fiscal path is the assessment of fiscal sustainability risks. Improved sustainability requires a focus on growth-friendly policies. The variable that will determine to a large extent the sustainability not only of public debt but also of private debt is the so-called "snowball effect", that is the difference between the nominal effective interest rate of debt refinancing and the nominal GDP growth rate. The "snowball effect" in the last several years has been negative, i.e. the nominal effective interest rate of debt refinancing has been smaller than the nominal growth rate, and this contributed to the stability of public and private sector finances. Policymakers should understand the significance of the "snowball effect" and make sure that it has the right sign, if not always, at least for most of the time. A favourable "snowball effect" can contribute to the ability of economies to remain resilient as they transition to the new normal.

The new EU economic governance framework requires prudent medium-term fiscal planning with constraints on the adoption of extraordinary measures. According to the new fiscal rules, fiscal consolidation and effectively addressing fiscal sustainability issues are now at the top of the medium-term agenda, while respecting the EU's investment priorities. At the core of the new rules are the reduction of public debt and the mitigation of risks to its sustainability in the medium-to-long term by controlling public expenditure growth. Making the expenditure rule an operational rule for monitoring and compliance implies that any fiscal space will be used to build up buffers and/or reduce public debt, while any extraordinary fiscal measure on the expenditure side should be financed by a revenue-increasing measure of an equal size. In such an environment of budgetary constraints, clear priorities should be set before the adoption of any new targeted support measures for the most vulnerable income groups.

Priority should also be given to broadening the tax base by combatting tax evasion and reviewing existing tax exemptions. This would also enable better targeting of social policy and, more generally, promote tax fairness. The recent measures against tax evasion are seen as a positive input to a growth-oriented tax policy. Notwithstanding this, curbing tax evasion among the self-employed also requires an appropriate incentivisation of consumers to disclose transactions. In parallel, the review of the currently applicable tax exemptions should focus on social usefulness and appropriate targeting. As both the number and the cost of tax exemptions have increased significantly over the past few years, a review is deemed necessary so as to make sure that they are relevant at the current juncture and fit for purpose (support of vulnerable groups, strengthening of business activity, promotion of innovation, etc.). Such an approach, coupled with an intensification of audits regarding the use of tax exemptions, would enhance tax fairness, potentially leading to higher tax revenue. In this manner, tax policy can be growth-friendly, while allocating the tax burden more fairly and proportionally.

The targeting of social spending in economies such as the Greek economy, where concealing income is a widespread practice, should rely on eligibility criteria rather than on tax returns. The provision of means-tested benefits in an economy with a high tax evasion rate leads to an irrational and unfair use of public funds. This is evidenced by the low fiscal multiplier of social spending in Greece, which suggests that such spending is allocated across several income brackets and is not channelled exclusively to the lower brackets of income distribution. The establishment of refined eligibility criteria, other than tax returns, for recipients of social payments is therefore deemed necessary. An increased use of electronic means of payment and the measures that are already in place to improve the technology toolkit of tax authorities should contribute to curbing tax evasion and help better target benefits.

Labour market

Increasing labour force participation of men and women and especially youth is of paramount importance, as population ageing may undermine the sustainability of social security systems. Policies that improve the work-life balance and invest in the technical education and (re)skilling of human capital, along with reforming the tax system and reducing incentives for early retirement, can help in this direction, so as to make it easier for more workers to rejoin and remain in the labour market. The employment and labour market participation of young people require strengthening demand in high value-added sectors and occupations, attracting foreign direct investment and increasing the extroversion of the Greek economy.

The observed labour market tightness calls for initiatives to ensure that the ongoing recovery of the economy is not disrupted. The continuous rise in employment and the fall in the unemployment rate have greatly limited the pool of – both skilled and unskilled – workers available for recruitment by firms, as evidenced by the higher measures of labour market tightness. In order to address labour market tightness, it is imperative to further support workers' technical education and continuous upskilling throughout their careers, as well as the reskilling of the long-term unemployed. Continued implementation of efficient training programmes for the labour force, and the vulnerable social groups in particular, should contribute to job retention and labour market participation of vulnerable groups. With a view to addressing job and skill mismatches in the domestic labour market, the integration of immigrants and the introduction of incentives to attract skilled immigrants are warranted. However, an institutional framework for immigration flows must be established, while appropriate strategies and policies must be designed for immigrants' gradual and successful social inclusion. Appropriate mechanisms for matching labour force skills with labour market needs must also be put in place, particularly at the local level. At the same time, the increase in wage costs points to an urgent need to reduce or subsidise social security contributions, so as to raise the competitiveness of Greek businesses and preserve jobs. Last but not least, reversing the brain drain and achieving a brain regain through incentives and well-paid jobs are also imperative.

Reforms

Pressing ahead with and strengthening reforms, especially in areas with chronic weaknesses, such as the delivery of justice. It should be noted that an efficient judicial system that assists in the resolution of disputes and the protection of property rights is a key driver of investment and growth. This can be explained by the fact that investors are more willing to invest in an economy where their contractual and property rights are protected and where they can seek and receive justice promptly should these rights be violated. Besides, an efficient judicial system is crucial for addressing business malpractices and monopolistic structures, thus contributing to increased competition, which in turn leads to higher productivity and fosters economic growth. Moreover, a well-functioning justice system provides an effective financial contract enforcement mechanism, thereby ensuring the expansion of financial markets, improved financing conditions in the economy and faster growth rates. Actions are therefore required, aimed at modernising and speeding up the delivery of justice, through an upskilling of judges as well as through the digitisation of court archives and judicial processes, adopting legislation for monitoring and improving the performance of judicial staff, and revising the judicial map for administrative, civil and criminal courts.

Further improvements in the business investment environment will boost investment and labour productivity. Actions in this direction include cutting red tape and digitalising public administration, accelerating and completing the national cadastre, as well as improving tax administration and streamlining the tax system, which could strengthen legal certainty for investors and help address the investment gap. At the same time, there is a need to remove the remaining, and excessive by EU standards, regulatory barriers to entry in certain professional services, to increase business R&D spending, which lags behind the European average, and to improve the digitalisation of the Greek economy. The expansion of investment should also be supported by rising domestic savings, without the contribution of which there is an imbalance between national savings and investment, which negatively affects the balance of payments.

Furthermore, a faster absorption and effective use of funds under the EU recovery instrument NGEU and the Multiannual Financial Framework 2021-27 is needed. The timely implementation of the reform programme will further improve the structural characteristics of the Greek economy, leading to strong and sustainable growth rates. Emphasis should be placed on actions aimed at raising total factor productivity, potential output growth and structural competitiveness, thereby improving the resilience of the economy. In this context, EU funds should be directed to investment in physical and human capital, clean energy, digital technologies and artificial intelligence, to competitive sectors that are export-oriented and to the improvement of infrastructures. This would enable closing the investment gap and boosting investment related, among other things, to green and digital transitions. Energy sector reforms in particular are expected to help contain medium-term inflationary pressures.

Wage increases should take account of developments in labour productivity, so as to avoid a deterioration in the competitiveness of the Greek economy. Wage decisions must take into account medium-term productivity developments and the current environment of high uncertainty. Thus, they will not add to the persistent inflationary pressures, which would worsen the competitiveness of the Greek economy and ultimately reduce the real incomes of workers.

A further rise in exports necessitates a diversification of tradable goods and services, with a focus on sectors of high value added. The past few years have seen considerable improvements in the extroversion of the Greek economy. As suggested by balance of payments data, in 2023 exports of goods and services as a percentage of GDP almost doubled compared with 2010 and outdid their 2019 level. Between 2010 and 2019, the share of gross value added of tradable goods and services at current prices increased from 50% to 57%, with an equal decrease for non-tradables. But more than 50% of Greek exports originates from three sources, namely travel services, sea transport and fuel. Besides, exports of high-tech products, despite having almost doubled in 2017-22, still account for a small share in total exports of goods. Therefore, for the Greek economy to become more extrovert, the composition of goods and services exports must be improved and the sectors producing high-tech goods must be supported.

Banking sector

The challenges of the economic environment require a further strengthening of the banking sector's resilience. Further improving the capital base of Greek banks remains an important challenge for the sector, particularly in the current environment of changing international financial conditions. The quality of Greek banks' prudential own funds remains low, as deferred tax credits (DTCs) continue to account for a large part of total prudential own funds. Further ahead, Greek banks are faced by a number of challenges, such as a possible increase in their funding costs (among other things, due to the impact from the issuance of MREL-eligible bonds) and the need to further reduce the NPL ratio towards the European average, in a high interest rate environment. In this context, both systemic and non-systemic banks should further increase their capital buffers taking advantage of their increased core profitability, which creates favourable conditions for internal capital generation. The creation of the so-called "fifth pillar" in the domestic financial system comprising well-capitalised non-systemic banks is expected to improve competition and the financing conditions of SMEs. Lastly, the interlinkages between climate change risks and the financial system must be further explored.

The high level of private debt which is held outside the banking sector is a major imbalance that hampers, among other things, access to bank credit. This can be addressed through sustainable workout solutions for viable borrowers and through collateral liquidation in all other cases. In this respect, the role of credit servicing firms is of paramount importance. The transposition of Directive 2021/2167 into Greek law, setting out the new legislative framework for credit servicers, is expected to provide assistance, among other things, in corporate governance matters and in borrowers' fair treatment. Improvements in the out-of-court settlement mechanism and the operation of the Sale and Lease Back Organisation in particular should help address this problem.

European integration

Although the EU banking sector so far seems to have fared well despite a multitude of challenges, there is no room for complacency. The strengthening of the crisis management framework in the euro area along with the completion of the Banking Union (namely in the form of the European Deposit Insurance Scheme) will enhance the preparedness of monetary authorities to deal with banking crises. The authorities should prepare for a rainy day well in advance. The past crises show the importance of enhancing the institutional framework prior to the materialisation of risks.

To this end, in April 2023 the European Commission published legislative proposals to reform the existing framework for crisis management and deposit insurance. The main elements of the proposed reform include: (i) expanding the scope of resolution to include small and medium-sized banks; and (ii) strengthening the role of national deposit guarantee schemes with the possibility of using them in resolution, for preventive measures or for alternative measures in insolvency. Such proposals should work in the right direction to ensure seamless crisis management in the banking sector and the protection of depositors. However, it should be stressed that there is a need for additional changes to ensure, among other things, the effectiveness of the framework in the event of a generalised systemic crisis. In this respect, the adoption of a common European deposit insurance scheme at the banking union level is essential to consolidate depositor confidence.

Bolstering the resilience of the euro area economy and its financial system to future shocks requires faster progress towards deeper European integration and better policy coordination. The creation of a full-fledged Capital Markets Union, the completion of the Banking Union and the development of a strategy towards a Fiscal Union are priorities, with a view to more prosperity for Europe and its citizens.

Climate change

The cost of tackling the impacts of climate crisis dictates the need for medium-term planning. The recent international experience with the devastating effects of climate change, especially in Southern Europe, has demonstrated the need for a “rainy day” fund to finance climate change adaptation and emergency relief, in addition to the necessary investments to mitigate the impacts of climate change over the medium-to-long term. The increased cost of addressing natural disasters must be covered either from European funds or from additional income sources, without undermining fiscal stability. At the same time, the promotion of private property insurance is warranted for tackling climate change risks, as the public sector alone cannot bear the entire cost of compensation and infrastructure restoration.

The acceleration of the energy transition and the reduction of reliance on fossil fuels will contribute to the achievement of environmental goals. Increasing the share of renewables in the energy mix requires, in addition to new investment, increased energy storage capabilities. In this context, it is crucial to use REPowerEU resources to improve energy efficiency and accelerate the green transition. At the same time, it should be noted that the green transition of the economy requires not only the implementation of new investment projects, but also the existence of staff appropriately trained in new technologies.

Despite the deep crisis of the past decade, Greece is currently a prosperous country with strong institutions and consolidated democracy. According to the United Nations' Human Development Index (with population weighting), Greece ranks among the top 13% of world population. This index includes variables such as per capita GDP, as well as sectors such as education, health, standard of living and the environment. The past ten years saw a great number of reforms that made significant contributions to the stabilisation of the economy, the banking system and the social security/pension system, to the improvement of the tax collection mechanism, competition and labour market flexibility, as well as to the deregulation of certain markets. However, such changes came up against strong resistance from vested interests, as they were imposed in the context of the economic adjustment programmes, under the strict surveillance of European and international institutions. As a result, despite the undeniable benefits of those reforms, the policies pursued lacked national ownership to a great extent.

In an international environment where new uncertainties are piling up, reform fatigue is the biggest challenge to further strengthening the resilience of the Greek economy. Geopolitical instability, technological challenges, green transition and generative artificial intelligence are just some of the areas that call for strengthening the economy's resilience to exogenous shocks and necessitate sustained high growth rates in the medium term. To this end, economic policy should focus on maintaining the reform momentum, with stronger national ownership of planned changes.

Implementing the necessary reforms is a prerequisite for increasing welfare and bolstering institutions. The proposed reforms aim at enhancing total factor productivity, potential output growth and structural competitiveness, leading to higher economic growth, a stronger labour market, social cohesion and, ultimately, higher standards of living. In turn, this reduces the risk of unemployment and an adverse economic outlook, limits inequalities and unlocks sound creative forces.

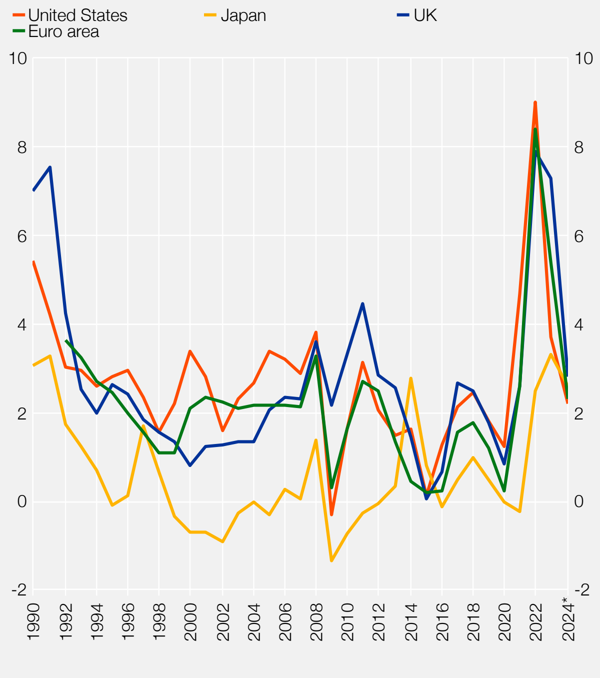
Finally, the important competitiveness challenges of the European economy in the medium-to-long term call for rapid steps to reform the EU architecture. Further delays in taking action towards full integration of Europe, even in sectors where substantial progress has been achieved (such as the Banking Union and the Capital Markets Union), will lead to a marginalisation of the region and loss of prosperity for its citizens. Policymakers should act in a timely and proactive manner (i.e. before the outbreak of a new major crisis), with decisive, balanced and well-designed reforms at the euro area level, in a spirit of cooperation and mutual concessions. These changes will make the economies of the Member States more resilient, enhance the acceptance of the euro as a global reserve currency and lay the foundations for sustainable and lasting prosperity of all European citizens.

II THE EXTERNAL ENVIRONMENT OF THE GREEK ECONOMY

In 2023, the global economy proved more resilient and inflation declined faster than initially projected. The significant slowdown of the euro area economy was offset by an accelerating US economy, while growth in emerging market and developing economies remained robust. Global inflation declined as international energy prices followed a downward trend, but underlying inflation decreased at a slower pace and remained relatively high. Among advanced economies, the slowdown was steeper in the euro area and the United Kingdom, mainly due to weak international demand, which significantly dampened global trade growth, coupled with high input costs and tighter financial conditions. Fiscal policy in advanced economies continued to be supportive, largely driven by strong fiscal expansion in the United States, despite the phasing-out of emergency measures related to the energy crisis in other countries, while monetary policy tightening has effectively contained inflation expectations, with no significant impact on the labour market, which has remained broadly resilient.

Chart II.1 Headline inflation in major economies

(annual percentage changes)



Sources: IMF, OECD and ECB.
Notes: HICP for the euro area. Projections for 2024.

1 OVERVIEW OF DEVELOPMENTS[1]

The global economic recovery from the fallout of the pandemic crisis, Russia's invasion of Ukraine and the subsequent rise in the cost of living continued in 2023 but has been uneven across major economies. Inflation in advanced economies eased from the 40-year high recorded in 2022, on the back of declining global energy prices and the timely and largely coordinated response of central banks (see Chart II.1). The tightening of monetary policy, which continued in 2023, though at a more moderate pace in most economies, contributed to reducing inflation and keeping inflation expectations low, with only a small impact on labour and product markets. Global inflation declined by around 2 percentage points in 2023 to 6.8% and is projected to stand at 5.8% in 2024 and 4.4% in 2025.

Fiscal policy in 2023 was mildly expansionary in advanced economies, despite the phasing-out of the emergency income support measures, mainly owing to strong fiscal expansion in the United States.

International trade in goods and services is estimated to have slowed significantly, dragged down by weak global demand, as well as by geoeconomic fragmentation and increased trade

1 The cut-off date for information and data used in this chapter is 21.3.2024.

restrictions adopted by several countries. While it is projected to recover in 2024 and 2025, global trade growth will fall short of the recent historical average. Developments in the Red Sea near the Suez Canal – which handles 11% of global trade flows – as well as at the Panama Canal – due to drought – have led to longer delivery times and higher shipping costs, heightening the downside risks to international trade.

International crude oil prices fell by 16% in 2023 and – on the back of the projected international supply and demand conditions – are expected to ease slightly in the coming years. Similarly, the international price of natural gas of all types plunged by an annual average of 63.4% in 2023, compared to the previous year's historic highs.

In the euro area, economic activity slowed sharply as early as end-2022, as the post-pandemic recovery had run its course. In 2023, GDP grew by a mere 0.5%, compared with a strong increase of 3.4% in 2022, reflecting the impact on demand from tighter financial conditions, uncertainty and worsening economic sentiment, the impact of the energy crisis and high inflation on consumption, as well as a decline in investment. Despite a marked deceleration in economic activity, the euro area labour market remained resilient, and labour hoarding, driven by labour shortages, helped sustain high levels of excess labour demand (see Box II.1). At the same time, inflation dropped by 3 percentage points to 5.4% in 2023 and, according to ECB projections, is expected to decline further to 2.3% in 2024, mainly due to receding food inflation. Tight financial conditions, the withdrawal of fiscal support measures and global value chain disruptions could keep growth momentum subdued in the near term, potentially leading to a faster-than-estimated decline in core inflation.

At the institutional level, policy interventions in the EU-27 and the euro area to tackle geopolitical shocks, as well as those concerning enlargement, energy issues, strategic autonomy, industrial policy, artificial intelligence and the new fiscal rules, are discussed shortly in Box II.2.

Economic growth in South-Eastern Europe slowed in 2023, and a mixed outlook is anticipated for 2024, with some economies expected to weaken further while others are projected to rebound. Box II.3 explores the shift in EU priorities regarding the enlargement process and the associated challenges, following the decision to open accession negotiations with Ukraine and Moldova and to grant Georgia candidate status.

2 DEVELOPMENTS AND PROSPECTS IN THE WORLD ECONOMY AND THE EURO AREA – POLICY RESPONSES

2.1 The world economy

Global GDP growth is estimated by the IMF to have decelerated to 3.1% in 2023 from 3.5% in 2022 and to remain unchanged in 2024. For 2025, it is projected to remain below the recent historical average (2000-2019: 3.8%). In advanced economies, activity slowed overall, with the exception of the US and the Japanese economy. Tight financial conditions mainly weighed on investment, while a further decline in real incomes owing to a faster rise in the cost of living, despite emergency fiscal support, negatively affected private consumption. On the other hand, aggregate supply has recovered as the pandemic-related disruptions in global value chains have unwound and input costs have declined, yet it remains high compared with pre-energy crisis levels. Among the largest economies, Germany was hit hardest in 2023 with a recession, while the United Kingdom and Italy also faced significant challenges, with GDP growth decelerating by more than 3 percentage points compared to 2022.

Emerging market and developing economies, unlike advanced ones, did not face a slowdown in 2023, and GDP growth is projected to remain unchanged at 4.1% in 2024. Macroeconomic developments, however, varied significantly across these economies. The Russian economy,

Table II.1 Key macroeconomic aggregates of the world economy

	Number of countries	Share in GDP[1] (%)	GDP (volume, annual percentage changes)			Inflation[2] (annual percentage changes)			Fiscal balance[3] (% of GDP)			Gross government debt (% of GDP)			Current account balance (% of GDP)		
			2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
World total	196	100.0	3.5	3.1	3.1	8.7	6.8	5.8	-	-	-	-	-	-	-	-	-
1. Advanced economies	41	41.7	2.6	1.6	1.5	7.3	4.6	2.6	-3.3	-5.2	-4.4	112.3	112.1	112.8	-0.4	0.2	0.3
United States		37.3	1.9	2.5	2.1	9.0	3.7	2.2	-4.0	-7.8	-7.0	119.8	120.9	123.8	-3.8	-3.1	-3.0
Japan		9.0	1.0	1.9	1.0	2.5	3.3	2.6	-5.8	-5.2	-4.4	245.6	244.8	244.8	1.8	3.4	3.8
United Kingdom		5.4	4.3	0.3	0.7	7.9	7.3	2.8	-4.6	-3.7	-2.9	100.4	97.4	96.5	-3.1	-2.1	-2.3
Euro area	20	28.9	3.4	0.5	0.6	8.4	5.4	2.3	-3.6	-3.2	-2.9	90.4	88.3	88.5	-0.7	1.8	3.2
2. Emerging market and developing economies	155	58.3	4.1	4.1	4.1	9.8	8.4	8.1	-5.0	-5.5	-5.4	64.2	68.6	68.6	1.5	0.5	0.4
China		31.6	3.0	5.2	4.7	1.9	0.4	1.0	-6.5	-6.6	-6.7	77.0	87.4	87.4	2.2	1.6	1.1
Russia		5.0	-1.2	3.1	1.8	13.8	5.9	7.2	-1.4	-3.7	-2.6	18.9	21.2	21.8	10.5	3.4	4.0

Sources: IMF, World Economic Outlook database and *Fiscal Monitor*, October 2023, and *World Economic Outlook Update*, January 2024, and OECD, *Economic Outlook, Interim Report*, February 2024. For the UK: European Commission, *European Economic Forecast, Autumn 2023*, November 2023, and OECD, *Economic Outlook, Interim Report,* February 2024. For the euro area: ECB, *ECB staff macroeconomic projections for the euro area*, March 2024.
Note: Estimates for 2023 and projections for 2024.
1 Percentage share in world GDP in 2022, based on purchasing power parities (PPP).
2 HICP for the euro area and the UK; CPI for the other countries. Annual averages.
3 General government.

despite the ongoing war, exited recession, while India's economy slowed. In contrast, China's economy accelerated to 5.2% from 3.0% in 2022 (see Table II.1). The acceleration of the Chinese economy is largely attributed to a series of expansionary economic policy measures aimed at compensating for the impact of the contraction in the real estate sector. An improvement in external demand is projected for 2024, but idiosyncratic factors across countries will affect each one of them differently.

The US economy fared much better in 2023, defying expectations of weak growth or even recession. Following a strong performance in the second half of 2022, GDP continued to grow by 2.2%, 2.1%, 4.9% and 3.2% in the first, second, third and fourth quarters of 2023, respectively (on an annualised basis). The stronger-than-expected growth of the US economy was driven by all domestic demand components, while net exports played a comparatively smaller role. In the labour market, employment levels fluctuated throughout 2023, but the 2023 unemployment rate stood at 3.6%, the same level as in 2022. Annual CPI inflation was 6.4% at the beginning of 2023, reached a trough (3.0%) in June and rose slightly thereafter as economic growth picked up. Disinflation in 2023 reflects the effective transmission of restrictive monetary policy, as well as falling energy prices. For this year and next year, the IMF and the OECD forecast a slowdown in GDP growth from 2.5% in 2023 to 2.1% in 2024 and 1.7% in 2025, owing to a gradual tightening of the fiscal stance, the lagged impact of past monetary policy tightening and a slackening labour market, all of which are expected to dent aggregate demand.

In the United Kingdom, the economy expanded modestly in 2023, with GDP growth plummeting to 0.3% from 4.3% in 2022. This development was driven by deteriorating external demand and the tightening of fiscal and monetary policies. Despite a decrease in inflation and a notable increase in nominal compensation per employee, real wages and household disposable income continued to shrink. In the fourth quarter of 2023, the unemployment rate stood at 3.8%

and returned to the level seen in the fourth quarter of 2022, despite having reached 4.3% during the year. Annual CPI inflation decreased significantly from a peak of 11.1% in October 2022 to 3.4% in February 2024. The decline in inflation was driven by monetary policy interventions, such as interest rate hikes, and fiscal policy measures, aimed at reducing the fiscal deficit. Furthermore, the labour market shows some signs of cooling and wage pressures are expected to ease, helping the disinflation process. The IMF estimates that GDP growth will only rebound modestly, reaching 0.6% in 2024 and 1.6% in 2025. The OECD forecast is slightly more optimistic for 2024, predicting a GDP growth rate of 0.7%, but more muted for 2025, with an estimated growth rate of 1.2%. The slight increase projected for 2024 will be driven by lower energy prices, while the stronger growth in 2025 is expected to result from significant disinflation.

In Japan, GDP growth rose to 1.9% in 2023, on the back of a positive contribution from net exports, which more than offset the slowdown in domestic demand. Inflation accelerated to 3.3% but remained relatively low (see Chart II.1), due to subdued domestic demand and government price controls for certain products. The current account surplus is estimated by the OECD to have widened to 3.4% of GDP, while the fiscal deficit narrowed to 5.2% of GDP. A mild slowdown in economic activity and a small decline in inflation are expected for 2024 and 2025.

According to the IMF, global inflation fell to 6.8% in 2023, from 8.7% in 2022, and is projected to decrease further to 5.8% in 2024. In advanced economies, inflation declined more rapidly (from 7.3% in 2022 to 4.6% in 2023) due to the forceful anti-inflation policies pursued and is expected to decrease further by 2 percentage points to 2.6% in 2024. The factors pushing down inflation differ as to their importance across economies, but overall – and to a greater extent in 2024, as expected – they will be associated with declining core inflation on the back of restrictive monetary policy, signs of labour market slackening and the gradual pass-through of lower international energy prices in 2023 to the domestic general price level. For economies with an inflation target, the IMF expects that headline inflation will be 0.6 percentage points above target for the median economy by the fourth quarter of 2024, down from an estimated gap of 1.7 percentage points at the end of 2023, while most of these economies will reach their targets by 2025.

Risks surrounding the global economic outlook appear to be balanced, as the risks of stagflation or recession are fading and the negative shocks to aggregate supply are gradually waning. On the upside, a faster-than-expected decline in underlying inflation and inflation expectations would allow monetary authorities to normalise their policy stance sooner. In China, a swift implementation of reforms and restructuring in the real estate market is likely to speed up recovery in the country's economy and hence in world trade and global exports. Artificial intelligence and innovation in production may have beneficial effects over the medium term on labour productivity and total factor productivity, particularly in advanced economies. On the other hand, there are downside risks to the global growth outlook. An escalation and contagion of geopolitical tensions in the Middle East and the Red Sea – through which a significant portion of world trade passes – might again push upwards international food, fuel and other commodity prices, as well as the cost of imported intermediate and final goods. The slowdown in China's economy is likely to be steeper than expected if the implementation of credible restructuring measures in its over-indebted real estate sector is delayed. At the same time, the pace of the necessary fiscal adjustment in several major economies should be gradual yet credible, so as to avert the risk of a more violent adjustment with higher interest rates on public debt in the event of abrupt movements in market risk sentiment.

Global trade and international commodity prices

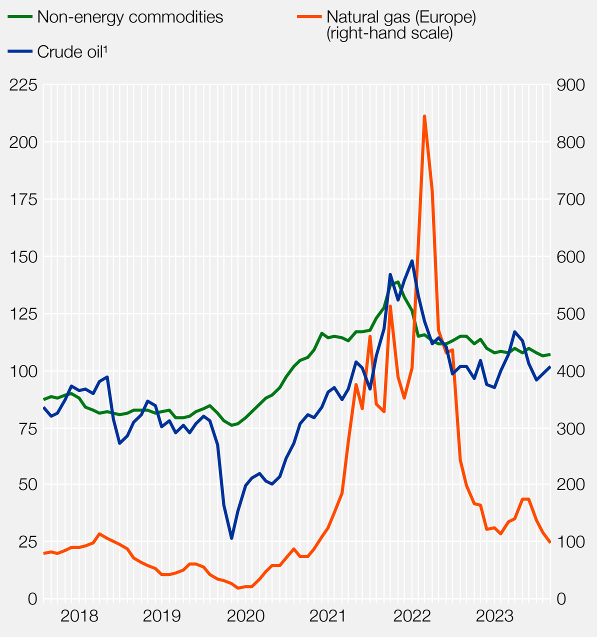
In 2023, the decline in global economic activity, trade restrictions, which remained above pre-pandemic levels, and geoeconomic fragmentation dampened international trade flows. The volume of global trade in goods and services is estimated to have grown by a mere 0.4% in 2023, compared with a strong increase of 5.2% in 2022. According to IMF estimates (January 2024), world trade is expected to grow by 3.3% in 2024, below its historical average growth rate. However, global supply chain disruptions worsened in early 2024, with significant delays in cargo deliveries due to shipping restrictions at the Suez Canal – which handles 11% of global trade flows – following attacks on cargo vessels in the Red Sea, as well as at the Panama Canal because of the drought. These incidents increased delivery times and freight insurance costs, reduced the supply of chartered capacity due to a rise in tonne-miles and drove freight rates upwards, increasing the downside risks to international trade.

In the first half of 2023, the global economic slowdown and a deterioration in the economic outlook for China weakened demand for oil products. As a result, the average international crude oil price for all types had fallen to nearly USD 73 per barrel by June 2023, marking the lowest average price since December 2021. On the other hand, the voluntary cuts in oil production by Saudi Arabia and Russia, coupled with the geopolitical tensions in the Middle East – where 35% of the world's exported oil is produced – triggered oil price spikes, which were partly offset by a rise in US oil production. Crude oil prices gradually declined from USD 92 per barrel in September to around USD 76 in December. For 2023 as a whole, the average international crude oil price stood at USD 80.7 per barrel, compared with USD 97.1 in 2022, down by 16.8% year-on-year. According to IMF estimates (January 2024), it is expected to fall to USD 79.1 per barrel in 2024, partly as a result of lower demand. In January-February 2024, average oil prices rebounded by 4.5% compared to December 2023, primarily due to global transport constraints. The risk of higher oil prices remains significant, reflecting mounting geopolitical uncertainty, additional voluntary reductions in oil production, increased demand from China and India, and the recent shipping disruptions.

In 2023, the average price of natural gas across all types fell by 63.4% year-on-year from the previous year's record highs, affected by reduced gas demand amid slower growth rates and increased gas production. Nevertheless, geopolitical instability, including the suspension of gas extraction from the Tamar field in Israel in the context of the Middle East conflict, temporarily pushed gas prices in October 2023 to their highest average monthly level since February 2023, while by December, prices had dropped by 62.2% year-on-year. Similarly, in 2023, gas prices in Europe fell by 67.5% year-on-year, despite facing upward pressures in the second half of the year due to problems with the Israel-Egypt energy connection and the Finnish-Estonian pipeline (see Chart II.2). Milder weather conditions, the acceleration of green transition and historically high energy inventory levels in Europe contributed to lower gas prices. At the same time, the nearly 22% drop in LNG prices in 2023 year-on-year was primarily due to increased exports from the United States and lower demand. In early 2024, supply fluctuations caused by disruptions at the Suez and Panama Canals kept LNG prices close to the high monthly average seen in December 2023, while subdued consumption of electricity and industrial goods in many advanced economies is expected to limit upward pressure on LNG prices.

Chart II.2 Global commodity prices (January 2018 - February 2024)

(market prices, monthly data, 2010=100)



Source: World Bank.
1 Average global price for three types of crude oil (UK Brent, West Texas Intermediate and Dubai).

In the course of 2023, metal prices declined from their January peaks, primarily driven by the crisis in the Chinese construction sector and reduced industrial activity in advanced economies. On an annual average basis, base metal prices fell by 11% compared to 2022. In December 2023, they were 9.1% lower than in December 2022. At the same time, international food prices fell by 9.2% year-on-year in 2023, mainly due to increases in production and inventories. However, shipping restrictions through the Panama Canal have affected international food transport, including cereal exports from the United States, leading to increased transportation costs. The extension of India's cereal export ban until March 2024 and the impact of extreme weather events on food production (e.g. in the United States) pose significant upward risks to food prices in the short term. In 2023, the average price of non-fuel commodities fell by 6.1% (in USD), reversing the 7.9% increase observed in 2022, and according to IMF estimates (January 2024), a further decline of 0.9% is projected for 2024.

Fiscal policy

In 2023, the fiscal stance was mildly expansionary in advanced economies, primarily due to strong fiscal expansion in the United States, while remaining neutral in emerging market and developing economies. According to the IMF (October 2023), the general government deficit is estimated to have widened to 5.2% of GDP in advanced economies and 5.5% of GDP in emerging market and developing economies. A tighter fiscal stance is anticipated for 2024 across many economies around the world, so as to replenish fiscal buffers, curb the rising public debt-to-GDP ratio and mitigate fiscal risks over the medium term. Lower growth and higher borrowing costs are expected to contribute to an increase in the general government gross debt-to-GDP ratio in most economies over the coming years. Although it has declined from the historic highs of 2020-2021, the debt-to-GDP ratio remains above pre-pandemic levels and is estimated to have reached 112% of GDP in advanced economies and 67% of GDP in emerging market and developing economies in 2023. In the medium term, fiscal policy in most economies aims to ensure debt sustainability and create fiscal space in order to support vulnerable groups and facilitate new investments, amid ongoing economic, climate and geopolitical challenges.

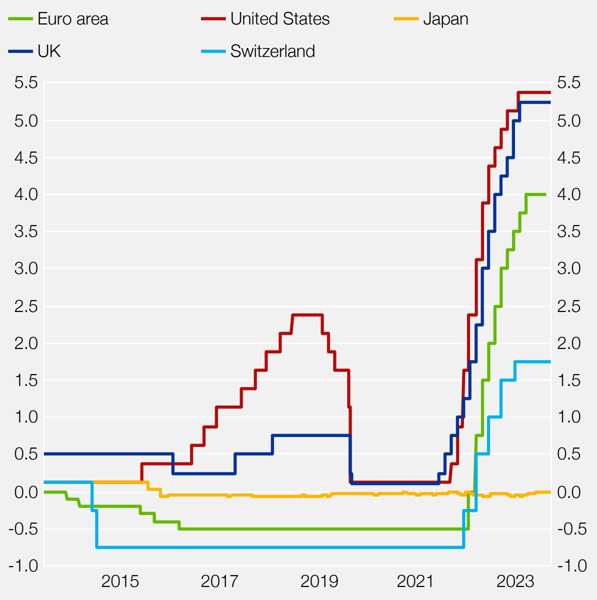
Monetary policy

Monetary policy tightening continued in 2023, albeit at a slower pace in most economies, due to a faster-than-expected fall in inflation and concerns about a further weakening in aggregate demand. In some emerging Latin American economies, where monetary tightening began earlier, and in China, where inflation remained close to zero, policy rates were cut, leading to a less synchronised global monetary policy cycle. Overall, central banks remain committed to achieving their inflation targets, closely monitoring several factors, including labour costs, corporate profit margins and inflation expectations. With borrowing costs and the levels of public and private debt remaining high in several economies, enhanced supervisory vigilance is crucial to safeguarding financial stability.

In 2023, the US Federal Reserve (Fed) raised its policy rate target range four times, each by 25 basis points (bps), bringing it to 5.25%-5.50%, as of July 2023 – the highest level in 23 years. After five consecutive increases of 25

Chart II.3 Central bank key interest rates (1 January 2014 - 15 March 2024)

(percentages per annum, daily data)



Sources: Euro area: European Central Bank, deposit facility rate. United States: Federal Reserve Bank, federal funds target rate. Japan: LSEG, key policy rate. UK: Bank of England, repo rate. Switzerland: Swiss National Bank, policy rate.

bps each, the Bank of England set its base rate at 5.25% in August. In the euro area, the ECB's Governing Council raised key interest rates six times last year, with two increases of 50 bps each in the first quarter and four of 25 bps each thereafter, bringing the deposit facility rate to 4.0% as of September 2023 (see Chart II.3). Moreover, in March 2023, the Eurosystem started to reduce its asset purchase programme (APP) portfolio, by gradually ceasing to reinvest the principal payments from maturing securities. In the last quarter of 2023 and the first quarter of 2024, all three central banks maintained their policy rates unchanged. The Bank of Japan continued its negative interest rate policy pursued since 2016 and its yield curve control policy, keeping the key policy rate unchanged at -0.1%. The Swiss National Bank raised its policy rate in 2023 from 1.00% to 1.50% in March and 1.75% in June, while in March 2024 it lowered it to 1.50%.

2.2 Euro area

In 2023, the euro area economy slowed amid tight financial conditions, declining consumer confidence and weakening domestic demand. At the same time, reduced external demand and cost competitiveness losses due to the appreciation of the euro weighed on exports of goods. Headline inflation declined significantly, largely driven by negative energy inflation, although this was partly offset by domestic inflationary pressures on food and services prices. On the other hand, the resilience of the labour market has bolstered real wages and economic growth. The rise in uncertainty related to the geopolitical turmoil in the Middle East in October 2023, along with disruptions in global supply chains due to navigation restrictions at the Panama and Suez Canals, add to the risk of higher global commodity prices and persisting inflationary pressures.

Economic activity in the euro area weakened, particularly in the second half of 2023, reflecting deteriorating economic sentiment, the impact of the energy crisis and high inflation on consumption, and a decline in investment caused by tight financial conditions. GDP growth, which was 0.5% in the third quarter of 2022 compared to the previous quarter, continued to be very low, averaging close to 0.0% until the fourth quarter of 2023. Euro area GDP only grew by 0.5% in 2023, compared with a strong increase of 3.4% in 2022. According to the March 2024 ECB staff macroeconomic projections, GDP growth is expected to remain muted at 0.6% in 2024, supported in part by increasing real incomes, a resilient labour market and a gradual recovery in foreign demand. Tight financial conditions and the withdrawal of fiscal support measures are likely to keep growth momentum subdued in the near term.

In 2023, domestic demand continued to be the main driver of growth in the euro area. In contrast to the resilience of spending on services, spending on goods contracted, leading to near stagnation of private consumption in the first half of 2023. Thereafter, improving consumer confidence and declining inflation supported consumer spending. However, households' savings remained high, partly due to elevated interest rates increasing the opportunity cost of consumption. In 2023, private consumption grew by 0.5%, compared with 4.2% in 2022. In 2024, further disinflation and nominal wage growth are expected to support real incomes and consumption, which is projected to rise by 1.2%. At the same time, the withdrawal of energy-related support measures and high inflation constrained public consumption growth to just 0.2% in 2023, down from 1.6% in 2022. In 2024, public consumption is estimated to increase by 1.3%, mainly due to higher spending on wages and pensions.

Investment in the euro area slowed significantly, due to tighter financial conditions and weak domestic demand. Uncertainty over geopolitical developments and global commodity prices weighed on business confidence, while delays in disbursing NextGenerationEU funding kept investment levels low. At the same time, the use of capital generated from profit margins for investment purposes decreased, as profit margins absorbed a portion of firms' rising wage costs. Housing investment declined in 2023 amid rising mortgage rates, tightening bank credit standards and persistently high construction costs. Total investment in the euro area increased by a mere 0.8% in 2023, compared to 2.8% in 2022. In 2024, it is expected to decline by 0.6%, mainly due to weak economic activity and tight financial conditions. The gradual recovery of domestic and external demand, as well as the green and digital transitions supported by NextGenerationEU funding, are expected to boost investment in the medium term.

Geopolitical tensions and increased trade restrictions, the global economic slowdown and the appreciation of the euro have weighed on euro area trade. In October 2023, the temporary rise in international energy prices due to tensions in the Middle East had a negligible impact on euro area terms of trade. In 2023, the euro area current account recorded a surplus of 1.8% of GDP, against a deficit of 0.6% of GDP in 2022, mainly reflecting the slowdown in domestic demand and the associated fall in imports. Euro area exports of goods and services contracted by 0.7% in 2023, compared to a 7.4% increase in 2022, while the contribution of net exports to GDP remained marginally positive, as import volumes declined faster than export volumes. In 2024, total exports are expected to grow by 1.0%, while weak domestic demand and a partial shift of domestic consumption towards services should dampen import growth in the near term. In early 2024, global value chain disruptions and the resulting rise in freight rates and freight insurance costs added to the downside risks to the outlook for export growth.

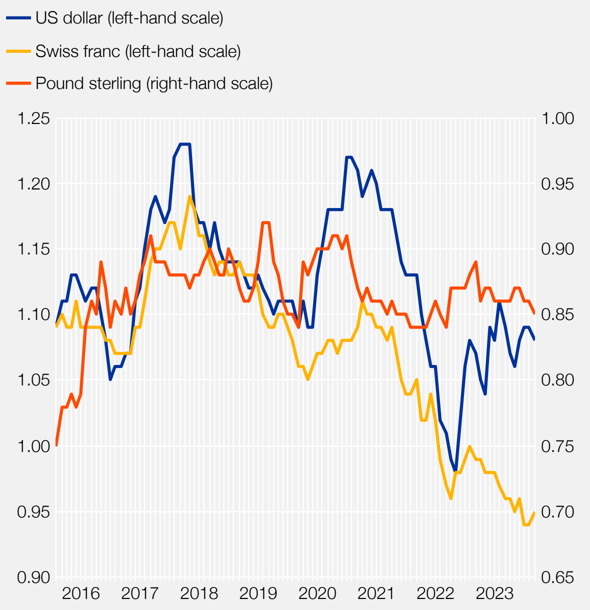
In 2023, the labour market in the euro area remained resilient, despite the significant economic slowdown and heightened uncertainty. Labour hoarding, amid labour shortages, kept excess labour demand high (see Box II.1). In the fourth quarter of 2023, headcount employment rose by 0.3% quarter-on-quarter (third quarter: 0.2%). In contrast, the job vacancy rate fell to 2.7% from 3.1% in the fourth quarter of 2022, indicating a slight deterioration in the labour market. In 2023, total employment increased by 1.4% (2022: 2.3%), while it is projected to grow modestly by 0.5% in 2024. Unemployment as a percentage of the labour force declined further, from 6.6% in January 2023 to 6.5% in December, remaining at historically low levels, and averaged 6.5% for the year as a whole, down from 6.7% in 2022. In January 2024 the euro area unemployment rate stood at 6.4%, while, according to the latest monthly data (January 2024), unemployment rates within the euro area ranged from 2.6% in Malta to 11.6% in Spain and 10.4% in Greece. For 2024, the unemployment rate is projected to rise slightly to 6.7%, amid subdued economic growth.

In 2023, inflation in the euro area declined, due to lower energy inflation – on the back of falling global commodity prices compared to 2022 – and weaker domestic demand, partly resulting from a significant rise in interest rates. At the same time, consumer prices were pushed downwards by the euro's appreciation, which reduced import prices, and upwards by labour market tightness, which led to higher nominal wages. Euro area inflation, as measured by the Harmonised Index of Consumer Prices (HICP), declined from 8.5% in January 2023 to 2.9% in December, averaging 5.4% in 2023, down from 8.4% in 2022. According to ECB staff projections (March 2024), inflation is expected to decline further to 2.3% in 2024, primarily driven by receding food inflation, while the withdrawal of energy-related support measures will exert temporary upward pressures on energy inflation. Over the first months of 2024, inflation continued its downward trend, reaching 2.8% in January and 2.6% in February, with the prices of food and services showing the highest annual percentage changes compared to the other components. Meanwhile, annual HICP inflation excluding energy and food averaged 4.9% in 2023, up from 3.9% in 2022, mainly due to more persistent services inflation and rising wage costs. In 2024, core inflation is anticipated to fall to 2.6%.

Credit growth in the euro area contracted visibly in 2023, primarily due to the tightening of the ECB's monetary policy. The growth rate of bank lending to non-financial corporations moderated to 0.4% in December 2023, down from 6.1% in January, while in October 2023 it turned negative (-0.3%) for the first time since July 2015. Similarly, the growth rate of loans to households slowed from 3.6% in January to 0.3% in December, reaching its lowest level since March 2015. According to the ECB's Bank Lending Survey for the fourth quarter of 2023, credit standards for firms and households (particularly for consumer loans) tightened further, reflecting the risk of rising NPLs as a result of the economic slowdown. The tightening of credit standards is expected to continue into the first quarter of 2024. Additionally, high lending rates, lower investment, declining consumer confidence and deteriorating housing market prospects have dampened credit demand. In the first quarter of 2024, demand for housing loans is expected to increase for the first time since the first quarter of 2022.

Chart II.4 US dollar, pound sterling and Swiss franc exchange rates vis-à-vis the euro (January 2016 - February 2024)

(monthly data, monthly averages)



Souce: ECB.

In 2023, fiscal policy in the euro area was restrictive, mainly due to the withdrawal of energy-related support measures and high inflation. According to the ECB staff macroeconomic projections (March 2024), the budget deficit for the euro area is expected to stand at 3.2% of GDP in 2023, against 3.6% of GDP in 2022, affected positively by a lower primary deficit and negatively by worse economic circumstances and higher interest rates. In 2024, it is projected to decline further to 2.9% of GDP. Similarly, government debt declined to around 88% of GDP in 2023 from 91% of GDP in 2022, reflecting a favourable interest rate-growth differential (snowball effect) and a lower budget deficit. In 2024, the government debt-to-GDP ratio is expected to remain close to its 2023 level.

The nominal effective exchange rate of the euro (against 41 trading partners) appreciated by an annual average of 4.9% in 2023, compared with a depreciation of 3.7% in 2022. The successive increases in the key ECB interest rates and the gradually diminishing interest rate differential vis-à-vis other central banks, the Fed in particular, contributed to this appreciation, although the slowdown of the euro area economy in the second half of 2023 led to a temporary weakening of the euro's exchange rate from the high levels recorded in July and August. From January to February 2024, the exchange rate of the euro at period averages marginally strengthened compared to December 2023. In bilateral terms, on a yearly average basis, the euro appreciated by 2.7% against the US dollar and by 2.0% against the pound sterling in 2023, reversing the depreciations of 11.0% and 0.8% against these currencies, respectively, in 2022. By contrast, in 2023 the euro depreciated by 3.3% relative to the Swiss franc, against a 7.1% depreciation in 2022 (see Chart II.4). These developments mainly reflect expectations of a reversal in central bank monetary policies, declining global energy prices, as well as increased demand for safe haven currencies. In the January-February 2024 period, the euro depreciated against the US dollar, the pound sterling and the Swiss franc, compared to December 2023 averages.

Risks to the euro area economic outlook remain tilted to the downside, although the likelihood of a "hard landing" in the economy has waned. A potential aggravation of geopolitical tensions in the Middle East and Ukraine, as well as the continuation of attacks in the Red Sea would heighten the risk of renewed global supply disruptions and increases in food and energy prices and in transport costs, leading to higher inflation and lower growth rates. Further geoeconomic fragmentation could also hamper cross-border flows of merchandise, adding to international commodity price volatility and resulting in a weaker-than-expected recovery in external demand. Moreover, a tightening of global financial conditions would affect domestic demand, public finances and financial stability. Extreme weather events are likely to dampen productivity and raise the fiscal cost, in an environment of high debt levels and borrowing costs, thus worsening the economic outlook. On the contrary, a greater-than-expected moderation in wage costs, owing to a faster labour market slackening, along with a significant compression of profit margins should bring inflation down sooner, while a more front-loaded implementation of policies for green and digital transitions should support investment.

Box II.1

LABOUR MARKET: RESILIENCE FACTORS AND IMPLICATIONS FOR INFLATION

The labour market in advanced economies has shown resilience to the successive pandemic and energy shocks, partly owing to fiscal measures supporting incomes and growth. During the post-pandemic period, unemployment declined relatively quickly to historic lows. At the same time, employment remained robust, despite the economic slowdown since 2021 amid increased uncertainty, high inflation and coordinated monetary policy tightening.

Labour shortages in many sectors after the pandemic can initially be interpreted as a result of the reopening of the economy. However, high job vacancy rates and historically low unemployment in the current context of subdued economic growth suggest a possible decline in labour market sensitivity (or an increased resilience thereof) to the economic cycle. This calls for a reconsideration of the factors behind the labour market tightness that can be observed in many advanced economies, as this may exert inflationary pressures through nominal wage increases. Large nominal wage increases that are not in line with average labour productivity growth reinforce the risk of a wage-price spiral, giving rise to the need to offset pressures through a tightening of monetary policy.

This box analyses the degree of labour market tightness in the US and the euro area. It also investigates the main factors on both the supply and the demand side of labour that can shed light on labour market resilience at the current economic juncture. Understanding these factors provides useful insights into the prospects of the labour market and wage costs. Finally, the implications of labour market tightness for inflation and the ensuing challenges for the conduct of monetary policy in advanced economies are discussed.

Indicators of labour market tightness

The labour market is tight when there is excess labour demand. To examine the degree of tightness, a set of indicators is used to capture the evolution of both labour supply and labour demand.

Typically, the main indicator of tightness used is unemployment as a percentage of the labour force, which should be assessed against more composite indicators, as it reacts with a lag to economic activity. In recent years, the responsiveness of the unemployment rate to the economic cycle has been inconsistent with the pre-pandemic historical unemployment-growth relationship in many advanced economies (Okun's law) (see Chart A). In 2020, unemployment's sensitivity to the economic cycle was affected by the different policies adopted to address the economic fallout of the pandemic. In the euro area, job retention schemes have contained the unemployment rate, which rose by only 0.3 percentage point on an annual basis in spite of the deep recession (-6.1%), while the prolongation of these schemes in the following years has partly contributed to the labour market tightness. By contrast, in the US, direct income support to the unemployed and the lower cost of temporary lay-offs –as compared to Europe– increased the unemployment rate by 4.4 percentage points in 2020 amid a smaller annual decline in GDP (-2.2%). In other words, the increase in the unemployment rate was significantly lower in the euro area and significantly higher in the US in relation to long-run elasticities.[1] During the post-pandemic rebo-

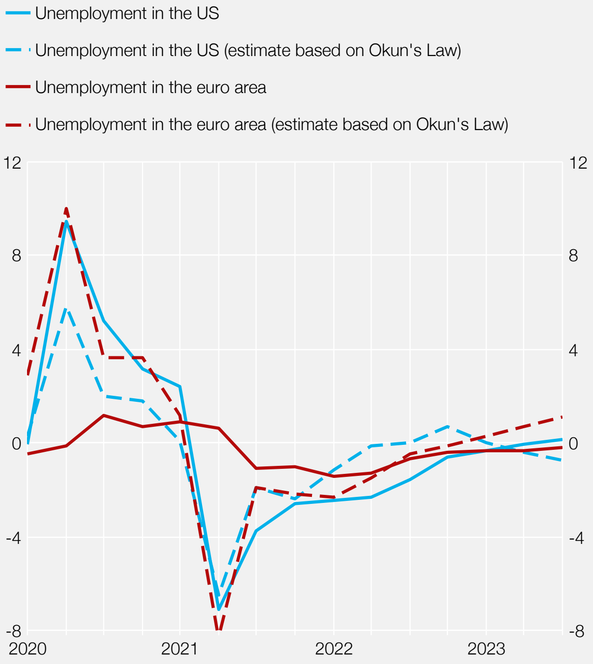
1 For 2020, the annual increase in the unemployment rate based on Okun's law is estimated at 2.7 and 2.5 percentage points in the euro area and the US, respectively. This follows a linear estimate of $y=0.34-0.39*X$ for the euro area and $y=1.08-0.63*X$ for the US, where y is the change in the unemployment rate and X is real GDP growth. The estimate covers the period from the first quarter of 2006 to the fourth quarter of 2019.

und of activity, the decline in the US unemployment rate was larger than expected by pre-pandemic norms. This may be explained by greater labour market flexibility and a dynamic recovery of employment reflecting high excess labour demand.[2] By contrast, in the euro area, changes in unemployment remained below estimated levels until 2022, partly as a result of the gradual adjustment of the labour market through the increase in hours worked, although the unemployment rate dropped to historical lows. In 2023, unemployment remained at a historical low of 6.5% in the euro area, despite monetary policy tightening and a gradual moderation in domestic demand, and at a post-1968 low of 3.7% in the US, confirming the resilience of the labour market in both economies.

A more composite indicator of labour market tightness is the vacancy-to-unemployment ratio.[3] In 2019, this indicator already stood at historically high levels both in the US and the euro area, reflecting increased tightness. Despite a significant fall in the first half of 2020 because of the impact of the pandemic, it remained higher than during the global financial crisis of 2009, pointing to a tightening of labour markets during the pandemic in comparison with other global crises. After the pandemic, the vacancy-to-unemployment ratio rebounded vigorously to record highs in both economies, mainly as a result of a rapid increase in job vacancies on the back of a strong economic recovery within a short period of time.

Chart A Unemployment rate in the United States and the euro area

(%, annual change, quarterly data, Q1 2020 - Q3 2023)



Sources: Federal Reserve Bank of St. Louis, Eurostat and Bank of Greece calculations.
Note: Unemployment based on Okun's law is derived from the linear estimate linking changes in the unemployment rate to changes in real GDP (see footnote 1 of the text).

The job vacancy rate also points to increased labour demand. After peaking in the first quarter of 2022, it gradually declined, although it remains historically high, suggesting a partial labour market easing, particularly in the US. In the euro area, the job vacancy rate in the services sector is higher than in the other sectors of the economy, signifying higher labour shortages in services.

Moreover, the negative relationship between job vacancies and the unemployment rate (Beveridge curve) is a key indicator of labour market efficiency. A decline in domestic demand is expected to increase the unemployment rate and reduce job vacancies. However, a simultaneous increase in the unemployment rate and job vacancies implies a deterioration in job matching efficiency, which is equivalent to a tightening of the labour market. In the euro area, from the first quarter of 2020 to the third quarter of 2023, the Beveridge curve shifted upwards and to the left compared to the pre-pandemic period (see Chart B). Job vacancies thus remained at high levels despite a gradual moderation of growth, while unemployment continued to fall.[4] Empirical studies on a possible structural change in the relationship between job vacancies and unemployment in Eu-

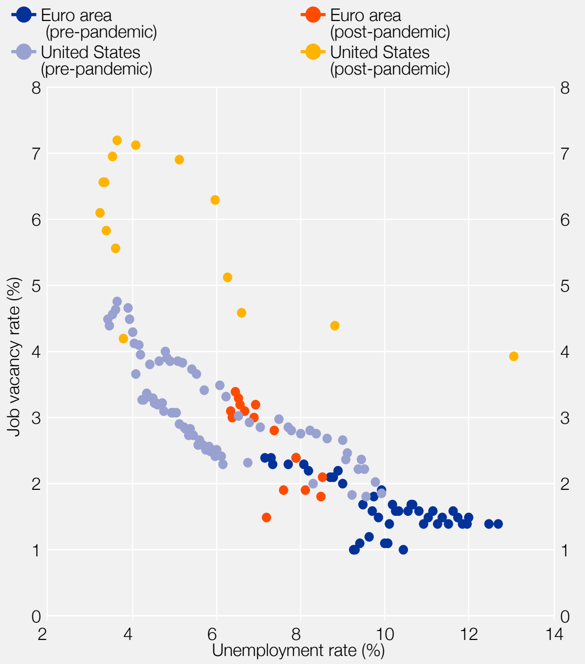
2 According to the Bank for International Settlements, an increase in the economic growth rate in advanced economies by 1 percentage point is estimated to correspond to a 0.3 percentage point decrease in the unemployment rate, compared with a 0.15 percentage point decrease in previous economic crises. See Doornik, B., D. Igan and E. Kharroubi (2023), "Labour markets: what explains the resilience?", *BIS Quarterly Review*, December.

3 An increase in this ratio implies that labour demand is stronger than the respective supply, therefore it indicates a tighter labour market.

4 The vacancy rate is a leading indicator of the labour market response to the economic cycle, while unemployment reacts with a lag. Therefore, an increase in labour demand, such as the post-pandemic reopening of the economies, will lead to an increase in job vacancies before the unemployment rate falls.

Chart B Beveridge curve in the United States and the euro area

(%, annual change, quarterly data, Q1 2020 - Q3 2023)



Sources: Federal Reserve Bank of St. Louis, Eurostat and Bank of Greece calculations.
Notes: The job vacancy rate is defined as job vacancies as a percentage of total jobs. The pre-pandemic period refers to the years 2001-2019 and the post-pandemic period to the years 2020-2023.

rope confirm that after the pandemic there was no simultaneous increase in job vacancies and the unemployment rate, i.e. the Beveridge curve has not shifted upwards and to the right, which would suggest a deterioration in job matching efficiency.[5] In the US, by contrast, the post-pandemic Beveridge curve has shifted upwards and to the right, reflecting a less efficient labour market.

As an alternative to the above indicators for the euro area, Eurostat's labour market slack indicator, which considers a wider definition of labour market underutilisation,[6] peaked in the first quarter of 2021 and has been declining since. This indicator had been standing below pre-pandemic levels already since the third quarter of 2021, pointing to tighter labour market conditions. This tightness seems to reflect for the most part a decline in the number of unemployed. It should be noted that, based on this indicator, in 2019 the euro area labour market was already tighter than in the previous decade, while the reduction of labour shortages during the pandemic was temporary.

At the same time, in the euro area the transition rate from employment to unemployment has remained stable after the pandemic, suggesting that the labour market is resilient despite a gradual slowdown in economic growth since 2022. However, the transition rate from unemployment to employment stands at historically high levels. Finally, additional indicators, such as the employment-to-working age population ratio, have exceeded pre-pandemic levels in many advanced economies.

Explanatory factors for labour supply and labour demand

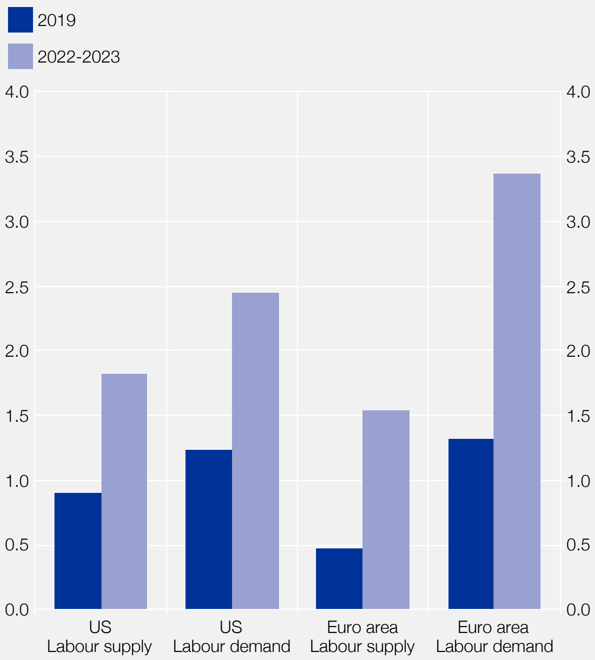
The tightness of the labour market in many advanced economies in recent years can be explained by a variety of factors contributing to lower labour supply, higher labour demand or a combination of the two. In the US and the euro area in particular, the labour demand-supply mismatches relate to the policies pursued in response to the pandemic, to the post-pandemic preferences as regards workers' participation in the labour force and to the structural features of these two labour markets. An overall conclusion is that the post-pandemic labour market tightness in the US and the euro area can be mainly attributed to a strong growth in labour demand. This has resulted in the gap between labour demand and labour supply (i.e. excess demand) doubling in the US and more than doubling in the euro area in 2022-2023 compared to 2019 (see Chart C).

Developments in labour supply are captured by the "labour force participation rate", calculated as the share of the employed and the unemployed (i.e. active persons in the labour market, or labour force) in the total working age population. Following a temporary decline in 2020 due to pandemic-related restrictions, the labour force participation rate recovered dynamically, more so in the euro area than in the US. In the third quarter of 2023, it reached a historic high of 65.7% in the euro area and of 68.9% in the US, 1.2 percentage points higher in the euro area and unchanged in the US compared with the respective 2019 pre-pandemic levels. The more significant drop in 2020 and the slower recovery of the US participation rate vis-à-vis the euro area thereafter are probably

5 Kiss, Á., M.C. Morandini, A. Turrini and A. Vandeplas (2022), "Slack & Tightness: Making Sense of Post COVID-19 Labour Market Developments in the EU", European Commission, European Economy Discussion Paper No. 178, December.
6 The indicator includes the unemployed, underemployed part-time workers that would like to work additional hours, persons available to work but not seeking a job and persons seeking a job but not immediately available to work.

Chart C Labour supply and demand in the United States and the euro area

(%, annual average change, period averages based on quarterly data)



Sources: US Bureau of Labor Statistics, Eurostat and Bank of Greece calculations.
Notes: Labour demand is calculated as the sum of the number of employed and job vacancies. Labour supply is calculated as the total labour force.

related to reduced migration, health issues, early retirement and the existence of alternative sources of income.[7] The "Great Resignation" in 2022 in the US proved to be temporary and without a significant impact on the labour force, as the workers involved did not withdraw from the labour market, but sought better-paid and more qualitative jobs in an environment of abundant employment opportunities ("Great Reshuffle").

Another determinant of the labour supply is hours worked. Contrary to the US, average hours worked per person in the euro area fell sharply during the pandemic, and have since remained lower than pre-pandemic levels, even though they have increased lately, and despite the full recovery of employment and total hours worked. According to the IMF, this post-pandemic phenomenon can be mainly explained by changes in workers' preferences —especially men's (with young children) and young people's— towards fewer working hours, in line with a longer-term trend, and is not expected to reverse.[8]

Developments in labour demand are reflected both in employment – which recovered strongly after the pandemic and remained resilient in the US and the euro area – and, as mentioned above, in the job vacancy rate, which remains elevated in both economies. The strong growth in labour demand can be attributed to a number of factors. First, labour hoarding is observed in businesses, particularly in the euro area, as suggested by a decline in the transition rate from employment to unemployment or by the combination of robust employment growth and lower hours worked per employee. Companies are reluctant to proceed with lay-offs because of the costs and the difficulty of rehiring, or finding suitable staff after massive lay-offs. Second, some of the new vacancies may refer to medium-term rather than immediate staff needs in the context of staff restructuring. Third, businesses are encouraged to post more job vacancies as the relevant costs are lower and online interviews have become easier.

Implications of labour market tightness for wages and inflation

Labour market tightness increases wage and thus inflationary pressures.[9] Since mid-2022, nominal wages in the US and the euro area have increased substantially to recoup losses in workers' purchasing power due to high inflation, but in conditions of low labour productivity. In the third quarter of 2023, annual nominal wage growth based on total compensation per employee stood at 3.4% in the US (around pre-pandemic rates) and at 5.2% in the euro area (higher than pre-pandemic rates). The decline in productivity was more evident in the euro area, partly owing to dif-

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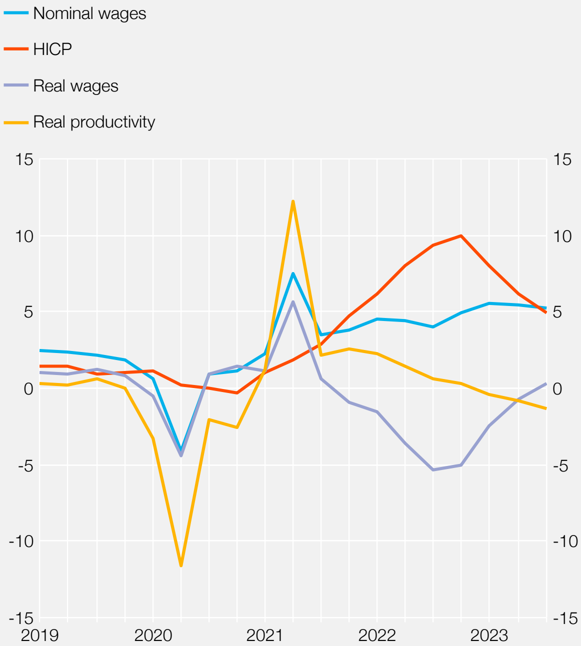
7 Generous income support policies during the pandemic, coupled with an increase in savings, delayed the return to work. In addition, rising household net wealth, driven by very high returns on assets such as equities and housing, weighed on the labour force participation rate. See Faria e Castro, M. and S. Jordan-Wood (2024), "Pandemic Labor Force Participation and Net Worth Fluctuations", *Federal Reserve Bank of St Louis Review, First Quarter 2024*, 106(1), 40-58; and Abraham, K. and L. Rendell (2023), "Where are the missing workers?", BPEA Conference Draft, Spring.

8 Astinova, D., R. Duval, N.-J.H. Hansen, B. Park, I. Shibata and F.G. Toscani (2024), "Dissecting the Decline in Average Hours Worked in Europe", IMF WP/24/2, January.

9 Studies suggest that labour market tightness is exacerbating the impact of exogenous supply-side shocks on inflation, such as the recent energy crisis, given the non-linear nature of the Phillips curve. See Ball, L.M., D. Leigh and P. Mishra (2022), "Understanding U.S. Inflation During the COVID Era", NBER Working Paper No. 30613; and Benigno, P. and G.B. Eggertsson (2023), "It's Baaack: The Surge in Inflation in the 2020s and the Return of the Non-Linear Phillips Curve", NBER Working Paper No. 31197.

Chart D Wages, labour productivity and inflation in the euro area

(%, annual change, Q1 2019 - Q3 2023)



Sources: ECB Data Portal, Eurostat and Bank of Greece calculations.
Notes: Wages in nominal terms refer to total compensation per employee. Productivity in real terms is the output (at constant prices) per employee.

ferent structural features of the labour market compared with the US,[10] but also to post-pandemic labour hoarding.

The increase in nominal wages reflects both a tight labour market and the reaction of wages to high inflation due to the Russia-Ukraine war, and the ensuing rise in energy prices and the cost of living. In the euro area and even more strongly in the US, there is a positive relationship between job vacancies (tightness indicator) and nominal wages.[11] Moreover, high job-to-job transition rates and high rates of voluntary resignations tend to be associated with faster nominal wage growth, especially in tight labour market conditions.[12] Finally, the sensitivity of nominal wages to inflation depends on cyclical and structural factors, such as the inflation level, expectations about inflation persistence, pension and wage indexation and the institutional framework for wage bargaining.[13]

Nominal wage growth was not commensurate with consumer price inflation, leading to lower real wages in the US and the euro area. For example, real wage growth in terms of total compensation per employee was negative in the US from the second quarter of 2021 to the first quarter of 2023 and in the euro area from the fourth quarter of 2021 to the second quarter of 2023. Since then, real wages have increased slightly in both economies, reflecting both lower nominal wage growth and lower inflation, trends which are expected to continue over the medium term (see Chart D for the euro area). The slowdown in nominal wage growth, paired with the expected labour productivity growth, should dampen unit labour cost growth in the coming years, mitigating wage pressures on inflation. At the same time, it is estimated that post-pandemic business profit margins should continue absorbing part of the wage growth, as it was the case in 2023, also mitigating second-round effects of wages on inflation. Therefore, in the absence of new external shocks, the risk of a wage-price spiral appears to remain less likely in the US and the euro area as economic activity slows down, inflation de-escalates and the labour market rebalances. However, a more persistent tight labour market in certain sectors of the economy, particularly in labour-intensive services, could keep services inflation high for longer and thereby delay the decline in core inflation.

Conclusions

The labour market in advanced economies remains resilient to restrictive economic policies and the economic slowdown. In particular, the labour market continues to be tight in the US and the euro area, as suggested by a number

10 For the most part, these include an ageing population and subdued labour force growth. Additional factors in explaining lower productivity in the euro area include reduced total factor productivity and the movement of workers towards less productive sectors. See Deutsche Bundesbank (2021), "The slowdown in euro area productivity growth", *Monthly Report*, January.

11 The shift of the Beveridge curve upwards and to the right in the US implies an increase in the bargaining power of workers, as there are more jobs available for the same number of unemployed workers, and therefore stronger upward wage pressure.

12 Daly, M.C., B. Hobjin and T.S. Wiles (2011), "Dissecting Aggregate Real Wage Fluctuations: Individual Wage Growth and the Composition Effect", Federal Reserve Bank of San Francisco Working Paper 2011-23; and Engbom, N. (2022), "Labor Market Fluidity and Human Capital Accumulation", NBER Working Paper No. 29698.

13 Also, studies show that non-pecuniary benefits, such as remote working and more flexible working hours, have partly substituted wage increases. See Doornik, B., D. Igan and E. Kharroubi (2023), "Labour markets: what explains the resilience?", *BIS Quarterly Review*, December; and Maestas, N., K.J. Mullen, D. Powell, T. von Wachter and J.B. Wenger (2023), "The Value of Working Conditions in the United States and Implications for the Structure of Wages", *American Economic Review*, 113(7).

of indicators, despite recent signs of easing. Post-pandemic tightness has mainly been associated with strong growth in labour demand, while labour supply has generally recovered to pre-pandemic levels in both economies.

The process of labour market rebalancing in the US and the euro area is affected by structural factors in the short and the medium term. The expected economic slowdown in the US and weak growth in the euro area should initially dampen demand for new jobs and then slightly push up the unemployment rate to levels more in line with historical norms. In the medium term, the implementation of new investment projects under the European recovery instrument NextGenerationEU or the US Inflation Reduction Act should support labour demand. At the same time, labour supply will be boosted by the funding of structural measures aiming to upskill human capital, in view of the increased demands associated with digital transformation, the diffusion of new technologies (e.g. artificial intelligence) and green growth. However, the potential reallocation of the labour force across sectors due to the impact of climate change on production, as well as the possibility of stricter restrictions on migration, may delay the process of rebalancing labour supply and labour demand.

The persistence of a tight labour market increases the risk of wage and inflation pressures and calls for increased vigilance on the part of monetary authorities. However, recent positive real wage growth in the US and the euro area, as inflation falls and short-term inflation expectations return to the 2% inflation target, suggests lower wage demands in the future. Moreover, given that monetary policy changes have a lagged impact on aggregate domestic demand and subsequently on the labour market,[14] the effects of past monetary policy tightening on the labour market are expected to become more visible in the coming quarters. In the absence of new external shocks, this projected labour market cooling will make monetary policy more effective in achieving price stability.

14 See Bauer, M.D. and E.T. Swanson (2023), "An Alternative Explanation for the 'Fed Information Effect', *American Economic Review*, 113(3), 664-700, suggesting that the maximum impact of a tightening of monetary policy on unemployment becomes apparent one year ahead; and D'Amico, S. and T.B. King (2023), "Past and Future Effects of the Recent Monetary Policy Tightening", *Chicago Fed Letter*, No. 483, September, demonstrating that most of the labour market effects of the current tightening cycle (more than half) have not yet been felt. Moreover, contrary to the conventional view that monetary policy only affects labour demand, a recent study suggests that tight monetary policy can increase labour supply as resignation rates fall and the unemployed intensify their efforts to find work. Excluding this effect, the overall decline in employment arising from a sudden tightening of monetary policy is twice as high (see Graves, S., C.K. Huckfeldt and E.T. Swanson (2023), "The Labor Demand and Labor Supply Channels of Monetary Policy", NBER Working Paper No. 31770, October).

Box II.2

EU AND EURO AREA POLICY RESPONSES

Geopolitical turmoil: Russia's war against Ukraine and the Israel-Hamas war

In 2023, the EU adopted three additional packages of economic and individual sanctions against Russia aimed at further weakening its economic and technological base in the ongoing war on Ukraine. These sanctions included, among other things, tighter restrictions on bilateral trade between the EU and Russia and an obligation for operators to contractually prohibit the re-export of certain categories of sensitive military or hi-tech goods to Russia. At the same time, they strengthened cooperation with third countries in order to prevent the circumvention of sanctions. Since the outbreak of the war, 13 packages of sanctions have been adopted, affecting more than 2,000 individuals and entities, while in 2023 it was decided to criminalise the breach of EU sanctions. Furthermore, in February 2023, the EU, in collaboration with its international partners, imposed price caps on Russian seaborne oil exports to third countries.

Meanwhile, military, humanitarian and financial support to Ukraine continued. The suspension of all import duties and quotas on Ukrainian exports to the EU was renewed until June 2024, while the temporary protection of Ukrainian refugees in the EU was extended until March 2025. By mid-March 2024, the EU and its Member States had channelled more than EUR 138 billion to Ukraine, at the same time committing themselves to offering sustained support for its recovery and reconstruction. Specifically, in February 2024, in the context of the revision of the EU multiannual financial framework for 2021-2027, it was decided to establish a single financial instrument (Ukraine Facility) to support the reconstruction and modernisation of Ukraine, with a budget of EUR 50 billion (of which, EUR 17 billion in grants and EUR 33 billion in loans).

The Hamas terrorist attack on Israel in October 2023 was unequivocally condemned by the EU, which stressed that Israel has the right to defend itself, in accordance with humanitarian and international law, against such brutal acts. In January 2024, the EU Council established a dedicated framework of restrictive measures specifically targeting individuals or entities that support violent actions carried out by Hamas and the Palestinian Islamic Jihad. The EU reiterated the importance of ensuring the protection of all civilians at all times and the unhindered flow of humanitarian aid to Gaza, while it remained committed to achieving a lasting and sustainable peace based on the two-state solution.

EU enlargement policy
In December 2023, the European Council decided to open accession negotiations with Ukraine and Moldova and grant candidate status to Georgia. It also stated that negotiations with Bosnia and Herzegovina would begin once the necessary degree of compliance with the membership criteria was achieved, while it called upon the Republic of North Macedonia to step up the required constitutional changes so that the opening phase of accession negotiations would be completed (see also Box II.3).

Energy policy
In 2023, the emergency measures that had been adopted following the outbreak of the Russia-Ukraine war were extended by 1-2 years, with a view to strengthening natural gas supply security in Europe, accelerating the development of renewable energy sources (RES) and protecting EU citizens from excessively high energy prices (natural gas market correction mechanism). In parallel, as part of the "Fit for 55" package, it was decided: a) to raise the share of renewable energy in the EU's overall energy consumption to 42.5% by 2030, with an additional 2.5% indicative top up to reach the target of 45% of renewables in the EU energy mix by 2030; and b) to adopt a hydrogen and decarbonised gas market package. The reform of the electricity market, which was agreed by the Council of the EU and the European Parliament in December 2023, aims to make electricity prices less dependent on the volatile prices of fossil fuels and shield consumers from price spikes. This decision complements the Regulation on protection against market manipulation in the wholesale energy market through reinforced market surveillance and increased market transparency, which was adopted in November 2023.

Strategic autonomy and industrial policy
In the context of the Green Deal Industrial Plan,[1] in March 2023 the European Commission proposed the Net-Zero Industry Act and the Critical Raw Materials Act to enhance the competitiveness of the European green industry and support the swift transition to climate neutrality. In November 2023, the EU legislators reached a provisional agreement on the Critical Raw Materials Act (CRMA), which covers 34 such materials, the demand for which is expected to increase exponentially in the coming years. The new rules strengthen the EU's strategic autonomy by diversifying the supply of critical raw materials and promote circular economy. The CRMA establishes three objectives for the EU's annual consumption of raw materials: at least 10% from local extraction; at least 40% to be processed in the EU; and at least 25% to come from domestic recycled materials by 2030. The Net-Zero Industry Act, which was also provisionally agreed upon in February 2024, aims to promote green strategic technologies in industrial production through faster project authorisation, the creation of net-zero industry clusters and the introduction of new non-price criteria for net-zero technologies in public procurement procedures and renewable energy auctions. Finally, in July 2023, a regulation to strengthen Europe's semiconductor ecosystem (the Chips Act) was adopted. The programme should mobilise EUR 43 billion in public and private investment, with the objective of doubling the EU's global market share in semiconductors, from 10% now to at least 20% by 2030.

The EU a pioneer in artificial intelligence (AI) legislation
In December 2023, the AI Act was provisionally agreed upon, the first-ever comprehensive legal framework on AI worldwide. Its principal objective is to regulate the use of AI based on the risk it poses to society (e.g. violations

1 European Commission, Green Deal Industrial Plan.

of fundamental rights or security), i.e. the greater the risk, the stricter the rules. Some AI practices pose unacceptable risks and will therefore be prohibited in the EU, while fines are laid down for businesses breaking the law.

New fiscal rules in the context of the EU's economic governance review

The package of measures that was agreed by the Council of the EU in December 2023 focuses on fiscal issues and is based on the European Commission's initial proposal on the new fiscal rules that was published in April 2023. It includes three proposals: a) a new regulation on the effective coordination of economic policies and multilateral budgetary surveillance (preventive arm of the Stability and Growth Pact-SGP); b) amendments to the current regulation on speeding up and clarifying the implementation of the Excessive Deficit Procedure (corrective arm of the SGP); and c) amendments to the EU Council's Directive on requirements for budgetary frameworks of the Member States. In February 2024, the Council of the EU and the European Parliament reached a provisional political agreement concerning the regulation on the preventive arm, while the regulation on the corrective arm and the aforementioned directive required only a consultation with the European Parliament (for more details, see Chapter V, Special feature).

Banking Union

In April 2023, the European Commission published a legislative proposal in order to strengthen the EU bank crisis management and deposit insurance (CMDI) framework, with a focus on medium-sized and smaller banks. The proposal will enable authorities to organise an orderly market exit for failing banks of any size and business model, using a wide range of instruments. In particular, it will facilitate the use of industry-funded safety nets (such as deposit insurance and resolution fund schemes) to enable authorities to shield depositors in bank crises, such as through the transfer from an ailing bank to a healthy one. This use of safety nets will complement banks' internal loss absorption capacity, which remains the first line of defence. The coverage level of EUR 100,000 per depositor and per bank remains applicable for all eligible EU depositors, but the proposal extends depositor protection to public entities. Overall, the proposal under discussion seeks to further preserve financial stability, protect taxpayers and depositors, and support the real economy and its competitiveness.[2]

In June 2023, the Council of the EU and the European Parliament agreed on amendments to the capital requirements regulation and directive with a view to increasing EU banks' resilience and strengthening their supervision and risk management. This reform completes the transposition of the Basel III international agreements to EU law.

In December 2023, the Council of the EU and the European Parliament reached a provisional agreement on the Daisy Chains proposal. This proposal amends the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism Regulation (SRMR), with an aim to resolve issues regarding the accounting treatment of the "internal MREL", namely when an MREL (minimum requirements for own funds and eligible liabilities) instrument is issued by a subsidiary within a banking group and is directly or indirectly subscribed by its parent company. Specifically, the proposal lays down the conditions under which the resolution authorities will allow banking groups to comply with MREL on a consolidated basis. In these cases, banking groups' intermediary subsidiaries will not be obliged to deduct from their own funds their individual holdings of internal MREL, thus preventing disproportionate effects on banking groups' structure. Furthermore, entities within a banking group earmarked for liquidation, and therefore not subject to resolution action, are, as a rule, exempt from MREL requirements.

Capital Markets Union

In November 2023, the Council of the EU adopted a regulation that updates the rules on Central Securities Depositories (CSDs). The new rules reduce compliance costs and regulatory burdens for CSDs and improve their ability to offer services across borders, by simplifying the passporting regime while at the same time strengthening cooperation among supervisors. The new regulation also improves settlement efficiency (i.e. the rate at which securities transactions settle on the intended date), as it seeks to prevent cases of settlement failure due to lack of cash or securities. It sets out the preconditions for applying so-called mandatory buy-ins, i.e. when a transaction has failed to settle at the end of an agreed period and the buyer of the securities is forced to repurchase them

2 See Bank of Greece, *Financial Stability Review*, Box III.3 "The European Commission's proposal to adjust and further strengthen the EU's existing bank crisis management and deposit insurance (CMDI) framework", May 2023.

elsewhere, and clarifies that such buy-ins will only be introduced as a measure of last resort, where the rate of settlement fails in the EU is not improving and is presenting a threat to financial stability.

In December 2023, the EU legislators reached a provisional agreement on amendments to the "Solvency II" Directive and the adoption of an insurance recovery and resolution directive (IRRD). The new rules will boost the role of the insurance and reinsurance sector in providing long-term private funding to European businesses, while at the same time ensuring that insurers and relevant authorities in the EU are better prepared in cases of significant financial distress, so that they can intervene sufficiently early and quickly in a crisis, including across borders.

In March 2024, the Eurogroup identified three priority areas for action where measures are necessary to improve the functioning of European capital markets and called upon the European Commission to submit proposals as soon as possible in the next European legislative term 2024-2029. The first priority area concerns the architecture of the capital markets and the development of a competitive, streamlined and smart regulatory system, allowing funds to be better channelled into innovative EU businesses, with greater liquidity, risk taking and risk sharing. The second priority area aims at ensuring better access to private funding for EU businesses (in particular SMEs) to invest, innovate and grow in the EU. The third priority area focuses on citizens/retail investors and aims at creating better opportunities for EU citizens to accumulate wealth and improve their financial security.[3]

New rules for markets in crypto-assets

In May 2023, the EU Council adopted a regulation on markets in crypto-assets, setting an EU-level regulatory framework for crypto-asset issuers and crypto-asset service providers for the first time. Specifically, rules are introduced on the authorisation and prudential supervision of crypto-asset issuers and crypto-asset service providers, including requirements for transparency and information of interested parties before the tokens are offered to the public or admitted to trading on a trading platform, the operation and governance of crypto-asset issuers and crypto-asset service providers, as well as for addressing market manipulation. The crypto-assets included in the scope of the regulation are e-money tokens, asset-referenced tokens and stablecoins; also covered are service providers, such as trading venues and wallets where crypto-assets are held. Crypto-asset service providers will need to be authorised in order to operate in the EU and will be subject to strict rules. The aim is to protect investors and safeguard financial stability, while fostering innovation and the role of the EU as a standard-setting body for digital policy.[4]

Establishment of a European Authority and application of stricter rules on Anti-Money Laundering

In December 2023, the EU legislators reached a provisional agreement on the establishment of a new Anti-Money Laundering and Countering the Financing of Terrorism Authority (AMLA). The AMLA will have direct and indirect supervisory powers over high-risk obliged entities in the financial sector (initially up to 40 selected obliged entities), as well as the power to impose financial sanctions. As concerns the non-financial sector, it will support and coordinate financial intelligence units.

In January 2024, EU legislators agreed on an anti-money laundering regulation on the obligations of the private sector and an anti-money laundering directive to improve anti-money laundering mechanisms at a national level. The regulation, among other things, harmonises and specifies for the first time all rules against money laundering in the EU, covering potential gaps in their application. It also expands the list of obliged entities to new bodies, forces all crypto-asset service providers (CASPs) to conduct due diligence on their customers and requires enhanced due diligence in business relationships involving high-risk third countries and in business relationships with very wealthy individuals, while setting an EU-wide maximum limit of EUR 10,000 for cash payments.

Regulation on European Green Bonds

In October 2023, the Council of the EU adopted a regulation creating a European green bond standard. Under the regulation, entities acting as external reviewers for European green bonds must be registered with and su-

3 For details, see Statement of the Eurogroup in inclusive format on the future of Capital Markets Union, 11.3.2024.
4 See Bank of Greece, *Financial Stability Review*, Special Feature I, "Crypto-assets: Critical ecosystem events, risks to financial stability, and regulatory developments", November 2023.

pervised by the European Securities and Markets Authority (ESMA). It also introduces rules on the supervision of European green bond issuers. All proceeds from these bonds must be invested in sustainable economic activities covered by the EU taxonomy. For those sectors not yet covered by the EU taxonomy, issuers may invest up to 15% of the proceeds to other than green investments under specific terms.

3 THE ECONOMIES OF SOUTH-EASTERN EUROPE

All negative external factors, including the ongoing Russia-Ukraine war, the conflict in the Middle East, high inflation (mainly of food and energy) and the anti-inflationary monetary policies pursued by central banks in the region, contributed to a slowdown in South-Eastern European (SEE)[2] economies in 2023. For 2024, a mixed outlook is expected, with some economies slowing further and others recovering.

In the Western Balkan countries,[3] growth continues to be driven by domestic demand, primarily through private consumption, while industrial production (except in Montenegro and Serbia at the end of the year) and goods exports remain subdued, dampened by weak external demand from EU countries. By contrast, exports of services (particularly tourism) have largely offset this trend, especially in Albania and Montenegro. For both 2023 and 2024, growth rates are expected to be relatively moderate, averaging 3%, i.e. one percentage point lower than in 2022 and significantly below 8.3% that was recorded in 2021, the year of post-pandemic economic recovery (see Table II.2).

Table II.2 Macroeconomic and banking indicators in SEE countries

	GDP (volume, annual percentage changes)			Inflation (averages, annual percentage changes)			Current account balance (% of GDP)			Fiscal balance (% of GDP)			Credit growth (annual percentage changes)			Capital adequacy ratio (%)		NPLs (%)	
	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2021	2022	2023[3]	2022	2023[3]	2022	2023[3]
Albania	4.8	3.6	3.2	6.7	4.6	3.5	-6.0	-4.9	-5.1	-3.7	-2.2	-2.2	6.9	11.2	1.0	16.9	19.6	5.0	5.2
Bosnia and Herzegovina	3.9	2.2	2.8	14.0	6.5	3.5	-4.6	-4.5	-4.0	-0.4	-0.5	-1.5	1.7	4.2	5.0	19.6	19.5	4.5	4.1
Bulgaria[1]	3.9	2.0	1.9	13.0	8.6	3.4	-1.4	0.7	-0.3	-2.9	-3.0	-3.0	11.9	12.0		20.5	21.4	3.2	2.9
Montenegro	6.1	4.9	3.2	11.9	9.0	5.7	-13.3	-12.6	-12.3	-5.2	-2.3	-3.4	6.6	6.1	10.0	19.2	20.1	5.7	4.8
Republic of North Macedonia	2.1	1.8	2.5	14.2	9.5	4.1	-5.9	-3.5	-3.6	-4.4	-4.8	-3.8	5.8	9.6	5.9	17.7	18.2	2.9	2.7
Romania[1]	4.1	1.8	2.9	12.0	9.7	5.8	-9.3	-7.3	-7.1	-6.3	-6.3	-5.3	16.1	12.8		21.8	22.8	2.7	2.6
Serbia	2.5	2.0	3.00	11.9	12.7	5.5	-6.9	-3.3	-3.5	-3.1	-2.8	-2.2	9.1	10.9	-0.4	20.2	22.3	3.0	3.2
Türkiye	5.5	4.2	3.1	72.3	53.9	49.3	-5.4	-4.1	-3.0	-1.1	-6.0	-6.0	22.7	56.0	55.7	17.1	18.5	2.1	1.5
Average	**4.1**	**2.9**	**2.8**	**12.0**	**8.7**	**4.5**	**-6.6**	**-4.9**	**-4.9**	**-3.4**	**-3.5**	**-3.4**	**8.3**	**9.5**	**4.3**	**19.1**	**20.3**	**3.6**	**3.4**

Sources: European Commission, *European Economic Forecast, Winter 2024*, February 2024, and *EU Candidate Countries' & Potential Candidates' Economic Quarterly (CCEQ), 1st Quarter 2024*, January 2024, World Bank, *Global Economic Prospects*, January 2024, OECD, *Economic Outlook, Interim Report*, February 2024, and national central banks.
Note: Estimates for 2023 and projections for 2024.
1 Credit growth for the private sector in Bulgaria and Romania, total credit growth for the other countries.
2 Inflation and credit growth averages exclude Türkiye (as an outlier).
3 Latest available month.

2 The economies examined are Albania, Bosnia and Herzegovina, Bulgaria, the Republic of North Macedonia, Montenegro, Romania, Serbia and Türkiye.

3 The economies of Albania, Bosnia and Herzegovina, the Republic of North Macedonia, Montenegro and Serbia.

Regarding the accession process of the Western Balkan countries to the EU, the European Commission has expressed its increased interest in enlargement, which has become a geostrategic priority following the unprecedented speed with which candidate status was granted to Ukraine and Moldova in 2022 and to Georgia (subject to conditionality) in December 2023. At the same time, the European Commission: (a) aims to open the first negotiation cluster for Albania as soon as possible; (b) stands ready to conclude the opening phase of the accession negotiations with the Republic of North Macedonia, provided that the country accelerates the implementation of necessary reforms; (c) urges Serbia to fulfil the requirements outlined in Chapters 23 and 24 (rule of law); (d) proposes the opening of negotiations with Bosnia and Herzegovina no later than March 2024; and (e) recommends that Montenegro swiftly advance in line with its EU integration strategy (see Box II.3). In the Western Balkans, inflation continued its downward trend, averaging 7.2% in the third quarter, down from 9% in the second quarter and 12.8% in the first quarter. Except for the Bank of Albania, which raised its policy rate by 25 basis points to 3.25% in November, the other central banks remained cautious, keeping their interest rates stable (at 6.3% in the Republic of North Macedonia and 6.5% in Serbia).

In Bulgaria, annual growth slowed over the course of the year, reaching 1.5% in the third quarter, down from 1.9% in the second quarter and 2.2% in the first quarter. Although economic indicators for the fourth quarter of 2023 show some acceleration in growth, the overall annual rate is estimated to have declined to 2.0%, from 3.9% in 2022. Private consumption and net exports were the main drivers of growth. The dynamics in net exports was shaped by a sharper decline in imports of goods and services (-6.3%) compared to exports (-1.5%).[4] GDP growth is projected to remain stable (1.9%) in 2024, with domestic demand maintaining last year's levels. An improvement in export performance and increased absorption of investment resources under the National Recovery and Resilience Plan are expected, which will significantly boost both public and private investment. Despite stronger nominal wages sustaining inflationary pressures, inflation in 2023 decreased to 8.6%, from 13.0% in 2022, mainly due to lower energy prices and weaker external demand. According to recent remarks by the Bulgarian Central Bank Governor,[5] credit expansion to households may need to be contained further, based on first-quarter results, as part of the country's efforts to curb inflation and meet the final criterion for joining the euro area in 2025.

In Romania, real GDP growth slowed to 1.8% in 2023 from 4.1% in 2022, mostly on account of weak domestic demand, persistently high inflation and subdued foreign demand. However, fixed capital formation picked up (by 11.1% in the first half of 2023, compared with 2.2% in the first half of 2022), mainly due to effective absorption of EU investment funds. Of course, the absorption rate of EU funds in 2024-2025 will also depend significantly on the country's ability to curb the budget deficit, which is estimated to reach 6.3% of GDP in 2023 for the second year in a row. The EU has warned the Romanian government to implement deficit-reducing measures, otherwise some of the European financing flows risk being put on hold. The fiscal package[6] adopted by the Romanian government in autumn is expected to reduce the deficit, by 0.6% per year for five years. In 2024, the deficit is projected to decrease by one percentage point, reaching 5.3% of GDP. Average annual inflation only declined slightly to 9.7% in 2023,

4 The decline in exports is attributed to (a) a contraction in external demand (primarily from Western Europe); (b) a ban (from 5 February 2023) on exports of Russian oil and oil products to countries other than Ukraine; and (c) extensive repair works carried out during 2023 in large manufacturing and electricity companies.

5 Remarks by Bulgarian Central Bank Governor Dimitar Radev on the Bulgarian National Radio (28 January 2024). The central bank raised minimum reserve requirements for banks from 5% to 10% in May and then to 12% in July. Bulgaria's inflation rate is 1.5 percentage points higher than the average of the three EU economies with the lowest inflation rates, and closing this gap is the only condition Bulgaria needs to meet in order to be considered "ready for the euro area".

6 A tax of 1% on business turnover, an additional tax on real estate and luxury cars, and the elimination of tax reliefs and benefits for different population groups.

from 12.0% in 2022. Although continuing its downward trend into the last quarter of the year, inflation remains high, mainly owing to services and food inflation. Committed to its inflation target of around 2.5% (±1 percentage point), in January 2024 the central bank kept the reserve ratios on commercial banks' liabilities both in new leu (RON) and foreign currency stable and left the policy rate unchanged at 7%.

The growth rate of the Turkish economy accelerated to 5.9% in the third quarter of 2023 (from 3.9% in the second quarter), driven by increases in industrial production (4.9% from -0.3%), in construction activity (the index rose from 90.7 to 104.4) and in investment (14.7% from 5.5%). For 2023 as a whole, GDP growth is estimated at 4.2%, down from 5.5% in 2022. Domestic demand (private and government consumption, and investment), despite some slowdown, has been the key propeller of a still robust growth rate. For 2024, GDP growth is projected to moderate further to 3%. This forecast is also supported by several economic sentiment indicators, as recorded in the fourth quarter of 2023. Most importantly, however, it reflects the economy's gradual adjustment to the impacts of the monetary policy tightening initiated by the central bank's administration[7] after the election in May 2023, which brought the policy rate to 50% on 21 March 2024, compared with 8.5% in May 2023. The rise in interest rates was accompanied by a series of restrictive interventions in the supply of bank credit to firms and households. The effects of this policy will become more felt in 2024 and 2025, once the economy has fully adjusted to the new financial conditions (given the lagged transmission of monetary policy). Hyperinflationary pressures have persisted in the Turkish economy since 2021, although annual inflation decreased to 53.9% in 2023 from 72.3% in 2022. Several factors, most notably the strong depreciation of the Turkish lira (which weakened by 57% against the US dollar year-on-year), contributed to a resurgence of inflationary pressures. Continued upward pressure on food prices and increases in indirect taxes following the July 2023 budget revision also worked in the same direction. Despite ongoing central bank interventions and drastic policy rate hikes, the real interest rate remains strongly negative. For 2024, a faster pace of adjustment, a decline in domestic demand, a slower depreciation of the Turkish lira and a moderation in the price level are expected, with inflation estimated at 50%.

Current account deficits, as a percentage of GDP, showed a strong correction trend in all countries under review in 2023 and were estimated at 4.9% on average, down from 6.6% in 2022. A stabilisation at this level is projected for 2024 (see Table II.2). This outcome was largely driven by the tourism sector, as well as shrinking trade deficits, which were supported by relative declines in global energy and other commodity prices. In most countries, foreign direct investment, despite a downward trend, continues to cover their trade deficits on the back of higher tourism receipts.

Moreover, fiscal deficits, as a percentage of GDP, in the SEE countries under review appear to be stabilising and/or narrowing, as suggested by data for the year to November. In Türkiye however, the sizeable fiscal measures necessitated by the February 2023 earthquakes are set to sustain the budget deficit at the high level of 6% for at least this year.

Finally, the banking systems of the countries in the region remained strong in 2023, with capital adequacy ratios in most of them improving slightly to an average of 19%, while NPL ratios have remained stable at low levels, averaging 3.4%.

7 Former deputy governor and economist Fatih Karahan has been appointed as Türkiye's new central bank governor, following the resignation of Hafize Gaye Erkan for personal reasons on 2 February 2024. According to his first remarks, the "orthodox" anti-inflation policy launched by his predecessor in June 2023 will continue and, if necessary, further intensify (see CBRT, *Press Release on the Appointment of CBRT Governor*, 4.2.2024). The new central bank administration's commitment to tackling hyperinflation is confirmed by its recent decision (21 March 2024) to raise the policy rate by an additional 500 basis points, from 45% to 50%.

Box II.3

EU ENLARGEMENT: DEVELOPMENTS AND CHALLENGES FROM THE POTENTIAL ACCESSION OF UKRAINE

In 2013, Croatia became the 28th member of the European Union. Since then and until 2022 the EU's enlargement policy[1] made moderate progress, although the European Council continuously confirmed the European perspective of each candidate Member State and EU partner (currently: Albania, Bosnia and Herzegovina, Kosovo, the Republic of North Macedonia, Montenegro, Serbia, Türkiye, Ukraine, Georgia and Moldova). Some of the factors[2] that did not contribute to the acceleration of the process are: (i) the EU's lack of commitment, as this issue was not a key priority due to the successive crises which had to be addressed; (ii) bilateral disagreements between some Member States with candidate countries (e.g. Bulgaria with the Republic of North Macedonia); and (iii) the emphasis of many EU Member States on strengthening their bilateral relations with Russia, at least until 2022, for economic or foreign policy reasons.[3]

After 2022 and Russia's invasion of Ukraine, the EU is facing different challenges and appears to be changing its strategic priorities, focusing again on the enlargement process, as it recognises that further steps are necessary to achieve a geopolitically solid Union, able to prevent any form of aggression or threat. This box attempts to outline how enlargement priorities change following the acceleration of the process with the opening of accession negotiations with Ukraine and Moldova and the granting of candidate status to Georgia, as well as to summarise the potential challenges of Ukraine's accession, thus reaching certain conclusions.

The priorities of EU enlargement following Russia's invasion of Ukraine and the level of preparation of candidate countries

At successive meetings in 2023 and early 2024,[4] the EU leaders set out the future priorities of the EU's strategic agenda, which aim at defending democratic values and achieving a lasting peace for the benefit of citizens. EU enlargement, among other things, has now become a strategic priority for the EU and a geostrategic investment in stability and prosperity.[5] In view of the prospect of an even more enlarged Union, the adoption of reforms is necessary not only by the future Member States (as the gap with the EU persists),[6] but also by the EU itself in terms of its institutional architecture in such a way as to maintain a balance of power within the EU.

The prospect of a more enlarged Union concerns – in addition to the Western Balkans[7] and Türkiye – Ukraine, Moldova and Georgia. The European Council granted Ukraine and Moldova candidate status in June 2022, with unprecedented speed, and in December 2023 Georgia was granted candidate status as well. The first two had applied for membership as late as the first quarter of 2022 and Georgia in March 2022, respectively.

The table below shows the progress of each candidate country in the EU accession process (i.e. level of preparation for accession by cluster and the progress made by each country in 2023). In particular, it reflects the results, both the qualitative (by cluster) and the quantitative (indicative relevant indices) ones, of the screening report carried out for each country separately. Indicatively, it is mentioned that in December 2023 the European Commission: (a) expects the opening of the first category of negotiating chapters as soon as possible for Albania;

1 European Council, EU enlargement policy.
2 Bechev, D. (2022), "What has stopped EU enlargement in the Western Balkans?", Carnegie Europe.
3 Karjalainen, T. (2023), "EU enlargement in wartime Europe: three dimensions and scenarios", Academy of Social Sciences, *Contemporary Social Science*, 18(5), 637-656.
4 European Council, Informal Meeting of heads of state or government, Granada, 6.10.2023, Conclusions on Ukraine, enlargement and reforms,14.12.2023, EU strategic agenda 2024-2029, 3.1.2024.
5 European Council, European Council meeting (14 and 15 December 2023) – Conclusions.
6 OECD, Economic Convergence Scoreboard for the Western Balkans 2023.
7 It should be noted that in December 2023 the European Council called for an acceleration of the accession process of the Western Balkans with the help of a new Development Plan, with EUR 6 billion of funding for the period 2024-2027, proposed by the European Commission on 8 November 2023.

Candidate countries for EU accession: level of preparation, progress and quantitative indices for the year 2023

	Albania	Republic of North Macedonia	Bosnia and Herzegovina	Montenegro	Serbia
Level of preparation[1] and progress for 2023					
Public administration	4	4, some progress	1	4, some progress	4
Functioning of the judiciary	4	Between 3 and 4, no progress was made	1	4, some progress	3
Fight against corruption	3	Between 3 and 4, no progress was made	Between 1 and 2	3	3
Fight against organised crime	3	3	Between 1 and 2		3
Fundamental rights	Efforts were intensified	Partially aligned with the EU acquis	The required progress was made		
Freedom of expression	Between 3 and 4	Between 3 and 4	Backsliding	3	Some progress was made
Legal framework on migration	Largely aligned with the EU acquis		Steps are being taken to align with the EU acquis	Efforts were intensified	
Economic criteria	Between 4 and 5	5	1	4	5
Structural reforms in the energy market, transport infrastructure, digitalisation of the economy and education	4, progress was made				
Public procurement	4		4	4	
Internal market (free movement of goods, services and capital)	4	4	Alignment with the EU acquis is required	Constant progress	3
Competitiveness	4	4	3		3
Green agenda and sustainable connectivity	3	5	2	3	
Resources, agriculture, regional policy and cohesion	3	4	1	2	
External relations, foreign security and defence	5	4	3	Alignment with the EU acquis is required	
Ability to assume the obligations of membership			Between 1 and 2	5	The country continues to work on alignment with the EU acquis
Good neighbourly relations and regional cooperation					5
Quantitative indices					
Global freedom status of the country for 2023[2]	Partly free	Partly free	Not free	Partly free	Partly free
Corruption Perceptions Index 2023[3]	37/100	42/100	35/100	46/100	36/100

Sources: Data compilation from: a) the European Council Conclusions (December 2023), b) the findings of the special reports of the European Commission on each country (November 2023), c) the freedom index and d) the corruption perceptions index for each country.

1 Describes the level of preparation of each candidate country for EU accession based on the Likert scale: (1) early stage, (2) some level of preparation, (3) moderately prepared, (4) good level of preparation and (5) well advanced.

2 Freedom House, *Freedom in the World 2023: Marking 50 years in the Struggle for Democracy.*

3 Corruption Perceptions Index 2023, Transparency International, country score on a scale of 0 to 100, where 0=highly corrupt and 100=very clean.

(continued)

	Kosovo	Ukraine	Moldova	Türkiye	Georgia
Level of preparation[1] and progress for 2023					
Public administration		3	3	Between 3 and 4, no progress was made	4
Functioning of the judiciary		3	3	1	3
Fight against corruption		3	3	1	3
Fight against organised crime		3	3	3	3
Fundamental rights		Compliance with international conventions	Commitment to meet international obligations	Backsliding	
Freedom of expression	1	Between 3 and 4, no progress was made	3		3
Legal framework on migration			Backsliding	3	Partially aligned with the EU acquis
Economic criteria		Between 3 and 4, no progress was made	2	5	4
Structural reforms in the energy market, transport infrastructure, digitalisation of the economy and education		1	2		
Public procurement				4	3
Internal market (free movement of goods, services and capital)		Good progress was made	1	5	4
Competitiveness		Efforts need to be intensified	3	4	4
Green agenda and sustainable connectivity		Progress was achieved in several areas	1	4	1
Resources, agriculture, regional policy and cohesion		Progress was achieved in several areas	1	3	1
External relations, foreign security and defence		5	Between 3 and 4, no progress was made	3	2
Ability to assume the obligations of membership		The country continues to work on alignment with the EU acquis		2	
Good neighbourly relations and regional cooperation		5	Maintains good dialogue	4	Efforts need to be intensified
Quantitative indices					
Global freedom status of the country for 2023[2]	Partly free	Partly free	Partly free	Not free	Partly free
Corruption Perceptions Index 2023[3]	41/100	36/100	42/100	34/100	53/100

Sources: Data compilation from: a) the European Council Conclusions (December 2023), b) the findings of the special reports of the European Commission on each country (November 2023), c) the freedom index and d) the corruption perceptions index for each country.

1 Describes the level of preparation of each candidate country for EU accession based on the Likert scale: (1) early stage, (2) some level of preparation, (3) moderately prepared, (4) good level of preparation and (5) well advanced.

2 Freedom House, *Freedom in the World 2023: Marking 50 years in the Struggle for Democracy.*

3 Corruption Perceptions Index 2023, Transparency International, country score on a scale of 0 to 100, where 0=highly corrupt and 100=very clean.

(b) is ready to complete the opening phase of the accession negotiations with the Republic of North Macedonia; and (c) urges Serbia to fulfil the conditions of Chapters 23 and 24 (rule of law).

In drawing up the table, account has been taken of: (a) the December 2023 European Council Conclusions; (b) the findings of the country-specific reports[8] in November 2023, describing the clusters of the candidate countries under negotiation with the EU, as reflected in the Likert scale (evaluation scale of 1-5 measuring the level of preparation from early stage (1) to well advanced (5)); (c) each country's freedom index, which is recorded in a global report[9] on political rights and civil liberties and labels countries as free, partly free and not free; and (d) the corruption perceptions index[10] for each country, which measures the level of corruption in its public sector on a scale of 0-100 where 0 means a highly corrupt country and 100 means a very clean country.

Challenges for the EU from the potential accession of Ukraine and reforms that need to be taken into account

Following Russia's invasion of Ukraine in February 2022 and the granting of candidate status to Ukraine in December 2022, enlargement is a geopolitical objective as it is now a key EU strategic priority.

The first topic of discussion emerging as a challenge is the impact of Ukraine's final accession on the distribution of power[11] of each EU member in the Council of the EU and, in the European Parliament, on the population-based voting system. Ukraine is the second largest country in terms of population (41 million) after Türkiye. Based on the population criterion, Ukraine's accession to the EU will increase the number of seats of the European Parliament above the threshold set by the Lisbon Treaty (750 MEPs), leading to a cut in seats from the other existing Member States, as the number of seats per country is negotiable and adjustable.[12] For a decision to be taken by the Council of the EU, a favourable vote is required by at least 55% of the Member States representing at least 65% of the EU's population (qualifying majority, Article 16(4) of the Treaty).[13] The admission of new members therefore changes the balance of power and may affect the ability of the EU and the Council of Ministers to take policy decisions on sensitive issues (external policy, security policy, EU funding, sub-delegation of competences) as the distribution of votes in the voting outcome will change.

The second possible challenge is the impact of Ukraine's final accession on the EU budget (budgetary policy[14,15]) and on the resources allocated under the Instrument for Pre-accession Assistance[16] and the Neighbourhood, Development and International Cooperation Instrument – Global Europe to the candidate countries, as demand for additional expenditure, in particular for EU agricultural and cohesion policy, changes. The wealthiest EU countries may need to pay larger amounts than they receive from the EU, as reductions in resources to current Member States would be likely if the rules remain the same as established since 2004 when Poland joined. An increase by nine members with an unchanged budget would give Ukraine (with 25% of EU arable land) 41.7% of EU funds, while the integration of smaller candidate countries does not pose similar challenges as they have small agricultural areas (1-3 million hectares).[17] Taking into account that the possible date of accession of the Member States is 2030, the European Committee of the Regions[18]

8 Albania, Bosnia and Herzegovina, Republic of North Macedonia, Serbia, Türkiye, Ukraine, Moldova, Georgia.
9 Freedom House, Freedom in the World 2023: Marking 50 years in the Struggle for Democracy.
10 Transparency International, Corruption Perceptions Index.
11 Kirsch, W. (2022), "The distribution of power within the EU: perspectives on a Ukrainian accession and a Turkish accession", *International Economics and Economic Policy*, 19, 401-409.
12 Blockmans, S. (2023), "The impact of Ukrainian membership on the EU's institutions and internal balance of power", International Centre for Defence and Security, Policy Paper, November, and Voting system of the Council of the EU.
13 Blockmans (2023), op. cit.
14 European Parliament, "Enlargement Policy: Reforms and challenges ahead", European Parliamentary Research Service (EPRS), December 2023.
15 European Commission, Communication from the Commission to the European Parliament, the European Council and the Council on pre-enlargement reforms and policy reviews, 21.3.2024.
16 Bank of Greece (2022), *Annual Report 2021*, pp. 60-61.
17 Karjalainen (2023), op. cit.
18 European Committee of the Regions, Opinion: The future of Cohesion Policy post-2027, 29-30 November 2023.

recommends that the European Commission (a) carry out a detailed evaluation and reform of the Common Agricultural Policy rules to ensure that the new rules allow for the provision of continued EU support to all regions; and (b) that the year of accession be taken into account in the design of the next Multiannual Financial Framework (2028-2034).

The third possible challenge from Ukraine's accession concerns the EU's common foreign and security policy (CFSP), which is already experiencing a remarkable change as a result of the war, with a view to maintaining the EU's resilience to hybrid threats and the future European order. Russia's conflict with Ukraine reinforced further attention to EU defence and underlines the fact that, in order to achieve these EU strategic priorities, it is necessary to: (a) facilitate joint procurement for the European defence industry with a view to replenishing Member States' stocks; (b) swiftly put in place a European defence industrial strategy – to be submitted by the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy – in order to strengthen the defence sector and make it more innovative and competitive; (c) adapt the regulatory framework for public procurement; and (d) step up defence investment by the European Investment Bank (EIB), through military mobility, regular real exercises, enhanced space security and cyber threat response.

Conclusions

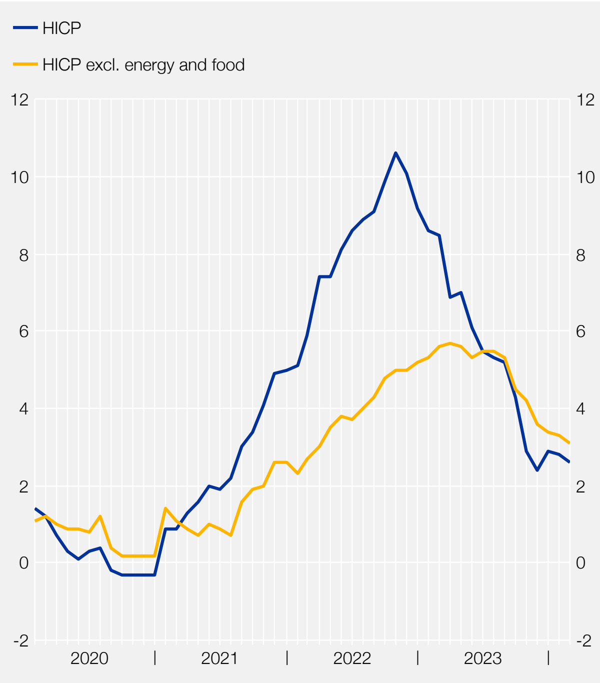
Following Russia's invasion of Ukraine in 2022 and the granting of candidate status to Ukraine, the EU revised its objectives and strategic priorities. As of February 2022 there has been an acceleration of the enlargement process since, within a short period of time, some countries have been given the status of candidate country and negotiations with the EU have intensified for those already possessing the said status, while the process had started many years ago.

In particular, on the one hand, the EU reassesses the enlargement policy on the basis of which it had built its relationship with the candidate countries, recognises that enlargement is now a strategic priority and concludes that reforms are necessary to maintain European balance after accession. On the other hand, based on the findings of the screening report, the level of preparation of the candidate countries is below moderate in almost all clusters, with a few exceptions (e.g. Serbia and Ukraine: well advanced in neighbourly relations and regional cooperation, Albania: well advanced in external relations, Republic of North Macedonia: well advanced in the green agenda), and they need to step up their efforts. The new Growth Plan for the Western Balkans proposed by the European Commission aims at this direction.

III THE SINGLE MONETARY POLICY IN THE EURO ERA

Over the course of 2023, headline inflation slowed down in the euro area, while many underlying inflation measures also declined, mainly in the second half of the year. However, these developments have not allowed the ECB Governing Council to change its assessment that inflation would remain too high for too long, especially compared with its 2% medium-term target. In line with the single monetary policy strategy, the Governing Council continued to raise key interest rates until the third quarter of 2023. Additionally, from mid-2023 onwards, reinvestments of principal payments from maturing securities acquired by the Eurosystem under the asset purchase programme (APP) were discontinued. Moreover, it was decided to gradually reduce reinvestments under the pandemic emergency purchase programme (PEPP) over the second half of 2024 until year-end and to discontinue reinvestments thereafter.

Chart III.1 Inflation in the euro area (January 2020 - February 2024)



Sources: ECB and Eurostat.

1 OVERVIEW OF DEVELOPMENTS AND PROSPECTS[1]

The analysis of the ECB Governing Council over the first half of 2023 led to the conclusion that inflation in the euro area was too high and was expected to remain too high for too long, compared with its 2% medium-term target. Although headline inflation had begun to slow down as a result of the rapid drop in energy prices (see Chart III.1), core inflation, (i.e. headline inflation excluding food and energy prices) remained high and underlying inflationary pressures remained strong, as past increases in energy prices continued to put upward pressure on the prices of a wide range of products.

In particular, in early 2023 the Governing Council of the ECB concluded that supply-side constraints had started to ease. Output in the services sector had risen, as demand for leisure activities continued to strengthen, thus reversing the significant decline of related spending during the pandemic. However, domestic demand had shrunk overall due to the adverse impact of high inflation on consumption, uncertainty, also as a result of geopolitical developments, and the deterioration of financing conditions. Manufacturing output weakened, among other things, due to the decline in global demand. Nevertheless, labour market conditions remained favourable, with unemployment rates hovering at historical lows, while employment moved upwards.

In the second half of 2023, both headline and core inflation followed a downward trend. The Governing Council pointed out that goods inflation slowed down owing to the improvement of supply conditions, lower energy prices, the mitigation of pressures at the early stages of the

1 The cut-off date for data and information used in this Chapter is 15.3.2024.

pricing chain, and the decline in aggregate demand, while monetary policy tightening limited firms' capacity to raise prices by widening their profit margins. On the other hand, food price inflation still hovered at high levels. Services inflation also remained strong, fuelled by wage increases and strong private spending on travel services.

The Governing Council of the ECB underlined that the inflation rate in the euro area, although declining, was still expected to remain too high for too long. Domestic inflationary pressures continued to be considered significant and, during that time, were mainly due to a surge in unit labour costs amid rising wage and falling productivity growth.

The Governing Council noted that the euro area economy had broadly stagnated over the first half of 2023 and GDP slightly declined in the third quarter. The decline in economic activity progressively spread from the manufacturing sector also to the services sector, as, among other things, the impact of interest rate hikes intensified.

Throughout 2023, most measures of longer-term inflation expectations hovered around 2%; when some indicators were elevated, the Governing Council underlined that they warranted close monitoring.

As regards financial and monetary conditions in the euro area, throughout 2023, first, banks' funding costs increased. As a consequence, interest rates on corporate and housing loans also increased. Second, credit expansion to businesses slowed down, owing to, on the one hand, reduced financing needs for inventories or fixed investment and, on the other, lower credit supply amid increased interest rates and tightening credit standards and financing conditions. Similarly, credit expansion to households was also contained. Third, the growth rate of monetary aggregates decreased significantly.

In the course of 2023, the Governing Council of the ECB followed a data-dependent and meeting-by-meeting approach to its interest rate decisions, based on a continuous assessment of the state of the euro area economy and inflation outlook.

The Governing Council of the ECB decided on new increases in key interest rates six times from February to September 2023. Since then, the Eurosystem key interest rates remained unchanged (see Table III.1).

Table III.1 Eurosystem key interest rates

(percentages % per annum)

Date of interest rate change[1]		Deposit facility	Main refinancing operations (fixed-rate tenders)	Marginal lending facility
2019	18 Sep.	-0.50	0.00	0.25
2022	27 July	0.00	0.50	0.75
	14 Sep.	0.75	1.25	1.50
	2 Nov.	1.50	2.00	2.25
	21 Dec.	2.00	2.50	2.75
2023	8 Febr.	2.50	3.00	3.25
	22 Mar.	3.00	3.50	3.75
	10 May	3.25	3.75	4.00
	21 June	3.50	4.00	4.25
	2 Aug.	3.75	4.25	4.50
	20 Sep.	4.00	4.50	4.75

Source: ECB.
1 Changes in the deposit facility and the marginal lending facility rates are effective from the first main refinancing operation following the relevant Governing Council decision (when the fixed rate on the main refinancing operation changes), rather than the date of the Governing Council meeting on which the relevant decision is made.

The Governing Council of the ECB has repeatedly pointed out that keeping key interest rates at restrictive levels will over time reduce inflation by dampening aggregate demand. Furthermore, monetary restriction helps to prevent the risk of a sustained upward shift in inflation expectations. In September 2023, the Governing Council of the ECB announced that key interest rates were at levels that, maintained for a sufficiently long duration, would make a substantial contribution to the timely return of inflation to its medium-term target.

With regard to the decisions of the ECB Governing Council on asset purchase programmes, from March 2023 to mid-2023, the Eurosystem portfolio acquired under the extended asset purchase programme (APP) was decreasing by a monthly average of EUR 15 billion. This decrease was effected by not reinvesting in full the principal payments from maturing securities held by the Eurosystem. As of July 2023, these partial reinvestments were discontinued.

The Governing Council decided that it would continue to reinvest in full the principal payments from maturing securities acquired by the Eurosystem under the Pandemic Emergency Purchase Programme (PEPP) during the first half of 2024. Over the second half of the year, it would reduce the PEPP portfolio by EUR 7.5 billion per month on average as a result of the only partial reinvestment of principal payments from maturing securities. At end-2024 such reinvestments will be discontinued.

Furthermore, the remuneration of banks' minimum reserves held with national central banks was set at 0%, effective as of late September 2023, thus contributing to an efficient and precise single monetary policy stance.

Finally, it should be noted that monetary policy tightening by the Eurosystem adversely affected the profitability of the ECB and the national central banks (NCBs) of the euro area countries, including the Bank of Greece. Central banks' credibility hinges on their ability to fulfil their primary objective of price stability and contribute to macroeconomic and financial stability. Any temporary losses do not prevent them from fulfilling their mandate (see Chapter III, Special Feature).

2 THE SINGLE MONETARY POLICY: FORMULATION AND IMPLEMENTATION

Evolution of prices, economic activity, employment and unemployment

The analysis of the Governing Council of the ECB in the first half of 2023 highlighted the following developments: Inflation was too high and was expected to remain too high for too long compared with its 2% medium-term target. However, headline inflation had begun to slow down already from the last months of 2022 as a result of the rapid drop in energy prices[2] (see Chart III.1). By contrast, food price inflation continued to gather pace and had reached high levels, as earlier[3] input cost surges (transport cost, fertiliser prices) were passed on to the prices of final goods. Inflation excluding food and energy prices (i.e. core inflation) remained high and underlying inflationary pressures remained strong, as past increases in energy prices continued to put upward pressures on the prices of a wide range of products.

Growth in non-energy industrial goods prices strengthened – with a time lag – as a result of shortages in raw materials, intermediate goods, equipment and labour force, which had been widespread in previous years.[4] Services inflation was also mostly picking up on the back of the recovery in demand for services, which started after the withdrawal of health restrictions, and as a result of the gradual pass-through of past increases in energy costs and wages.

2 Growth in energy prices (producer prices) slowed down after mid-2022.
3 In 2021-2022.
4 As from 2020 onwards.

Indeed, the usual pressures to compensate for losses in purchasing power due to inflation by adjusting wages were observed. The Governing Council of the ECB underlined that many firms in sectors where demand had outpaced supply had been able to raise their profit margins, which resulted in firms' heightened profitability, a development that benefited from the uncertainty caused by the high rate and volatility of inflation.

In the first quarter of 2023, private consumption weakened, reflecting the impact of high inflation and uncertainty, also as a result of geopolitical developments, and a deterioration in financing conditions. Moreover, public consumption contracted. Besides, manufacturing output weakened due to the tightening of financing conditions and the decline in global demand.

On the other hand, in early 2023, the Governing Council of the ECB concluded that supply-side constraints (including gas supply) had started to ease. Output in the services sector had risen, driven by increased demand for leisure activities. Business and consumer confidence recovered steadily, although it remained weaker than prior to Russia's invasion of Ukraine. Labour market conditions remained favourable, with the unemployment rate hovering at historically low levels. Employment and total hours worked recorded an increase, although hours worked per person remained below pre-pandemic levels.

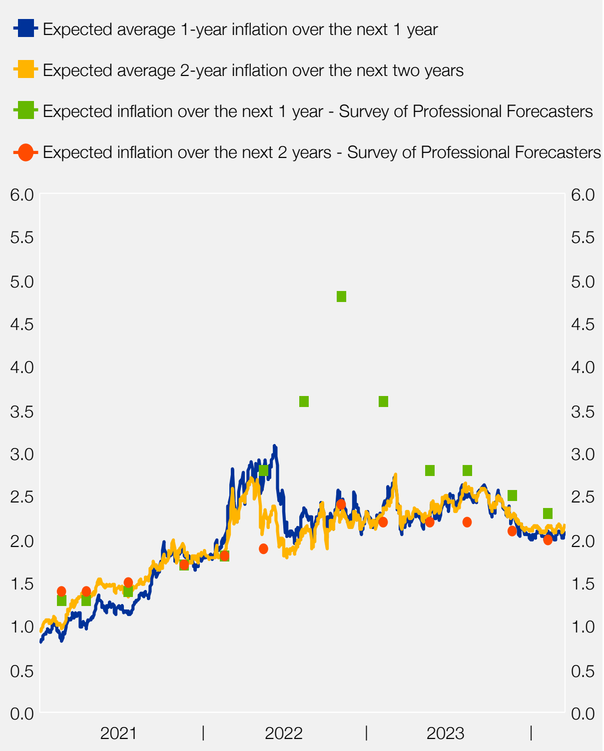
In the second half of 2023, both headline and core inflation followed a downward trend. The Governing Council pointed out that goods inflation slowed down owing to an improvement in supply conditions, energy price cuts, a mitigation of pressures at the early stages of the pricing chain, a decline in aggregate demand, and a weakening in firms' capacity to raise prices by widening their profit margins in an environment of tightening monetary conditions. On the other hand, food inflation, albeit declining, remained at high levels. Services inflation also remained high, fuelled by wage increases and strong private spending on travel services, reversing the significant decline in related expenditure during the pandemic.

The Governing Council of the ECB noted that the inflation rate in the euro area, although declining, was still expected to remain too high for too long. The Governing Council pointed out that many underlying inflation measures had decreased. Nevertheless, inflation estimates were generally high and domestic inflationary pressures continued to be considered significant. These pressures were mainly driven by a strong rise in unit labour costs due to wage increases combined with a drop in productivity, while the impact of the external environment of the euro area as a source of inflationary pressures was mitigated.

The Governing Council noted that the euro area economy had broadly stagnated over the first half of 2023. Subsequently, GDP declined slightly in the third quarter. The decline in economic activity progressively spread from the manufacturing sector also to the services sector as, among other things, the impact of interest rate hikes widened. Other factors considered (similarly to the first half of 2023) to have driven GDP developments included the decline in external demand for euro area goods and services and the tightening of fi-

Chart III.2 Medium-term inflation expectations in the euro area (4 January 2021 - 14 March 2024)

(percentages % per annum)



Sources: ECB and Refinitiv/Reuters Eikon.

nancing conditions in the euro area, which, among other things, led to a drop in investment (in housing, constructions and equipment), while high inflation continued to dampen private consumption.

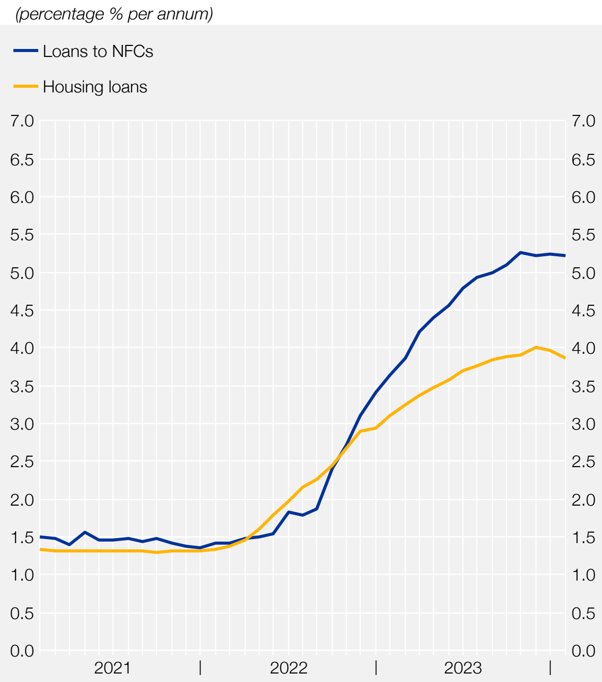
Compensation per employee continued to increase; thus, as mentioned above, wage developments are now a significant source of inflationary pressures. Of course, there were some signs of weakening in labour markets, as increasingly fewer jobs were created, while total hours worked fell in the third quarter of 2023.

Finally, throughout 2023, most measures of long-term inflation expectations hovered around 2%; when some indicators were elevated, the Governing Council underlined that they warranted close monitoring (see Chart III.2).

Money and credit developments

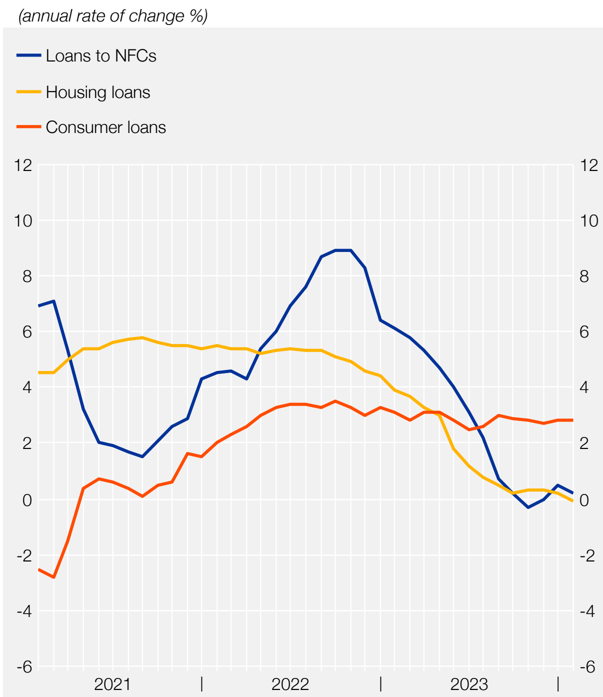
The Governing Council of the ECB noted the following developments: first, a rise in the level of market interest rates, due to the reappraisal of the outlook for the single monetary policy stance, but also due to its high volatility during periods of heightened geopolitical uncertainty[5] and financial market tensions.[6] The increases in key policy rates were found to have a strong impact on financing and monetary conditions in the euro area: banks' funding costs rose partly because savers turned to time deposits, which offer higher interest rates compared to overnight deposits. At the same time, banks' funding by the Eurosystem on favourable terms through targeted longer-term refinancing operations (TLTROs) moderated. As a consequence, interest rates on

Chart III.3 Cost of borrowing indicator for businesses and households in the euro area (January 2021 - January 2024)



Source: ECB.
Note: This indicator is complied by the ECB for housing loans to households and for loans to non-financial corporations (NFCs). It is calculated on the basis of the weighted average interest rates on new short- and long-term loans in these categories, with certain adjustments which improve comparability of borrowing costs across euro area countries.

Chart III.4 Loans to non-financial corporations and households in the euro area[1] (January 2021 - January 2024)



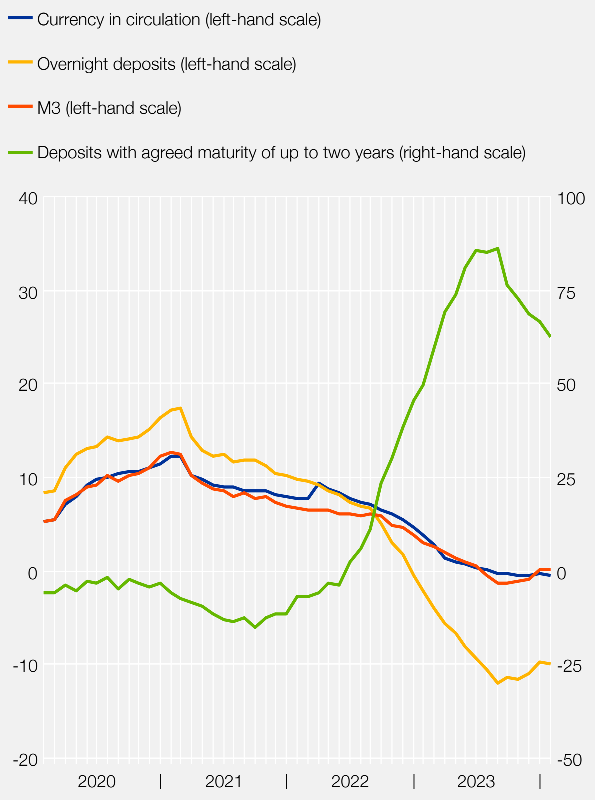
Source: ECB.
1 The rate of change in business and household financing has been adjusted for securitised or transferred loans, as well as for notional cash pooling provided by NFCs in certain euro area countries.

5 For instance, in early October 2023.

6 As in early March 2023.

Chart III.5 Monetary aggregates in the euro area (January 2020 - January 2024)

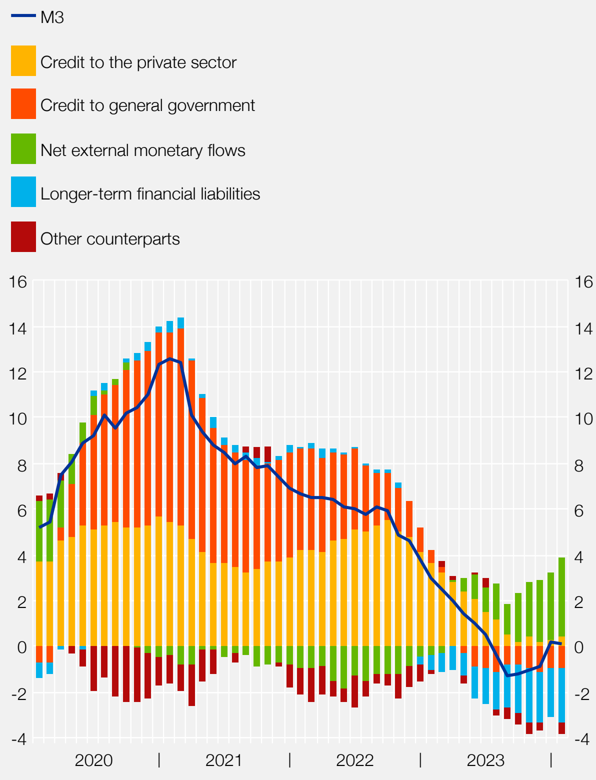
(annual rate of change %)



Source: ECB.

Chart III.6 Counterparts contributing to the change in the monetary aggregate M3 in the euro area (January 2020 - January 2024)

(annual rate of change % for M3; contribution in percentage points for counterparts)



Source: ECB.

corporate and housing loans increased (see Chart III.3). The Governing Council noted that the lag with which these developments will impact the real economy, as well as the overall extent of this impact, cannot be determined with certainty.

Second, a slowdown in credit expansion to businesses (see Chart III.4) owing to, on the one hand, lower demand for the financing of inventory or fixed investment and, on the other hand, the curtailment of credit supply through higher interest rates and tightened credit standards and financing terms. Third, a moderation of credit expansion to households, similarly due to a combination of reduced demand for and limited supply of bank credit.

Fourth, a significant decline in the growth of monetary aggregates, with a reduction in overnight deposits, which was not offset by the rise in fixed-term deposits. Specifically, growth in broad money (M3) turned negative – hovering around the lowest levels since the start of Economic and Monetary Union – after mid-2023 (see Chart III.5). The slowdown in M3 was mainly driven by the weakening of credit expansion and the reduction in the Eurosystem balance sheet (see Chart III.6).

Interest rate policy

In the course of 2023, the Governing Council of the ECB followed a data-dependent and meeting-by-meeting approach to its interest rate decisions, based on a continuous assessment of the state of the euro area economy and the inflation outlook.[7] The Governing Council explained

7 However, it should be noted that at its meeting of February 2023, in addition to raising key interest rates with immediate effect, the Governing Council of the ECB announced its intention to raise interest rates at its next meeting in March 2023.

that its approach to determining the appropriate degree and the required duration of monetary restriction in the euro area is based on the data and incoming information it collects as concerns the inflation outlook, the dynamics of underlying inflation and the strength of the single monetary policy transmission to the real economy of the euro area.

The Governing Council of the ECB decided on new increases in key interest rates six times during the period February-September 2023. As from the Governing Council meeting of October 2023 in Athens onwards, Eurosystem key interest rates remained unchanged in the light of the slowdown in headline inflation and in most underlying inflation measures. Besides, it was underlined that the previous increases in key interest rates continued to affect financing conditions towards a tightening stance. Throughout 2023, the Governing Council stressed that setting key interest rates at restrictive levels would, over time, lead to an easing of inflationary pressures by dampening aggregate demand. Furthermore, the tightening stance of the monetary policy helps prevent the risk of a permanent upward revision of inflation expectations.

In February 2023, the Governing Council of the ECB made it clear that it would stay the course in raising policy rates at a steady pace and in keeping them at levels that were sufficiently restrictive to ensure a timely return of inflation to the 2% target. In March 2023, the Governing Council of the ECB noted that it closely monitored the tensions that had recently[8] emerged in financial markets and that it stood ready to respond as necessary to preserve price stability and financial stability in the euro area. Starting from May 2023, the Governing Council repeatedly announced that key interest rates would be brought to levels that were sufficiently restrictive to achieve a timely return of inflation to the ECB's 2% target, and would be kept at those levels for as long as necessary. In September 2023, the Governing Council of the ECB announced that key interest rates were at levels that, maintained for a sufficiently long duration, would make a substantial contribution to the timely return of inflation to its medium-term target.

The Governing Council of the ECB repeatedly confirmed in the second half of 2023 that, as mentioned above, past key interest hikes had a major impact on the economy of the euro area, as they had led to a tightening in financing conditions, including a containment of credit expansion. Throughout the year it was repeatedly stressed that the Governing Council stood ready to adjust all of its monetary policy instruments within its mandate to ensure that inflation returned to its target over the medium term, and to preserve the smooth functioning of the monetary policy transmission mechanism. Specifically, it underlined that the transmission protection instrument (TPI) was available to counter unwarranted, disorderly fluctuations in markets which obstruct the smooth transmission of the single monetary policy across all euro area countries. This would allow the Governing Council to more effectively deliver on the primary objective of the Eurosystem, i.e. price stability.

Additional monetary policy measures

From March 2023 to mid-year 2023, the amount of the portfolio acquired by the Eurosystem under the asset purchase programme (APP) decreased at a pace of EUR 15 billion on average on a monthly basis. This decrease was effected by not reinvesting in full the principal payments of maturing securities held by the Eurosystem. As of July 2023 onwards, these partial reinvestments were terminated. Up until then, partial reinvestment amounts were allocated proportionally to the share of redemptions across each constituent programme of the APP (i.e. PSPP: public sector purchase programme, ABSPP: asset-backed securities purchase programme, CBPP3: third covered bond purchase programme, CSPP: corporate sectors purchase programme). As regards reinvestments under the PSPP, these were allocated proportionally to the share of redemptions of each jurisdiction and across national and supranational issuers. As regards reinvestments in corporate bonds (CSPP), they were tilted more strongly towards issuers with a better climate performance.

8 February-March 2023.

Regarding reinvestments of principal payments from maturing securities purchased by the Eurosystem under the pandemic emergency purchase programme (PEPP), in December 2023 the Governing Council announced its decision to continue to reinvest in full principal payments in the first half of 2024. Subsequently, over the second half of 2024, the PEPP portfolio would be reduced by EUR 7.5 billion per month on average. Reinvestments under the PEPP will also be discontinued at the end of 2024.

Effective as of late September 2023, the interest rate on banks' minimum reserves held with national central banks (NCBs) was set at 0%. Up until then, minimum reserves had been remunerated at the ECB's deposit facility rate, which, as already known, has turned positive since several months. The zero interest rate on banks' minimum reserves contributes to the effectiveness of monetary policy by maintaining the current degree of control over the single monetary policy stance,[9] as it ensures the full pass-through of the changes in Eurosystem key rates to money market rates. It is also important that this decision improves the efficiency of the single monetary policy by reducing the overall amount of interest that needs to be paid on reserves in order to implement the appropriate stance.

Recommendations of the ECB Governing Council on fiscal policies

The Governing Council of the ECB considers that Member States' fiscal policies should promote productivity in the economy and pursue a gradual decline of public debt, which has reached high levels. A government policy encouraging the expansion of productive capacity in the euro area through structural reforms and new investment, particularly in the energy sector, contributes to containing medium-term inflationary pressures. In this context, the Governing Council called upon governments to fully and without delay implement the investment projects and structural reforms included in the Next Generation EU programme, which also promotes the green and digital transitions in the European economy. The Governing Council also stressed that the revision of the EU's economic governance framework must be completed and that it is necessary to step up progress towards capital markets union and the completion of banking union.

In the recent past[10] many euro area countries took fiscal measures which reduced the risk of an excessive burden on households and businesses from the sharp rise in energy prices[11]. As the energy crisis de-escalated, the Governing Council of the ECB stated that these measures should be rapidly withdrawn, otherwise a further tightening of the single monetary policy would be necessary to avert the risk of such measures fuelling additional inflationary pressures in the medium term.

The beginning of 2024

The Governing Council of the ECB kept key interest rates unchanged at its meetings of January and March 2024, pointing out that most inflation measures followed a downward trend and that short-term inflation expectations had been revised considerably downwards. However, the Governing Council reiterated its assessment that domestic inflationary pressures remained elevated. It noted, nevertheless, that the compression of unit profit growth offset to a certain extent the upward effect on prices from the rise in unit labour costs, which have started to decelerate. Inflation is expected to decline further over the coming months, as wage costs are forecast to slow down, while the effect from previous increases in energy prices, supply-side constraints as well as the post-pandemic reopening of the economy will be eliminated. As a result, inflation will approach the 2% target in 2024.

Specifically, on the basis of the latest ECB staff macroeconomic projections (March 2024), the Governing Council expects that headline inflation will grow at an annual rate of 2.3% in 2024,

9 Essentially, over short-term interest rates, which in turn affect financing conditions and the volume of financing flows in the economy, particularly through the banking system, as well as the exchange rate.

10 I.e. mainly in the year 2022.

11 In 2021 and 2022 for final consumers.

2% in 2025 and 1.9% in 2026. For core inflation, staff projected an annual rate of 2.6% in 2024, 2.1% in 2025 and 2% in 2026.

The Governing Council of the ECB foresees the following upside risks regarding the inflation outlook: (a) the possibility of an unexpected increase in energy prices and freight costs, as well as a contraction of global trade due to developments in the Middle East and the ongoing conflict between Russia and Ukraine; (b) the possibility of wages increasing by more than expected or profit margins proving more resilient. The Governing Council of the ECB recognises as a medium-term downside risk to inflation the possibility of aggregate demand proving weaker than expected due to a deterioration in the external environment of the euro area or in the event that the transmission of the single monetary policy turns out to be stronger than anticipated.

As concerns monetary developments, the Governing Council noted the stabilisation of bank lending rates on business loans and the recent decline in mortgage rates. Finally, the Governing Council pointed out that economic activity remains weak because of declining consumer spending, reduced investments and lower exports due to weaker external demand and competitiveness losses. Nevertheless, surveys suggest that GDP may gradually recover in the course of 2024. The drivers of this development are expected to be declining inflation, robust wage growth and consequently the rise in disposable income. Furthermore, exports are expected to rise and the contractionary impact on economic activity from previous interest rates increases is expected to gradually weaken.

3 THE EURO AREA MONEY MARKET

After peaking at EUR 4,748 billion in November 2022 , excess liquidity[12] in the banking system gradually declined to stand on average at EUR 3,603 billion in the second half of 2023, from EUR 4,088 billion in the first half of 2023 and EUR 4,510 billion in 2022 as a whole (see Chart III.7). This decline largely reflected voluntary early repayments by banks and the maturing of TLTRO III operations.[13]

The decline in excess liquidity in 2023 was also driven, to a lesser degree, by a gradual contraction of the Eurosystem's assets portfolio acquired under the APP, initially due to the gradual reduction and, subsequently, to the termination of reinvestments by the Eurosystem as of July 2023. Reinvestments under the PEPP continued smoothly during the year. Specifically, holdings of debt securities acquired under the asset purchase programmes of the Eurosystem stood on average at around EUR 4,780 billion in the second half of 2023, against EUR 4,917 billion in the first half of 2023 and EUR 4,910 billion in the previous year.

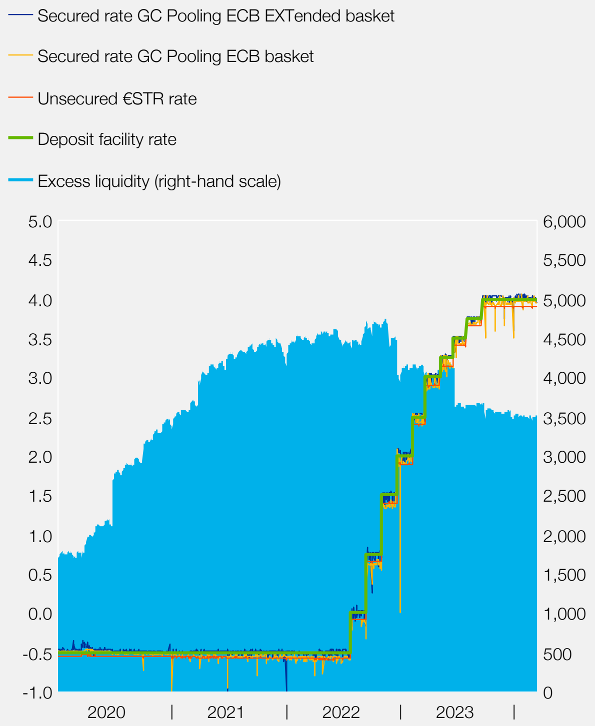
The share of asset purchase programmes (PEPP and APP) in the total liquidity provided to Eurosystem counterparties stood on average at 90% in the second half of 2023, from 81% in the first half of the year and 70% in 2022. The remaining share in total liquidity consisted of Eurosystem refinancing operations (TLTROs, LTROs and MROs) and its decline reflects, as mentioned above, the repayment of a large amount of liquidity raised through TLTROs III and which at end-2023 stood at about EUR 400 billion (December 2022: EUR 1.3 trillion). The volume of liquidity raised through regular refinancing operations (MROs and LTROs) increased in 2023, mainly immediately after the dates on which TLTROs were repaid, but subsequently it normalised and was overall maintained at relatively low levels, reflecting the satisfactory level of

12 Excess liquidity can be defined as the sum of credit institutions' deposits in Eurosystem current accounts and in the deposit facility, net of minimum reserve requirements and the outstanding amounts in the marginal lending facility.

13 It is noted that the largest repayment in the course of 2023 took place at the end of June, due to the maturing of the fourth operation under TLTRO III (of an amount of EUR 477 billion, which had been granted in June 2020 during the acute phase of the pandemic) and the early repayment of additional liquidity amounting to EUR 29.5 billion.

Chart III.7 Deposit facility rate, money market interest rates and excess liquidity in the euro area (2 January 2020 - 14 March 2024)

(percentages % per annum and EUR billions, daily data)



Sources: ECB, Eurex Repo και Refinitiv/Reuters Eikon.

banks' liquidity and the availability of alternative sources of funding.

In 2023, short-term money market interest rates followed the increases in ECB key policy rates, and generally stood close to the deposit facility rate (see Chart III.7). Specifically, the €STR in the unsecured market segment stood on average at 3.75% in the second half of 2023, from 2.66% in the first half of 2023 (2022: 0%). In the secured lending (repo) market, which accounts for the bulk of transactions in the euro area money market, the transmission of increases in ECB policy rates was also swift and complete. The interest rate on holdings against standardised baskets of collateral GC Pooling ECB stood in the second half of 2023 at 3.77%, from 2.68% in the first half of the year (2022: -0.02%). The corresponding interest rate GC Pooling ECB EXT for the extended basket of lower-rated securities stood at 3.85% in the second half of 2023, from 2.77% in the first half of the year (2022: 0.07%). The functioning of the secured money market was supported in 2023 by factors such as new debt security issuance, a larger availability of collateral due to the repayment of TLTROs and the reduction of the APP securities portfolio by the Eurosystem.

At mid-March 2024 the Governing Council of the ECB announced changes to the operational framework for implementing the monetary policy in order to ensure that it remains appropriate as the Eurosystem balance sheet normalises. These changes will affect how central bank liquidity will be provided, as excess liquidity in the banking system, while remaining significant over the coming years, gradually declines. The purpose of the operational framework is to steer short-term money market rates closely in line with monetary policy decisions.

Monetary policy implementation will be guided in the future by a set of principles such as effectiveness, robustness, flexibility, efficiency, etc. In line with these principles, a set of key parameters and features was defined for the operational framework. Specifically, the Governing Council of the ECB decided the following:

(i) The deposit facility rate will continue to be the one that will steer the monetary policy stance.

(ii) The Eurosystem will provide liquidity to counterparties through a broad mix of instruments, including short-term credit operations (e.g. MROs), three-month longer-term refinancing operations (LTROs) as well as, at a later stage, structural longer-term credit operations and a structural portfolio of securities.

(iii) Main refinancing operations and three-month longer-term refinancing operations will continue to be conducted through fixed-rate tender procedures with full allotment.

(iv) As of 18 September 2024, the interest rate on the main refinancing operations will be adjusted so that the spread between this interest rate and the deposit facility rate will be reduced to 15 basis points from the current spread of 50 basis points.

(v) At a later stage, once the Eurosystem balance sheet begins to grow again and taking into account legacy bond holdings, new structural longer-term refinancing operations and a structural portfolio of securities will be introduced. These operations will contribute significantly to covering the banking sector's structural liquidity needs arising from autonomous factors affecting liquidity and minimum reserve requirements.

CHAPTER III SPECIAL FEATURE

THE MONETARY POLICY IN THE EURO AREA AND ITS EFFECTS ON THE PROFITABILITY OF CENTRAL BANKS

In July 2022, the Governing Council of the European Central Bank (ECB) increased key interest rates for the first time since 2011. Until September 2023, over just 15 months, the ECB raised key interest rates ten consecutive times by a cumulative 450 basis points to ensure that the Eurosystem monetary policy stance would gradually shift from highly accommodative to sufficiently tight, in response to the sharp and unexpected surge in inflation. This significant shift and tightening of monetary policy aims to ensure inflation's timely return to the ECB's target (2% in the medium-term). However, a side-effect of such policy shift accompanied by the interest rate hikes is an adverse impact on the profitability of the ECB and the national central banks (NCBs) of the euro area countries, including the Bank of Greece, which in certain cases has caused financial losses.

At this point, it should be noted that the primary mandate of the Eurosystem[1] is to maintain price stability in the euro area and support the overall economic policies of the European Union, without prejudice to the objective of price stability. Central banks are public institutions, therefore they are not profit-oriented, as is the case for instance with commercial banks. Thus, the efficiency of the Eurosystem must be assessed in terms of delivering its mandate effectively and not of making profits. This mandate can be fulfilled regardless of any financial losses.

This special feature focuses on the factors which affect the profitability of central banks of the Eurosystem, as well as on the causes of the reduced financial results reported in the last few years. It also explains the reasons why the efficiency of central banks is not affected by their reduced profitability and considers the key factors which suggest that central banks will soon return to positive financial results. Lastly, reference is also made to recent central bank experiences.

DRIVERS OF THE PROFITABILITY OF THE CENTRAL BANKS OF THE EUROSYSTEM

Over the past decades, central banks mostly recorded profits, which are normally distributed to their respective national governments. However, over the last two years, many central banks, within and outside the euro area, have reported reduced profits or even losses. The Eurosystem's reduced profitability since 2022 is attributed to the significant shift in its monetary policy stance, which aimed at stabilising inflation. Following a period of an exceptionally accommodative monetary policy, marked by the adoption of non-standard measures (mainly asset purchases programmes) to address the very low, even negative, inflation rates during the previous decade and the beginning of this decade, the Eurosystem delivered bold policy rate hikes and reduced its balance sheet due to the surge in inflation.

Specifically, during the decade before the pandemic, inflation in the euro area persisted below the 2% target. The Governing Council of the ECB adopted an exceptionally accommodative monetary policy stance, primarily by maintaining low or even negative key interest rates. However, low inflation persisted and the effective lower bound of nominal rates was binding so that policy rates could not be lowered further. Thus, new measures had to be introduced which

1 The Eurosystem comprises the ECB and the national central banks (NCBs) of the Member States whose currency is the euro.

affected the size and composition of the Eurosystem's balance sheet, most notably the asset purchase programmes.

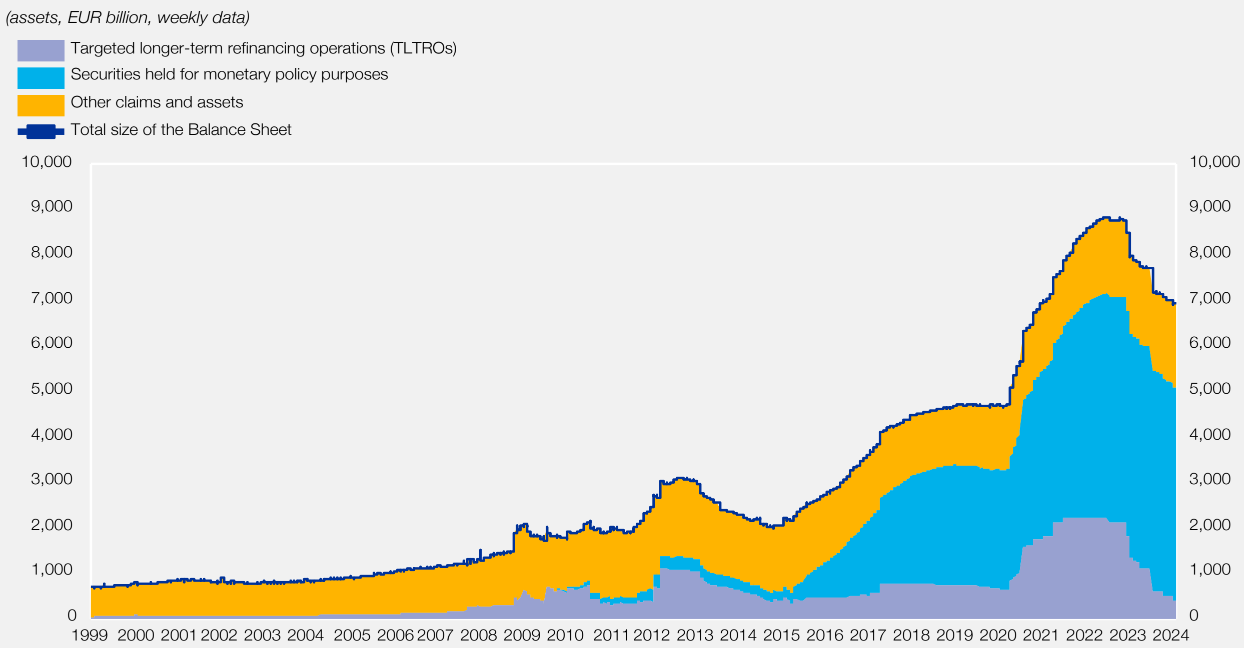
In the mid-2010s, the Eurosystem started to purchase public and private sector securities on the secondary market under the asset purchase programme (APP), increasing its assets and therefore its balance sheet, which was used as a tool in the conduct of monetary policy. The APP was effective in reducing medium-to-long term interest rates and borrowing costs for governments, firms and consumers, aiming to ultimately support investment and private consumption. Moreover, the Eurosystem conducted targeted longer-term refinancing operations (TLTROs), through which it provided ample liquidity to banks under very favourable terms, in order to encourage bank lending to firms and households. This package of measures resulted in increased effectiveness of the regular interest rate policy, thus facilitating the smooth transmission of monetary policy in the euro area.

In the years following the outbreak of the pandemic, the Eurosystem, in order to stave off its potentially negative impact on the economy and the financial markets, decided to implement the Pandemic Emergency Purchase Programme (PEPP), which involved bond purchases on a large scale, in parallel with the APP. At the same time, it made the terms of TLTRO III even more favourable, increasing thus liquidity provision to the banking system.

This bold monetary policy response ensured very favourable funding conditions to all financial sectors (households, firms, banks and governments). This stabilised financing conditions, prevented fragmentation in the euro area and increased financing to the real economy. In so doing, downward deviations of inflation from the target were contained and an economic recession was prevented.

These measures led to a significant increase in the Eurosystem balance sheet, which rose from EUR 2 trillion at the beginning of 2015 to EUR 9 trillion in mid-2022 (see Chart A). At its peak, EUR 5 trillion corresponded to securities acquired under the asset purchase programmes and EUR 2 trillion to the outstanding amounts of targeted longer-term refinancing operations.

Chart A Eurosystem Balance Sheet



Source: ECB.

Liquidity provision to the banking system through non-standard measures significantly exceeded the funds lent by commercial banks to firms and households, resulting in the accumulation of excess liquidity in the banking system. Excess liquidity peaked at EUR 4.7 trillion at the end of 2022, with a large part of it deposited by commercial banks to the NCBs of the Eurosystem in their current accounts and the deposit facility. For almost eight years, from June 2014 to July 2022, the Eurosystem applied a negative interest rate to the balances of the said deposits to encourage the banks to channel such liquidity to the real economy instead of depositing it to the Eurosystem.

Following this prolonged period of a relatively stable, but below-target inflation, the Eurosystem faced a new challenge. Since mid-2021, inflation started to rise significantly above the 2% target: from 1.9% in June 2021, the annual inflation rate in the euro area increased to a historical high of 10.6% in October 2022.

Thus, amid excess liquidity and a historically large balance sheet (EUR 8.8 trillion in June 2022), the Governing Council of ECB decided to increase its policy rates drastically over a period of 15 months (July 2022-September 2023), to counter the inflation challenge. With interest rates hikes of 450 basis points, the interest paid by the Eurosystem NCBs on commercial banks' balances remunerated at the deposit facility rate increased significantly. On the other hand, revenues from the portfolios of securities acquired under the asset purchases programmes of the Eurosystem (which are accounted for at amortised cost) did not increase commensurately. This is due to the fact that many of these securities –in particular the sovereign bonds which make up the bulk of these portfolios– were acquired in a period of low interest rates and thus of low yields. Moreover, these securities mostly have fixed-rate coupons and long maturities. As a result, the increased interest currently paid by the Eurosystem is not offset by its revenues, due to the difference between the yield of the securities held by the Eurosystem and the deposit facility rate. Thus, net interest income, which constitutes a key component of the central bank's revenue, is significantly lower.

Central banks' reduced profitability affects the allocation of profits to national governments. It is, however, noted that, after setting rates to positive territory, the Governing Council of the ECB in September 2022 removed the 0% interest ceiling for the remuneration of government deposits, allowing the NCBs to offer positive interest rates to government deposits. This decision, which is aiming to prevent abrupt outflows of government deposits from certain NBCs, has a positive impact on the interest income received by the governments of the Member States.

It must be highlighted that central banks in the euro area had experienced a long period of positive financial results.[2] In more details, during the period 2012-2021 the Eurosystem recorded profits – of approximately EUR 300 billion cumulatively before taxes and general provisions. These profits were mainly driven by two factors:[3] on the one hand, the revenues from securities purchased under the asset purchase programmes (as already mentioned, in order to support the economy and raise inflation from its extremely low, below-target level) and on the other hand to the negative interest rate policy, which had resulted in Eurosystem NCBs receiving interest on commercial banks' balances remunerated at the deposit facility rate, which was negative during the period June 2014-July 2022.

Part of the profits realised in the previous years had been used by the central banks to build significant financial buffers by establishing general provisions and reserves to address financial risks. These provisions may be used, and have already been used in several cases, to cover

2 For an analysis of the Eurosystem's profitability during the period 1999-2017, see Chiacchio, F., G. Claeys and F. Papadia (2018), "Should we care about central bank profits?", *Bruegel Policy Contribution*, No. 13.

3 The profits/losses of the Eurosystem NBCs are also driven by a number of other balance sheet items, such as foreign reserve assets and own funds portfolios, which are not considered here, as they are not directly related to the conduct of monetary policy.

losses. In case these provisions and reserves are depleted, any remaining losses can be recorded on the annual account and be set off against future profits.

CREDIBILITY AND PROFITABILITY OF CENTRAL BANKS

The credibility of central banks and citizens' confidence to them are determined by their ability to fulfil their primary objective of price stability and their contribution to ensuring macroeconomic and financial stability. Recording losses for short periods of time does not jeopardise that role of the Eurosystem, as central banks can operate effectively despite the losses, without compromising their objectives, given that they are the sole issuers of legal tender. As the ECB President, C. Lagarde, also stressed,[4] "As the sole issuer of euro-denominated central bank money, the Eurosystem will always be able to generate additional liquidity as needed. So by definition, it will neither go bankrupt nor run out of money. And in addition to that, any financial losses, should they occur, will not impair our ability to seek and maintain price stability".

However, central banks must be independent in order to operate effectively, i.e. they should be shielded from external influence. Their independence has many aspects, including financial independence. Any situation whereby an NCB's net equity is below the level of its statutory capital or is even negative for a prolonged period of time should be avoided.[5] This could result in the provision by the respective Member State to the NCB with an appropriate amount to rebuild its capital, thus giving rise to concerns that the government may try to influence directly or indirectly the monetary policy decisions, which would undermine the credibility of central banks and citizens' confidence to them. For this reason, central banks ensure that adequate buffers are maintained, in order to address any financial risks and prolonged periods of reduced profitability.

OUTLOOK OF THE PROFITABILITY OF THE EUROSYSTEM CENTRAL BANKS

The financial results of the NCBs of the Eurosystem will continue to face pressures, including the risk of net losses, in the near future. Two factors though are expected to lead to a gradual improvement of central banks' financial results:

- First, as inflation has already started to converge to the medium-term target of 2%, the key monetary policy interest rates have not been increased since September 2023 and are expected to be cut in the future. Therefore, the interest paid by the NCBs of the Eurosystem on commercial banks' excess liquidity deposited in the deposit facility will decline, thus the difference between the yields of the securities held by the Eurosystem and the deposit facility rate will narrow.

- Second, excess liquidity, which has been declining since the end of 2022, is set to further decrease, as on the one hand TLTRO III repayments continue and, on the other hand, the monetary policy portfolio held by the Eurosystem under the APP programme will continue to shrink due to maturities of securities, while the reduction of the PEPP portfolio will also start from the second half of 2024. Therefore, excess liquidity deposited in the deposit facility will continue to fall.

According to a recent IMF paper,[6] the central banks of the Eurosystem are expected to record cumulative losses of EUR 55 billion during 2023-2024. For certain NCBs, the loss-making period

4 See Transcript of the hearing at the Committee on Economic and Monetary Affairs of the European Parliament, 19.11.2020.
5 See ECB, *Convergence Report*, June 2022.
6 Belhocine, N., A.V. Bhatia and J. Frie (2023), "Raising Rates with a Large Balance Sheet: The Eurosystem's Net Income and its Fiscal Implications", IMF Working Paper WP/23/145.

may be even longer. However, according to the same paper, the Eurosystem's and the largest NCBs' losses are expected to be temporary and to be covered in a short time with future profits. This obviates any need for any capital injections or compensation from the euro area Member States.

RECENT PROFITABILITY RESULTS OF THE CENTRAL BANKS WITHIN AND OUTSIDE THE EURO AREA

Already since 2022, many central banks within and outside the Eurosystem have posted reduced profits. More specifically:

- The ECB recorded losses in both 2022 and 2023. For 2022, the loss stood at EUR 1.6 billion and was covered by the release of an equal sum from the provision for financial risks (see Chart B). In 2023 losses of EUR 7.9 billion were recorded, part of which will be covered by the release of the remaining provisions for financial risks amounting to EUR 6.6 billion. The remaining loss of EUR 1.3 billion, which was not covered by the provisions, will be carried forward on its balance sheet and will be set off against future profits. As the ECB posted zero profits in both 2022 and 2023, no profits were distributed to the euro area NCBs.[7]

- The Bundesbank[8] recorded losses before provisions amounting to EUR 1 billion in 2022 and EUR 21.6 billion in 2023. After covering them by tapping its risk provisions, it reported zero profits and made no distribution to the Federal Government of Germany in both years.

- The Dutch central bank (De Nederlandsche Bank) [9] recorded in 2022 a loss before provisions of EUR 460 million, which was also covered by the provision for financial risks. In 2023 losses amounted to EUR 3.5 billion, partly absorbed through the release of the remaining provision for financial risks, whereas the remaining losses are charged to the central bank's capital and reserves.

- The Bank of Greece is one of the few central banks in the euro area that remained profitable in both 2022 (profits of EUR 456.8 million) and 2023 (profits of EUR 98.7 million, see *Annual Accounts 2023*). Three main reasons contributed to this. First, the structure of the Bank's investment portfolio and its successful active management. Second, the yields of Greek sovereign bonds held in its portfolios were not so low or negative as were the sovereign bond yields of other European countries. Third, the positive effect of the redistribution of monetary income, which constitutes a complex procedure for the allocation of profits and losses from monetary policy operations conducted by the NCBs of the Eurosystem.[10]

Several central banks outside the euro area have also entered a period of low (or even negative) profitability.

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7 In accordance with Article 33 of the Statute of the European System of Central Banks and of the European Central Bank, the net profit of the ECB shall be transferred in the following order: (a) an amount to be determined by the Governing Council, which may not exceed 20% of the net profit, shall be transferred to the general reserve fund subject to a limit equal to 100% of the capital; (b) the remaining net profit shall be distributed to the shareholders of the ECB in proportion to their paid-up shares. In the event of a loss incurred by the ECB, the shortfall may be offset against the general reserve fund of the ECB and, if necessary, following a decision by the Governing Council, against the monetary income of the relevant financial year in proportion and up to the amounts allocated to the national central banks.

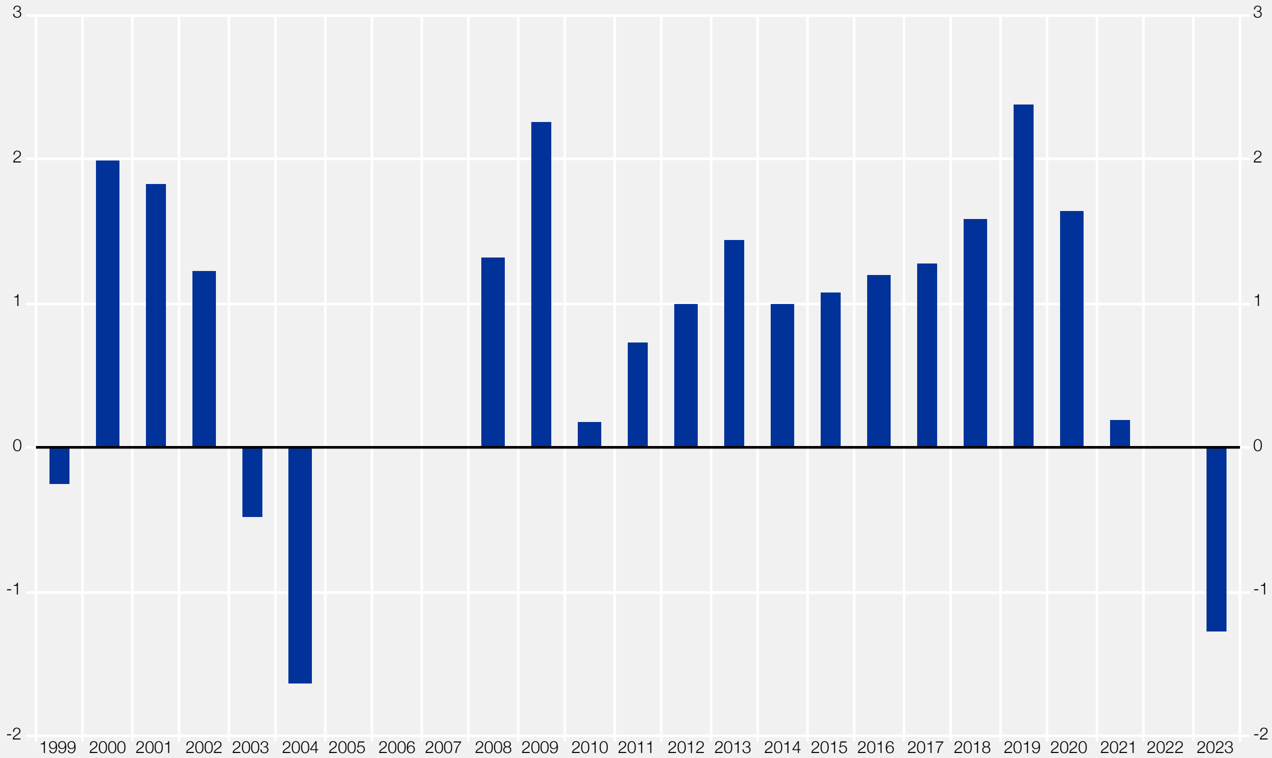
8 See Deutsche Bundesbank, press release 1.3.2023 and press release 23.2.2024.

9 See De Nederlandsche Bank, DNB 2022 Annual Report, March 2023, and press release 23.2.2024.

10 The positive effect of the redistribution of the monetary income was also a result of the Bank of Greece's more limited participation in the public sector purchase programme (PSPP), as Greek government bonds were not eligible for this programme given that they did not have investment grade status yet (although they were eligible for PEPP). For more details regarding the concept of monetary income, see Bank of Greece, *Annual Accounts 2022*, "Monetary Income in the Eurosystem", p.15.

Chart B Financial results of the ECB

(profits/losses for the year in EUR billion)



Source:ECB.

- The Swiss National Bank reported unprecedented losses of CHF 132.5 billion for 2022. The losses of the Swiss National Bank are associated though with different factors, as they are mainly attributed to the collapse of its foreign currency positions accumulated to restrict the appreciation of the Swiss franc. It reported a loss of CHF 3.2 billion for 2023.[11]

- The US Federal Reserve reported for 2023 the largest losses in its history, amounting to $114.3 billion,[12] whereas in the previous year it has reported net profits of $58.8 billion. These losses stemmed from the surge of interest rates, coupled with the Fed's large bonds portfolio, and were recognised in its balance sheet as a deferred asset to be set off against future profits.

- The Bank of England has reported profits in recent years, given that as early as 2009 it has been decided that the profits or losses stemming from the asset purchase programmes[13] would be passed to the UK government. Until September 2022, the Bank of England transferred profits to UK government, whereas after recording losses on its bond portfolios, HM Treasury was required to transfer annually to the Bank of England significant amounts as indemnity for these losses.

- It is noteworthy that both the US Federal Reserve and the Bank of England have sold securities held in their portfolios, which had an adverse impact on their financial results.

11 See Swiss National Bank, press release 4.3.2024.
12 See Federal Reserve, press release 12.1.2024.
13 See Bank of England, *Quarterly Bulletin 2022 Q1*, "QE at the Bank of England: a perspective on its functioning and effectiveness", 18.5.2022.

- Lastly, the Swedish central bank reported a loss of just over SEK 80 billion for 2022. As a result, its equity turned negative (SEK -18 billion). For this reason, it has reached an agreement with the Swedish Government on its recapitalisation.[14]

CONCLUSIONS

In conclusion, the credibility of central banks is determined by their ability to fulfil their primary objective, which in the case of the Eurosystem is price stability. Losses do not jeopardise the achievement of their objective, but are the price to pay for fulfilling their mandate.[15] The monetary policy measures of the Eurosystem have been designed with a view to ensuring price stability. The Eurosystem's bold measures were indispensable so as to bring back inflation to the medium-term target of 2%, both when it was below-target and, more recently, when upwards deviations were recorded. The Governing Council of the ECB stands ready to take whatever action is needed to accomplish its mission and safeguard price stability, even if the implementation of monetary policy measures may have a temporary negative impact on the financial results of the NCBs and the ECB.

14 See Sveriges Riksbank, announcement 24.10.2023.
15 See Agustín Carstens, "Central banks are not here to make profits", BIS, 9.2.2023.

IV MACROECONOMIC DEVELOPMENTS AND PROSPECTS IN GREECE

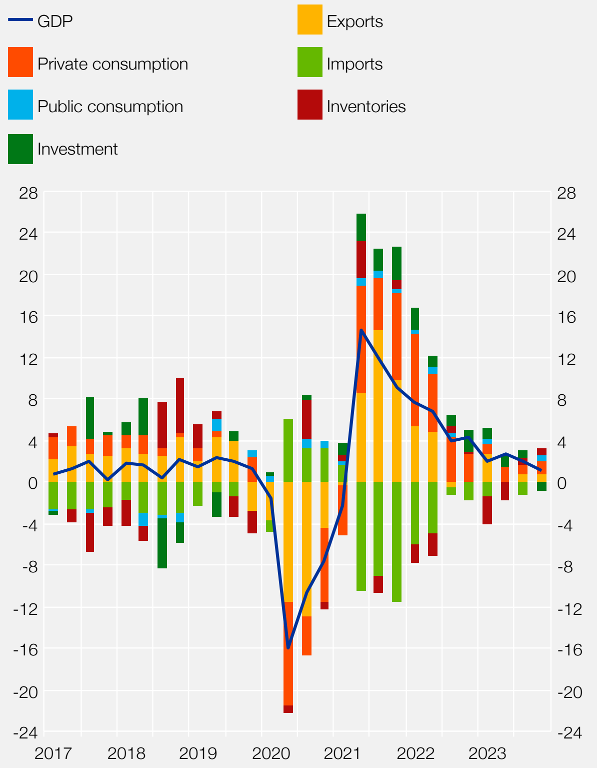
In 2023, the Greek economy grew at a slowing though satisfactory pace, clearly faster than the euro area average. Positive contributors to GDP growth were private consumption, exports of goods and services, and investment. Although some economic activity indicators, such as retail sales, declined, other sectors, such as industry, construction and services, showed positive signals. Nevertheless, consumer confidence was dragged down in the second half of the year, as a result of natural disasters that affected the country, heightened international uncertainty due to geopolitical developments in the Middle East, as well as persistent food inflation.

Headline inflation decreased substantially, mainly due to falling energy prices. However, upward pressures on the prices of processed food, non-energy industrial goods and services pushed core inflation above headline inflation. The labour market largely remained buoyant in 2023, with the unemployment rate dropping further and employment growing, albeit at a slower pace.

The current account deficit decreased markedly in 2023 against 2022, as imports of goods fell more than the corresponding exports and travel receipts grew, thanks to the strong performance of tourism.

Chart IV.1 Contributions to annual GPD growth on the demand side (Q1 2017-Q4 2023)

(contributions in percentage points)



Source: ELSTAT.
Note: Data on GDP components refer to constant 2015 prices and are seasonally adjusted.

The greatest challenge for the Greek economy is to maintain a satisfactory growth rate. Continuing structural reforms, fully implementing projects under the National Recovery and Resilience Plan and strengthening Greece's export dynamics should contribute in this direction.

The Greek economy is expected to grow by 2.3% and 2.5% in 2024 and 2025, while inflation should stand at 2.8% and 2.2%, respectively. The risks surrounding the GDP growth forecast are mainly tilted to the downside and are associated with possible adverse geopolitical developments and a further slowdown in the European economy, catastrophic climate crisis events, possible delays in the absorption of RRF funds and reform fatigue.

1 OVERVIEW OF DEVELOPMENTS AND PROSPECTS[1]

Economic activity grew in 2023, albeit at a slower pace than in 2022. The key drivers of growth were private consumption, gross fixed capital formation and exports. On the other hand, higher

1 The cut-off date for information and data used in this analysis is 22.3.2024.

Table IV.1 Demand and GDP (2020-2023)

(annual percentage changes and percentage point contributions; at constant market prices of 2015)

	2020	2021	2022	2023	2023 (Q1)	2023 (Q2)	2023 (Q3)	2023 (Q4)
Private consumption	-7.4 (-5.2)	5.8 (4.1)	7.4 (5.5)	1.8 (1.3)	1.1 (0.8)	2.1 (1.5)	1.2 (0.9)	1.8 (1.3)
Public consumption	3.0 (0.6)	1.8 (0.4)	2.1 (0.5)	1.7 (0.4)	2.8 (0.6)	1.1 (0.2)	-0.4 (-0.1)	2.7 (0.5)
Gross fixed capital formation	2.0 (0.2)	19.3 (2.3)	11.7 (1.6)	4.0 (0.6)	8.2 (1.1)	9.2 (1.3)	4.8 (0.7)	-5.7 (-0.9)
Housing investment	19.0 (0.2)	27.3 (0.3)	33.7 (0.4)	20.7 (0.4)	47.9 (0.7)	45.9 (0.6)	27.7 (0.4)	-18.7 (-0.4)
Domestic final demand[1]	-4.3 (-4.3)	6.5 (6.8)	6.9 (7.4)	2.1 (2.3)	2.4 (2.5)	2.8 (2.9)	1.4 (1.5)	0.9 (1.0)
Inventories and statistical discrepancy (% of GDP)	2.2%	2.8%	2.0%	1.4%	-1.1%	0.0%	3.2%	2.7%
Domestic demand	-3.9 (-4.0)	7.0 (7.7)	6.0 (6.5)	1.5 (1.5)	0.7 (0.7)	2.2 (2.3)	2.5 (2.6)	0.4 (0.4)
Exports of goods and services	-21.5 (-7.8)	24.2 (7.8)	6.2 (2.5)	3.7 (1.5)	7.2 (2.7)	0.3 (0.1)	1.9 (0.7)	2.1 (0.8)
Imports of goods and services	-7.3 (2.7)	17.9 (-7.1)	7.2 (-3.3)	2.1 (-1.0)	3.3 (-1.4)	-0.6 (0.3)	2.9 (-1.3)	0.0 (0.0)
Foreign demand	**... (-5.1)**	**... (0.7)**	**... (-0.8)**	**... (0.5)**	**... (1.3)**	**... (0.4)**	**... (-0.6)**	**... (0.8)**
GDP at market prices	**-9.3**	**8.4**	**5.6**	**2.0**	**2.0**	**2.7**	**2.1**	**1.2**

Source: ELSTAT. Quarterly annual accounts, 7 March 2024. Annual data are not seasonally adjusted. Quarterly data are seasonally adjusted.
Note: Percentage point contributions in brackets.
1 Excluding inventories and statistical discrepancy.

imports, largely due to rising private consumption and investment, had a negative contribution to GDP growth (see Table IV.1 and Chart IV.1).

Most indicators of economic activity (e.g. manufacturing production, construction and car sales) continued to register positive growth rates, while others (such as the volume of retail sales) decelerated or declined. Moreover, business expectations and consumer confidence deteriorated – albeit less than the corresponding European indicators – due to rising uncertainty over developments in the Middle East, as well as persisting inflationary pressures on food (see Chart IV.2). Nevertheless, the Purchasing Managers' Index (PMI) still suggests growth for Greek manufacturing output.

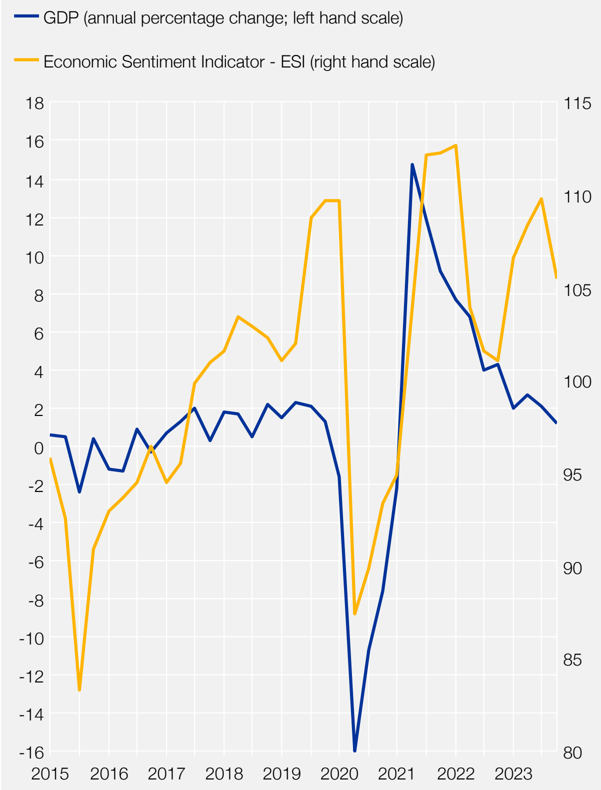
The Greek real estate market continued to attract investor demand in 2023, particularly for prime properties, pushing property prices further up. The outlook for the real estate market remains positive; however, price corrections at European and international level, together with inflation, energy costs and high interest rates, could lead to milder price growth rates in the period ahead.

The labour market improved further in 2023, albeit at a more moderate pace. Total employment grew by 1.3% and the unemployment rate dropped further to stand 1.4 percentage points below its 2022 level. Compared with the recent past, signs of a labour market tightening are now increasingly evident, as firms, particularly in sectors such as construction and tourism, find it difficult to hire workers matching their needs, despite a significant increase in wages in 2023.

Headline inflation decelerated markedly in 2023, mainly owing to a strong decline in the prices of energy goods. Nevertheless, HICP excluding energy recorded high rates of increase, which reflects upward pressures on food prices, as well as on the prices of industrial goods and services. Despite uncertainty driven by geopolitical developments, further deceleration of both headline and core inflation is expected in 2024, as all individual components are trending downwards (see also Box IV.1).

Following significant improvement in previous years, the international competitiveness of the Greek economy appeared to stagnate or even decline slightly in 2023, amid a worsening international trade environment. The effective exchange rate indices reached a 20-year best in 2022 before deteriorating slightly in 2023, mainly due to the appreciation of the euro. Moreover, the available composite structural competitiveness indicators are now stagnant, following significant progress in the past three years.

Chart IV.2 GDP and ESI[1] (Q1 2015-Q4 2023)



Sources: ELSTAT and European Commission/IOBE.
1 Three-quarter moving average.

The current account deficit dropped considerably in 2023 compared with 2022, mainly owing to a larger decrease in imports of goods than in the corresponding exports, as well as a rise in travel receipts and an improvement in the secondary income account, despite a deterioration in the primary income account.

In an international environment of mounting geopolitical uncertainties, as well as challenges such as the green transition, the rise of generative artificial intelligence and population ageing, maintaining high growth rates in the medium term is warranted. To this end, economic policy should focus on the following: (a) sustaining the structural reform momentum, with an emphasis on chronically dysfunctional areas, such as delivery of justice and curbing tax evasion, as well as strengthening competition in product markets; (b) efficient use of resources under the European recovery instrument NGEU to the greatest degree possible, particularly investment associated with infrastructure, green growth and digital transition, which are expected to boost total productivity in the economy; and (c) further shifting the Greek economy towards exports. Exports of goods and services now exceed 40% of GDP; nevertheless, further challenges need to be addressed, i.e. the fact that over half of total exports is concentrated in three areas (travel receipts, sea transport and fuel), exports of goods are highly import-intensive, and exports of high-tech products account for a very small share of the total.

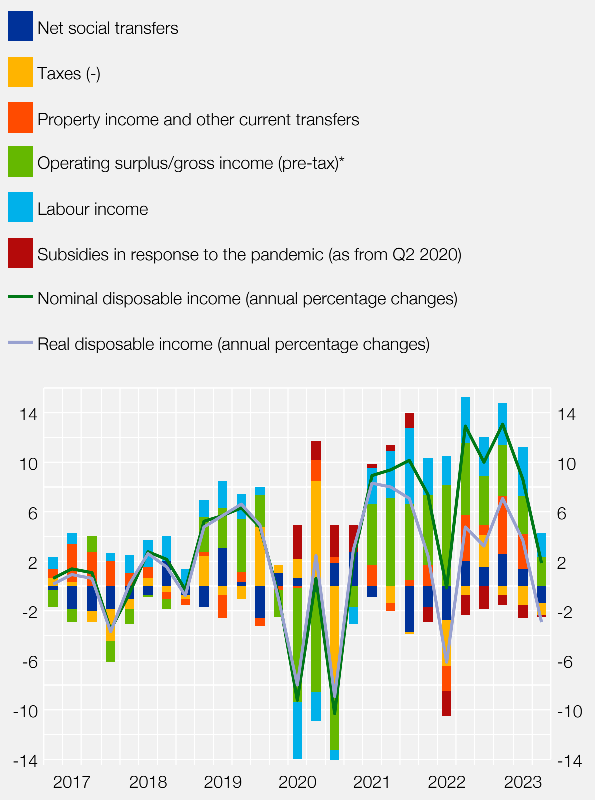
According to the latest Bank of Greece projections, economic activity is expected to grow by 2.3% in 2024 and by 2.5% in 2025. Inflation is projected at 2.8% for 2024 and at 2.2% for 2025. Risks to the growth forecasts of the Bank of Greece are tilted to the downside and concern: (i) a possible deterioration of growth rates in major euro area countries, compounded by the geopolitical crisis in Ukraine and the Middle East, and the ensuing implications for the global economic environment; (ii) potential natural disasters related to the impact of the climate crisis; (iii) a lower-than-expected implementation rate of actions under the NGEU; and (iv) potential delays in implementing reforms.

2 ECONOMIC ACTIVITY: DEVELOPMENTS AND PROSPECTS

2.1 Developments on the demand side

Economic activity kept improving in 2023 at an adequate – albeit decelerating – pace compared with 2022. The key drivers of growth were private consumption and exports of goods and serv-

Chart IV.3 Contributions to changes in disposable income (Q1 2017-Q3 2023)



Sources: ELSTAT, Quarterly non-financial accounts of institutional sectors and Bank of Greece calculations.
* Before subsidies in response to the COVID-19 pandemic, as from Q2 2020.
Note: Taxes = current income and wealth taxes + taxes on production and imports (incl. ENFIA).

ices, while smaller positive contributions to GDP growth came from gross fixed capital formation and public consumption. On the other hand, an increase in imports, although more muted than in 2022, exerted a dampening effect on growth (see Table IV.1 and Chart IV.1).

Private consumption registered more moderate growth rates in 2023 (1.8%, from 7.4% in 2022), following the very high rates recorded post-pandemic, due to the normalisation of consumer demand. Household consumer spending was supported by an increase in real disposable income. According to the latest quarterly non-financial accounts of institutional sectors published by ELSTAT, the nominal disposable income of households and non-profit institutions serving households (NPISHs) grew by an average of 7.4% in the first nine months of 2023, while real disposable income rose by 2.2% due to inflation. The increase in households' nominal disposable income over this period is mainly attributable to a rise in the disposable income of the self-employed and in dependent labour income (see Chart IV.3). An increase in dependent labour income in the first nine months of 2023 (5.5%) was mainly driven by higher remuneration per employee (4.4%) and, to a lesser extent, by a rise in the number of persons employed (0.7%). Moreover, the government's fiscal measures to bolster household income, such as support to vulnerable households against rising energy prices, significantly contributed to boosting household income,[2] as did the raise in the minimum wage and active employment policies.

Consumer spending in 2023 was mostly driven by demand for durable goods and services, as suggested by a rise in the services output, increased sales of private vehicles (see Table IV.2) and hikes in individual components of the retail sales volume index for durables.[3] This means that the trend to consume durable and semi-durable goods and services, which started in the post-pandemic period and was driven by pent-up demand and pandemic-related accumulated savings, continued, albeit at a decelerating pace. By contrast, consumption of non-durable goods, as recorded by the retail sales food sub-index, declined following the very high rates registered during the pandemic, partly owing to base effects. As a result of sustained consumer demand, despite a drop in households' purchasing power due to inflation, households' savings accumulated during the pandemic were reduced.[4] The households' average saving ratio (de-

2 Simulations of alternative policy scenarios (see Hua, S. and W. Shi (2024), "The Cost-of-Living Crisis: Impact and Policy Support to Households, Evidence from Micro-Level Data", IMF Selected Issues Paper 2024/007) suggest that targeted fiscal measures to support vulnerable households in Greece might effectively mitigate income losses attributable to the rising cost of living.

3 The sub-indices of the retail sales volume index associated with the consumption of durable goods continued to increase in 2023, although at a decelerating pace compared with 2022 and 2021: "Furniture-electrical appliances-household equipment" (+2.4%) and "Clothing-footwear" (0.9%). By contrast, the sub-index "Food shops" declined (-1.3%) in the same period.

4 According to Dybczak et al. (2023), "Household Savings in Selected Southern European Countries, Evidence from Cross-Country Micro-Level Data", IMF WP/23/150, the rise in inflation has a negative impact on households' savings, disproportionately affecting low savings.

Table IV.2 Indicators of consumer and investment demand (2019-2024)

(annual percentage changes)[1]

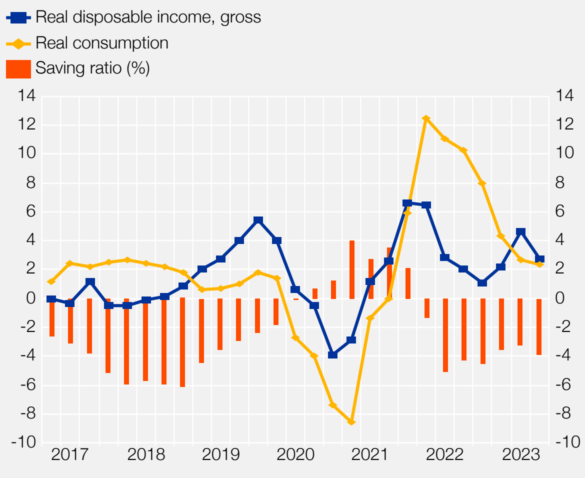
	2019	2020	2021	2022	2023	2024 (available period)
Retail trade volume (overall index)	0.8	-4.0	10.3	3.3	-3,3	-
Retail trade confidence indicator	6.0	-20.6	15.2	-5.3	21.9	2.1 (Jan.-Feb.)
Consumer confidence indicator	-19.6	-32.5	-35.4	-50.7	-40.0	-47,2 (Feb.)
New private passenger car registrations	13.2	-26.6	22.2	6.7	16,5	13,5 (Jan.-Feb.)
Consumer credit[2]	-1.6 (Dec.)	-2.2 (Dec.)	-0.3 (Dec.)	1.2 (Dec.)	3.4 (Dec.)	3,8 (Jan.)
Capacity utilisation in the capital goods industry	69.8	70.1	74.7	68.7	71.0	-
Production of capital goods	6.0	0.2	13.8	5.5	6,0	1,0 (Jan.)
Public Investment Programme (PIP) disbursements	-9.5	88.7	-15.5	22.5	1.6	51,9 (Jan.)
Bank credit to domestic non-financial corporations[2]	1.7 (Dec.)	9.8 (Dec.)	2.8 (Dec.)	11.9 (Dec.)	5.8 (Dec.)	4,9 (Jan.)
Housing credit[2]	-3.4 (Dec.)	-2.7 (Dec.)	-3.0 (Dec.)	-3.6 (Dec.)	-3.5 (Dec.)	-3,5 (Jan.)
Construction output index (at constant prices)	-6.0	-9.6	6.9	24.2	12,8	-
Volume of building activity on the basis of permits	9.8	5.9	45.9	-2.2	20,3 (Jan.-Nov.)	-
Construction confidence indicator	0.0	7.9	103.5	-10.2	24.3	25,2 (Jan.-Feb.)

Sources: ELSTAT (retail trade, cars, production of capital goods, volume of building activity, construction output); IOBE (confidence indicators,capacity utilisation); IOBE and European Commission (consumer confidence); and Bank of Greece (consumer and housing credit; business creditand PIP disbursements).
1 Excluding the consumer confidence indicator (weighted percentage balances of positive and negative answers) and capacity utilisation in thecapital goods industry (percentages).
2 Reflecting changes in balances adjusted for loan write-offs/write-downs, exchange rate changes and reclassifications.

fined as the ratio of gross savings to gross disposable income) rolling over four quarters shows that the high saving ratios registered during the pandemic dropped in 2022 and 2023, returning to pre-pandemic levels (see Chart IV.4).

Chart IV.4 Private consumption, households' disposable income and saving ratio¹ (Q1 2016-Q3 2023)

(annual percentage changes in private consumption and in households' disposable income)

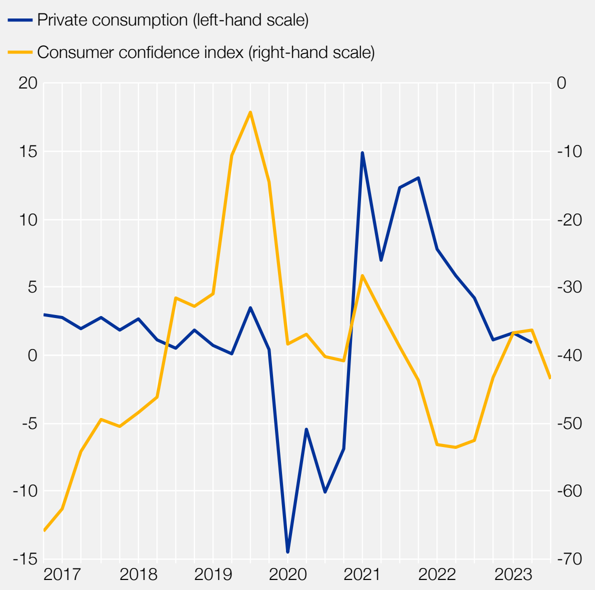


Source: ELSTAT, Quarterly non-financial accounts of institutional sectors.
1 Four-quarter moving average.

Regarding developments in private consumption this year, an expected further increase in households' real income, as a result of a rise in dependent labour income and a further decline in inflation, should support private consumption. Risks to developments in private consumption are mostly associated with a recent increase in uncertainty due to geopolitical shocks, as suggested by a decline in the consumer confidence indicator (see Chart IV.5 and Box IV.2 on developments in consumer confidence), as well as a potentially persistent upward course of prices, mainly of food and housing, which has distributional effects and mostly affects lower-income households. Poor households spend a relatively higher share of their income on food and housing,[5] thus their purchasing power is seriously eroded by price increases in these items. Nevertheless, the government's targeted measures

5 According to the Household Budget Survey for 2022, the share of the average equivalised expenditure for food and housing in total spending reaches 58.1% for the 20% of the country's population with the lowest income, while the corresponding share for the 20% of the country's population with the highest income is 25.6%.

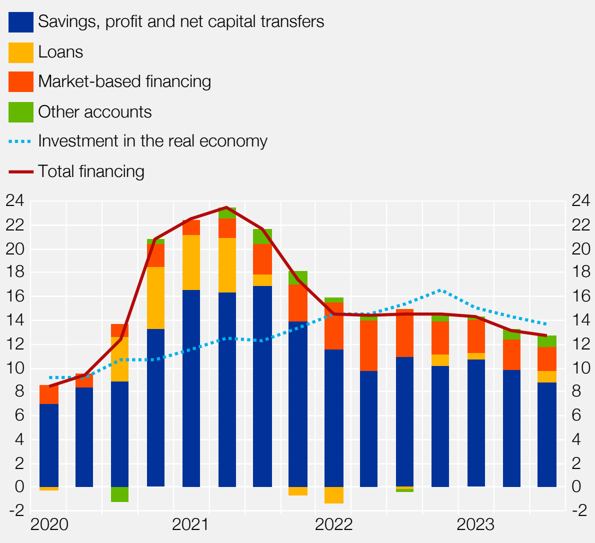
Chart IV.5 Private consumption and consumer confidence (Q1 2017-Q4 2023)



Sources: ELSTAT and European Commission (consumer confidence index).
Note: Private consumption: annual percentage changes; consumer confidence: weighted balances.

Chart IV.6 Sources of private sector financing and real investment (Q1 2020-Q3 2023)

(four-quarter moving sums; % of GDP)



Sources: Bank of Greece and ELSTAT.

to support more vulnerable households against price increases are expected to provide some relief. Moreover, recent legislation (Law 5082/19.1.2024) on price rationalisation and transparency, as well as stronger competition, are expected to mitigate inflationary pressures and support consumer spending, particularly by vulnerable households.

Investment continued to expand faster than economic activity in 2023, as the positive outlook for the Greek economy encouraged enterprises to push forward their investment plans. More specifically, gross fixed capital formation rose by 4.0% in 2023, against 11.7% in 2022. Positive growth rates are largely due to an increase of 20.7% in "residential investment" and 10.0% in "other construction". Investment in "transport equipment" also rose significantly by 14.9%, whereas investment in "machinery and weapon systems" decreased by 3.1% and in "ICT equipment" by 12.4%. Lastly, investment in "other products" grew by 2.5%.

In the third quarter of 2023, total private sector financing dropped to 12.7% of GDP from 13.2% of GDP in the second quarter of 2023, due to lower internal financing[6] (private savings). The decline in internal financing (from 9.9% of GDP in the second quarter of 2023 to 8.8% in the third quarter) is explained by strongly negative household savings and the mildly weakening dynamics of business profits. Specifically, in the third quarter of 2023, household savings became less negative (-2.1% of GDP), moving closer to pre-pandemic levels (2017-2019 three-year average: -2.4% of GDP), and positive savings by businesses fell slightly (10.9% of GDP), albeit remaining above the 2017-2019 three-year average (8.3% of GDP). It should be noted that grants to enterprises under the Recovery and Resilience Facility (RRF) mitigated the drop in savings (see Chart IV.6).

In particular, strong performance in tourism and the economy in general, combined with inflationary pressures and expectations, as well as RRF grants, helped maintain high business profits. By contrast, the almost complete withdrawal of pandemic-associated support measures, the phasing out of most energy-associated support measures, lower purchasing power of households, continued release of pent-up de-

6 Internal financing is defined as the sum of households' gross savings, businesses' retained earnings and net capital transfers.

mand and paying off loans and taxes weighed heavily on household savings and more than offset the positive performance of business savings.

On the other hand, a countervailing effect came from slightly improving external financing. This reflected a substantial increase in debt financing (domestic and foreign), as well as the fact that financing by tapping capital markets (mainly non-residents' investment in non-listed companies and investment in real estate and corporate debt issuance) remained to an extent buoyant.

In the third quarter of 2023, gross capital formation of the private sector in the real economy dropped to EUR 29.7 billion or 13.7% of GDP, from a post-Q2 2009 high of 16.5% of GDP in 2022. It is worth noting that in the fourth quarter of 2022 net capital formation by enterprises had registered a historical high (8.1% of GDP), reflecting a strong expansion of firms' productive capital base. In the third quarter of 2023 this upward trend moderated.

In the years 2020 and 2021, the private sector had registered financial surpluses; however, since 2022 internal savings have been inadequate to finance investment in the real economy. As a result, the third quarter of 2023 witnessed a financing gap of 4.9% of GDP (a deficit of 5.4% of GDP for households; a surplus of 0.5% of GDP for enterprises).

During the pandemic and the retail trade lockdown, electronic trade surged and continues to enjoy consumers' confidence, despite return to normality. The expansion of electronic trade has made it necessary to develop logistics, which has registered increased activity, with significant new investment under way in the near future, mostly in large urban areas. Construction works on Thriasio Logistics Centre I are projected to begin in 2024 (Thriasio I), an investment amounting to EUR 220 million, on a total land surface of 588,000 sq. m., expected to create 220,000 sq. m. of ground-floor multi-purpose area. The land concession contract for the construction of Thriasio II should be concluded within 2024; the cost of the project should reach EUR 696 million and the term of the contract is set at 30 years. In addition, new investment projects in logistics are scheduled in other locations in the Western Attika and Thessaloniki regions in the near future. Robust growth in logistics is expected to benefit traffic in large ports, such as Piraeus and Thessaloniki, turning Greece into a major transit hub and promoting growth in the transport sector.

The return to investment grade, as well as the medium-term growth outlook of the Greek economy markedly improved the business climate, accelerating the privatisation programme. On the basis of the 2024 Budget forecasts, privatisation proceeds are estimated to reach EUR 406.4 million in 2023, against EUR 586.6 million in 2022. Significant acceleration is projected for 2024 and proceeds should reach EUR 5,770.7 million, mainly as a result of the contracts granting the right to use and exploit Attica Tollway (Attiki Odos) and Egnatia Highway. In September 2023, the Government Economic Policy Council (KYSOIP) approved the updated Asset Development Plan under the HRADF, which includes 33 projects, such as the long-term contract of granting the right to use and exploit Egnatia Highway and Attica Tollway; efficient utilisation of the Athens Water Supply and Sewerage Company (EYDAP) and the Thessaloniki Water Supply and Sewerage Company (EYATH); the sale of a stake in HelleniQ Energy; and the utilisation of ports, marinas and other real estate.

2.2 Developments on the supply side

After rising strongly in 2022, gross value added in the economy continued to increase, albeit at a milder pace (1.2% in 2023, against 4.7% in 2022). The rise in the output of the economy is largely attributable to a contribution from services, particularly the business services sector, and construction to a lesser extent (see Table IV.3).

Agricultural output decreased, largely as a result of natural disasters that hit Greece in the second half of 2023. Industrial output including energy flattened in 2023; however, the industrial

Table IV.3 Gross value added at basic prices (2021-2023)

(annual percentage changes and sectoral contributions; at constant prices of 2015)

	2021	2022	2023	2023 (Q1)	2023 (Q2)	2023 (Q3)	2023 (Q4)
Agriculture, forestry and fishing	-3.8 (-0.2)	12.1 (0.5)	-7.4 (-0.3)	2.3 (0.1)	-5.4 (-0.2)	-9.7 (-0.4)	-17.6 (-0.8)
Secondary sector	12.5 (2.3)	-3.4 (-0.6)	1.7 (0.3)	0.7 (0.1)	-0.2 (0.0)	1.6 (0.3)	3.2 (0.6)
Industry including energy	12.5 (2.1)	-4.9 (-0.8)	0.0 (0.0)	-1.7 (-0.3)	-3.4 (-0.5)	0.7 (0.1)	2.9 (0.4)
Construction	12.0 (0.2)	9.5 (0.2)	14.0 (0.3)	17.9 (0.4)	25.5 (0.5)	8.2 (0.2)	5.1 (0.1)
Tertiary sector	7.3 (5.6)	6.0 (4.6)	1.6 (1.3)	3.5 (2.7)	2.2 (1.7)	0.5 (0.4)	1.0 (0.8)
Trade, hotels and restaurants, transport and storage	14.2 (3.0)	10.8 (2.5)	0.4 (0.1)	3.7 (0.9)	-0.5 (-0.1)	-0.8 (-0.2)	0.1 (0.0)
Information and communication	11.1 (0.4)	4.2 (0.1)	5.7 (0.2)	7.2 (0.2)	9.2 (0.3)	1.0 (0.0)	5.9 (0.2)
Financial and insurance activities	-2.0 (-0.1)	2.1 (0.1)	3.1 (0.2)	3.6 (0.2)	4.7 (0.2)	2.1 (0.1)	2.3 (0.1)
Real estate activities	5.6 (1.0)	2.3 (0.4)	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)
Professional, scientific and technical activities	9.7 (0.5)	11.6 (0.6)	6.1 (0.4)	14.3 (0.8)	9.4 (0.5)	4.9 (0.3)	1.5 (0.1)
Public administration and defence	1.6 (0.3)	2.4 (0.5)	0.7 (0.1)	1.2 (0.2)	2.6 (0.5)	-0.7 (-0.1)	-0.1 (0.0)
Arts, entertainment and recreation	14.9 (0.5)	11.7 (0.4)	7.9 (0.3)	9.2 (0.3)	6.4 (0.2)	6.2 (0.2)	8.6 (0.3)
Gorss value added at basic prices	7.7	4.7	1.2	3.0	1.6	0.1	0.3

Source: ELSTAT, Quarterly national accounts, 7 March 2024. Annual data are not seasonally adjusted. Quarterly data are seasonally adjusted.
Note: Percentage point contributions in brackets.

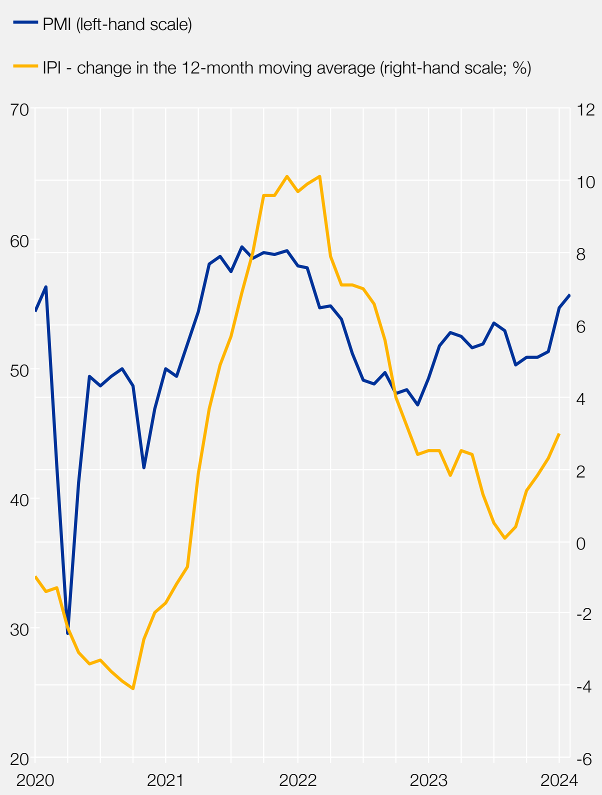
production index continued to increase in 2023, mainly due to higher manufacturing production. The output in manufacturing maintained a positive momentum on the back of strong performance in certain sectors such as the food industry, manufacture of coke and refined petroleum products and pharmaceuticals. Moreover, according to PMI survey data (see Chart IV.7), manufacturing output is still growing due to higher demand.

Construction output continued to increase vigorously in 2023 (14.0%). The positive momentum in this sector is also reflected in a significant rise in both the construction output index and the volume of building permits (see Table IV.2).

In 2023, the gross value added of the services sector grew at an annual rate of 1.8% and had a contribution of 1.4 percentage points to the change in total gross value added (GVA). Individual sectors of the Greek economy made different contributions to total GVA growth. A broader sector involving tourism, wholesale and retail trade and transport, which accounts for 1/4 of total GVA, contributed by 20% to the increase in total GVA growth in 2023. This is generally in line with turnover developments by sector (see Table IV.4). Specifically, the turnover of accommodation and food service activities (nominal values) grew by 10% in 2023, following a very a high growth rate (51.6%) in 2022.

Tourism services in 2023 exceeded the historical highs of 2019 in terms of arrivals and receipts (in nominal values), despite doubts early in the year, mostly attributable to the weakening incomes of European households as a result of inflationary pressures. Moreover, the outbreak of the war in the Middle East early in the fourth quarter of 2023 does not appear to have had a significant impact on tourist flows; besides, the fourth quarter does not account for a large share of total arrivals and receipts (for more details, see Box IV.4 and Section 7). Thus, in 2023 non-

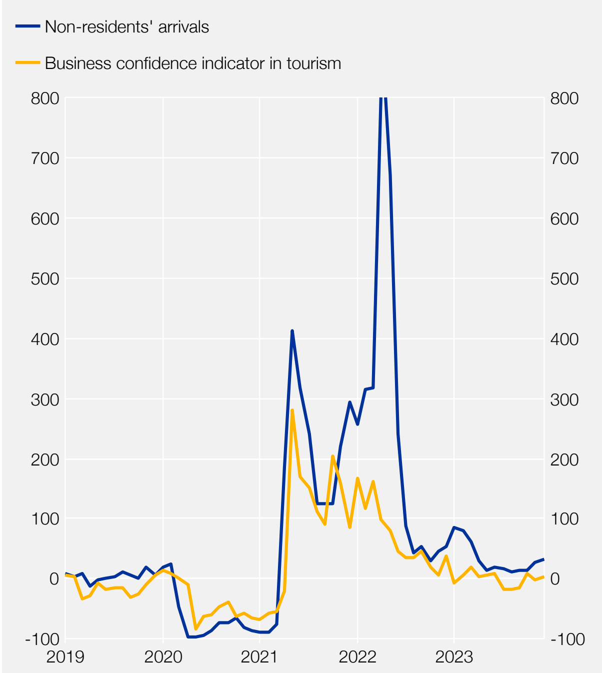
Chart IV.7 Purchasing Managers' Index[1] (PMI) and Industrial Production Index (IPI) (January 2020-February 2024)



Sources: S&P Global and Hellenic Institute of Purchasing and Supply Management for the PMI and ELSTAT for the IPI.
Note: IPI data refer to the January 2020-January 2024 period.
1 Seasonally adjusted index; a value over 50 denotes an increase.

Chart IV.8 Inbound traveller flows and business confidence in tourism (January 2019-December 2023)

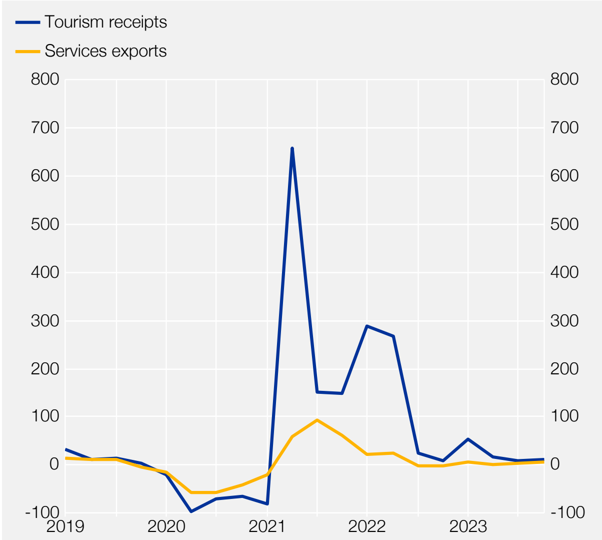
(% rates of change)



Sources: Bank of Greece and IOBE (expectations).

Chart IV.9 Tourism receipts and services exports (Q1 2019-Q4 2023)

(annual rates of change)



Sources: Bank of Greece and ELSTAT.
Note: Reference year: 2015, at constant prices; seasonally adjusted data.

residents' arrivals reached 32.7 million and travel receipts in nominal terms (including cruise receipts) stood at EUR 20.6 billion (see Charts IV.8 and IV.9), registering an annual increase of 17.6% and 16.5%, respectively, and exceeding their corresponding 2019 levels by 4% and 13%. In addition, during the same period, foreign passenger traffic both in Athens International Airport and in regional airports around Greece was strongly positive, outperforming 2019 levels.

Travel receipts made a significant contribution to the Greek economy as, among other things, they support private consumption and services exports, containing the expansion of the current account deficit. Upgrading the country's tourism product calls for successfully addressing certain challenges, such as spreading traveller flows more evenly across regions, extending the tourist season, covering shortages in human resources in hotels around the country and implementing new infrastructure projects. As regards 2024, the outlook appears positive, despite geopolitical tensions in Ukraine, the Middle East

Table IV.4 Activity indicators in the services sector (2020-2023)

(annual percentage changes)

	2020	2021	2022	2023
A. Services turnover indices				
1. Trade				
Wholesale trade	-10.8	22.1	21.4	-2.2
Retail trade	-3.9	11.5	12.4	3.7
Trade and repair of cars and motorcycles	-13.0	29.0	15.8	21.2
2. Transport				
Land transport	-17.8	10.6	21.3	15.8
Sea and coastal passenger transport	-25.8	6.3	32.9	1.7
Air transport	-65.9	64.1	94.3	22.6
Storage and supporting transport activities	-14.6	13.6	23.2	-2.7
3. Hotels and restaurants				
Accommodation and food service activities	-62.7	79.9	54.6	8.4
4. Information and communication				
Telecommunications	-2.6	7.3	5.8	5.5
Film, video and TV programme production, recordings and music products	-17.5	10.6	20.6	12.8
Programming and broadcasting activities	0.4	-0.3	12.6	-23.7
5. Professional-scientific-technical activities				
Legal, accounting and management consulting services	-2.9	12.2	23.9	6.9
Architectural and engineering services	4.1	21.7	8.8	12.1
Advertising and market research	-8.6	12.0	11.5	11.6
Travel agencies and related activities	-75.0	102.3	96.6	24.1
B. Passenger trafic				
Athens International Airport	-68.4	52.8	84.1	24.0
Aegean Airlines[1]	-65.5	38.9	73.3	25.9
Piraeus Port	-59.3	34.7	45.5	16.4
C. Services confidence indicator	-22.2	37.8	1.9	2.7

Sources: ELSTAT (services turnover), Athens International Airport, Aegean Airlines, Piraeus Port Authority and IOBE (services confidence).
1 Including charter flights.

and, recently, the Red Sea and pressures to external demand, due to high, albeit decelerating, inflation in European countries. Moreover, favourable leading indicators of tourist activity in Greece, such as business confidence in tourism, flight bookings and agreements already concluded by hotels,[7] confirm a positive environment for another year of growth.

3 DEVELOPMENTS AND PROSPECTS IN THE REAL ESTATE MARKET

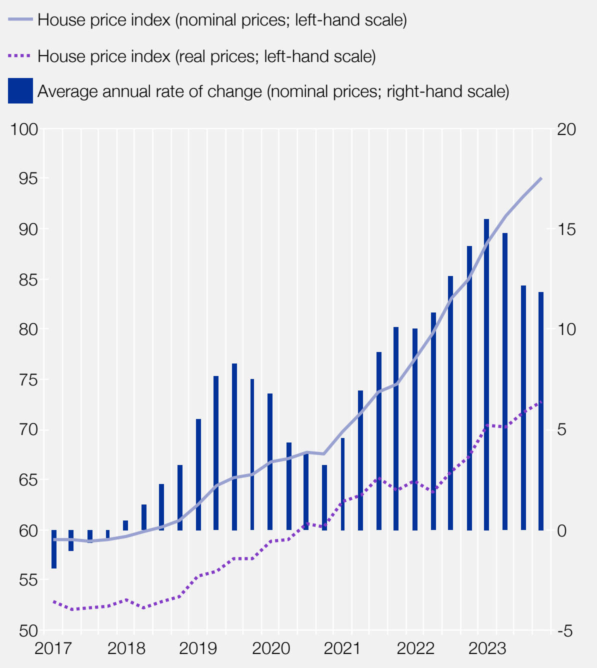
In the course of 2023, the Greek real estate market maintained high levels of demand, both foreign and domestic, especially as far as its prime segment is concerned. The uncertainties that emerged over the past two years from heightened geopolitical instability and the effects of high inflation have not halted the upward trend in prices and do not appear to have a significant impact

7 According to a survey by the Research Institute for Tourism (RIT – 2024), "Annual Survey for the Hotel Sector 2023", 47% of hotels (almost the same as in 2023) have signed contracts for 2024, among which 30.3% are commitment-type contracts, which commit 52% of the rooms.

on construction and investment activity for the time being. The residential real estate (RRE) sector, especially investment properties, attracted the greatest interest, with the respective rates of price increases being particularly high. At the same time, during the year, significant investments in offices with certified bioclimatic characteristics, hotels and professional warehousing facilities of high standards were started or completed, while several large land purchases were made for the development of new professional uses. Price developments and individual adjustments recorded at European and international level in the recent period, together with inflationary conditions, higher energy costs and high interest rates, should, if sustained, lead to lower growth rates or even a possible correction of prices for the domestic market, in particular for real estate with uses, characteristics and locations that attract lower demand.

Chart IV.10 House price index (Q1 2017-Q4 2023)

(2007=100; annual percentage changes)



Source: Bank of Greece.

According to the apartment price indices published by the Bank of Greece, the housing market in the country as a whole continues to record robust annual rates of price growth, which, however, decelerated in the last quarters of 2023. In more detail, the data (appraisals) collected from domestic credit institutions point to a price increase in the housing market at the country level in 2023, with apartment prices (in nominal terms) rising significantly by 13.4% on an annual basis, compared with increases of 11.9% in 2022 and 7.6% in 2021 (see Chart IV.10).[8] The prices of old apartments (aged over 5 years) rose at an average annual rate of 14.2% in 2023, which was slightly higher than that of new apartments (12.4%). Broken down by geographical area, strong annual growth rates in apartment prices were recorded in the major urban centres of the country. More specifically, the highest annual rates of increase in prices, overshooting the average annual rate for the country as a whole, were recorded in Thessaloniki (16.2%), the other major cities (14.5%) and Athens (13.7%), while in the rest of the country the rate of increase was more moderate (10.8%).

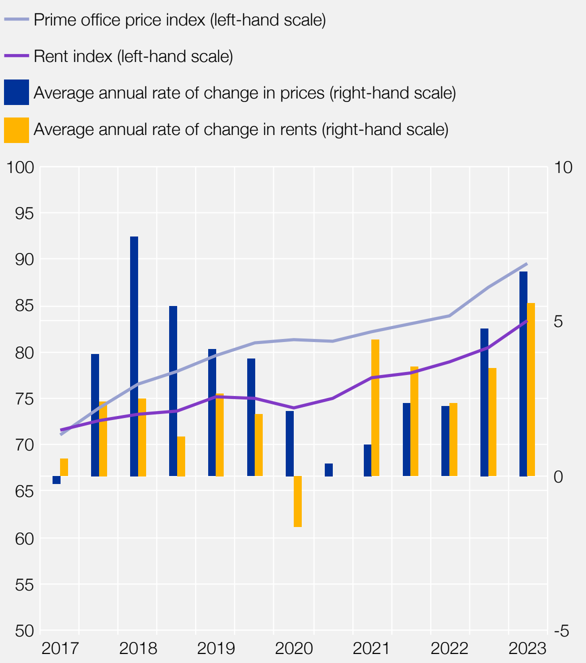
The further strengthening of the residential real estate market in 2023 was strongly supported by strong investment interest, mainly from abroad,[9] by low supply of particularly high-quality housing, buoyant tourism and short-term leasing, as well as high demand for the subsidised housing loan programme ("My Home") for young people who want to buy their first home. Sustained market dynamics is also confirmed by residential investment (non-seasonally adjusted ELSTAT data at constant prices), which increased by 20.7% in 2023, compared with 33.7% in 2022, although remaining at a low level as a percentage of GDP (1.9%). Moreover, in the first eleven months of 2023, construction activity for dwellings in the country as a whole (ELSTAT data) recorded a significant increase in both the number and building volume of new building permits, by 23.6% and 16.0%, respectively. At the same time, positive business expectations

8 Looking at each quarter of 2023, annual price growth rates were 15.4%, 14.7%, 12.1% and 11.8% in the first, second, third and fourth quarters respectively.

9 Foreign investment interest is reflected in Golden Visa data, as well as in Bank of Greece data on net inflows of funds for real estate purchases by foreign investors. More specifically, for 2023, net receipts for real estate purchases from abroad are still at a high level as a percentage of total investment in the country (42.5%), exceeding EUR 2 billion, up by 8.0% relative to 2022 (EUR 2,133 million, compared with EUR 1,975 million in 2022).

Chart IV.11 Office indices (H1 2017-H1 2023)

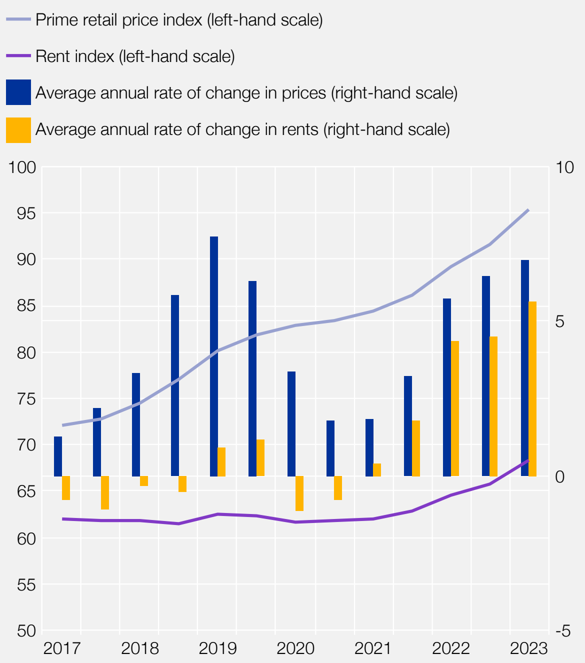
(2010=100; annual percentage changes)



Source: Bank of Greece.

Chart IV.12 Retail property indices (H1 2017-H1 2023)

(2010=100; annual percentage changes)



Source: Bank of Greece.

for residential construction (IOBE data) strengthened further in 2023 in annual terms (18.1%), compared with a moderate increase of 4.0% in 2022. However, the total cost of new residential building construction (ELSTAT data) continued to increase by 6.2% for the year as a whole, but slowed down from 8.8% in 2022, while the annual growth rates for the cost of construction materials were higher (7.6% in 2023, compared with 11.0% in 2022). It is worth noting that, despite the significant growth of the Greek residential real estate market, the total amount of new housing loans after six years of continuous increases continues to remain subdued, while it declined by 1.9% in 2023, against an increase of 20.7% in 2022. Moreover, according to the Bank Lending Survey data for the fourth quarter of 2023, there has been a continuous decline in demand for loans for house purchase (with the exception of the second quarter of 2023) for almost two years owing to rising mortgage rates.

In the commercial real estate sector, based on data collected by the Bank of Greece, in the first half of 2023, prime office prices increased by 6.6% year-on-year and prime retail prices by 6.9%. In Athens, the corresponding rate of increase in office prices was higher (7.2%), while a large increase was also recorded in the rest of Greece (7.3%), following a long period of relative stagnation in prices. In Thessaloniki, by contrast, after two consecutive half-years of high growth rates, a mild price correction was recorded compared to the previous year (-0.5%) (see Chart IV.11). With regard to prime retail properties, in the first half of 2023 significant positive annual rates of change were recorded in the Athens (8.4%) and Thessaloniki (9.8%) price indices, while in the rest of Greece the respective rate was 3.7% (see Chart IV.12). Finally, over the same period for the country as a whole, both office and retail rents recorded an annual increase of 5.6%.

In the January-August 2023 period, construction activity relating to commercial property (ELSTAT data) was positive overall, while a mixed picture was recorded in the individual categories. More specifically, the number of new office permits increased (44.8%), while the corresponding total volume (in cubic metres) decreased by 10.1% year-on-year. New hotel permits fell by

31.1%, while the corresponding building volume declined by 4.0%. Finally, retail property construction activity was particularly strong in volume terms (280.5%), but more moderately positive in terms of the number of new permits (13.9%). The positive growth rates in new office and retail property permits confirm ongoing investment interest, as well as user mobility towards modern standard properties. The variation in the growth rates recorded in the hotel sector comes after several years of strong growth rates in construction activity in this segment, even in periods when construction for other commercial (but also residential) uses was in recession.

On the basis of data collected by the Bank of Greece, in the course of 2023 the funds of Real Estate Investment Companies (REICs) and other investment portfolios and real estate development companies were mostly directed to the purchase and/or development of prime office space, mainly with modern bioclimatic features. Substantial funds were also attracted by hotels, business warehousing facilities and special-use investment dwellings. According to the results of the Bank of Greece's commercial real estate market survey, in the first half of 2023 the minimum return on prime offices situated in the capital's most commercial locations ranged between 5.5% and 6.6%, around the same level as in the previous half-year, while minimum returns on prime retail properties centrally located in Athens ranged between 5.3% and 6.0%.

The outlook for the Greek real estate market for the period ahead remains moderately positive, as uncertainties related to global geopolitical instability continue to be significant. Higher inflation and construction costs, as well as higher interest rates, affect the investment profit margin and increase the demanded real estate returns, which may also gradually affect prices on the domestic market, which in recent years has been strongly boosted by foreign investment. In the short term, however, and as long as foreign demand remains strong, prices are expected to continue their upward trend in the high-end market segment, also driving prices on secondary markets. Finally, it should be noted that the serious housing cost problem that has arisen in recent years, as a result of extensive housing investment for rental, raises important issues that call for action by the State. Interventions aimed at boosting supply and curbing investment demand for residential property (short-term leases, Golden Visa) in first-home areas are expected to dampen the rates of increase in prices and rents and may lead to local price corrections.

4 EMPLOYMENT AND UNEMPLOYMENT: DEVELOPMENTS AND PROSPECTS

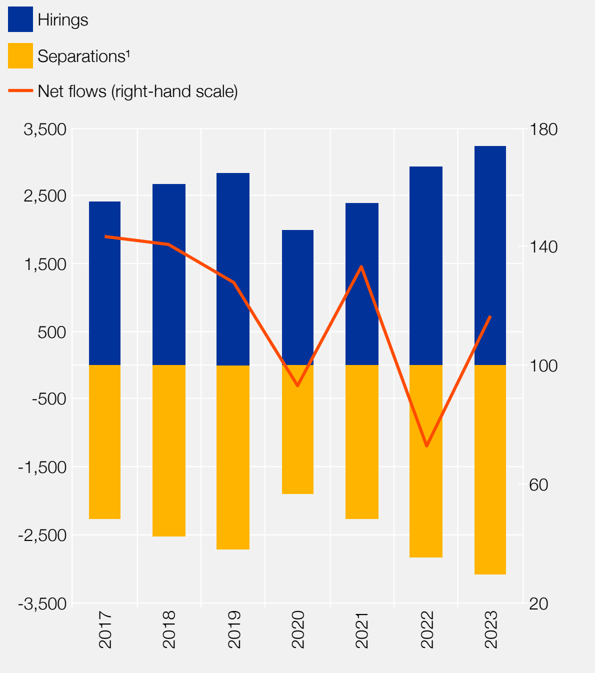
The labour market continued to improve in 2023, albeit at a more moderate pace. Total employment increased by 1.3% in 2023, against 5.4% in 2022, while the unemployment rate decreased to 11.1% in 2023, from 12.4% in 2022. Moreover, with unemployment dropping, the labour market is still tightening, as evidenced by a significant annual increase of 62.2% in job vacancies in 2023. The medium-term prospects remain positive, while a further rise in employment and a decline in the unemployment rate are anticipated in the years ahead.

Based on dependent employment flows data from the ERGANI information system, in 2023 dependent employment registered a new marked increase towards pre-pandemic levels. Nevertheless, more challenges are facing the labour market, as the decline in the unemployment rate makes it harder to cover job vacancies, particularly in construction, manufacturing and the primary sector.

The rise in employment is also reflected in ERGANI information system data, as the balance of dependent employment flows in the private sector was positive in 2023, hovering at higher levels compared with the previous year. Specifically, 2023 saw the creation of 116,649 new jobs, against 72,847 in 2022 (see Chart IV.13), while the higher positive balance is mainly attributable to a significant rise in hirings (10.4%), with the largest contribution coming from tourism. Full-time employment contracts (51.4% of total hirings, from 51.1% in 2022) exceeded flexible forms of employment.

Chart IV.13 Dependent employment flows in the private sector (2017-2023)

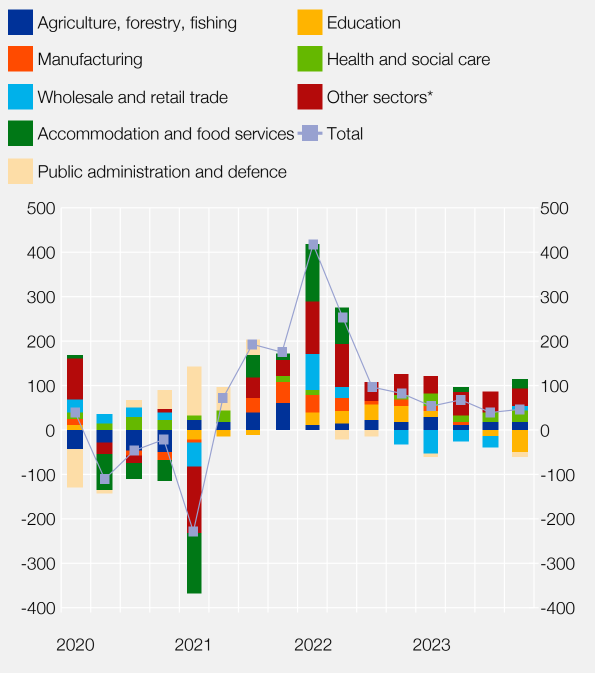
(thousand persons; annual data)



Sorces: Manpower Employment Organisation (OAED) and "ERGANI" information system.
1 Including termination and expiration of contracts and voluntary quits.

Chart IV.14 Changes in the number of the employed: total and by sector of the economy (Q1 2020-Q4 2023)

(year-on-year; in thousands)



Source: ELSTAT, Labour Force Survey.
* Including sectors with less than 6% contribution to total employment.

Based on electronic reporting data from the ERGANI information system, in 2023 the number of employees under private-law contracts increased by 2.1% compared with 2022 and the number of enterprises with employees grew by 1.1%. 54.5% of employees worked in small and medium-sized enterprises (i.e. with up to 49 employees). In particular, 16.0% of employees worked in micro enterprises (with fewer than 5 employees), which represent 72.3% of total enterprises; 11.5% in enterprises with 5-9 employees (14.4% of the total); 27.0% in enterprises with 10-49 employees (11.5% of the total); 18.1% in enterprises with 50-249 employees (1.5% of the total); and 27.4% of the employees worked in enterprises with over 250 employees, which account for a very small share (0.3%) of total enterprises.

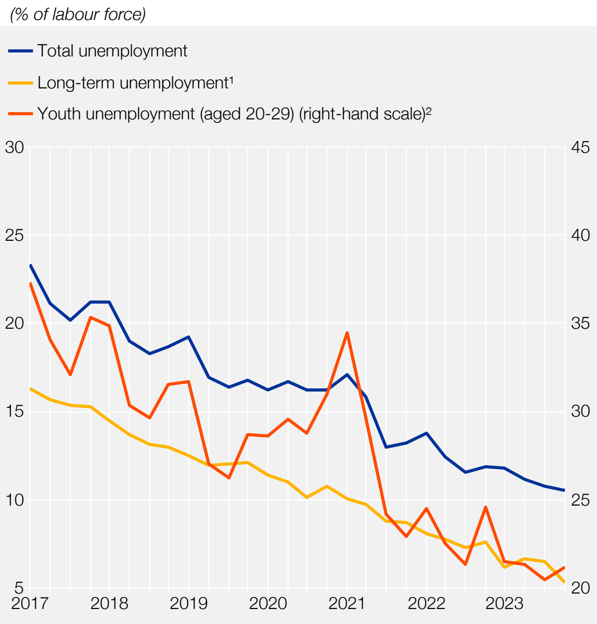
According to ELSTAT Labour Force Survey (LFS) data, in 2023 the number of employees grew by 1.3% relative to 2022. Similarly, dependent employment increased by 0.4% and the number of other employees rose by 3.3%, mainly reflecting a significant increase in the self-employed without staff, and family workers; on the other hand, the self-employed with staff registered a remarkable decline.

A rise in employment during this period came from an increase in the number of persons employed in agriculture (4.2%), manufacturing (1.0%), construction (11.6%), human health and social welfare activities (7.5%), transportation and storage (9.9%), as well as financial and insurance activities (13.6%). By contrast, a large decline in persons employed in wholesale and retail trade reversed the positive results of 2022 and contributed to a drop in the sector's share in total employment (see Chart IV.14).

A breakdown by gender shows that in 2023 employment growth was stronger for women than for men (2.7% and 0.2%, respectively). Regarding annual developments by age group, people aged 45-64 years, who account for the largest contribution to total employment, registered positive growth (2.5%) and boosted their corresponding share, while people aged 30-44 years, with the second largest contribution to total employment, recorded negative annual growth (2.2%) and a decreasing share. The share of part-time employment fell to 7.5% of total employment in 2023 (8.2% in 2022), mainly owing to a drop in the third quarter of 2023 (6.6%).

In 2023, the labour force participation rate for the 15-64 age group reached 69.5%, marginally higher than in 2022. Specifically, the participation rate increased for the 45-64 age group and decreased for the groups aged 25-29 years and 30-34 years. Labour force participation rates, especially youth participation, are of particular importance, as an ageing population may undermine the sustainability of social security systems. Policies promoting reconciliation of family and work life and investing in the education and training of human capital, along with tax system reforms and the removal of incentives to early retirement, are important in this respect, as they help to reintegrate and keep more workers in the labour market.

Chart IV.15 Unemployment rates (Q1 2017-Q4 2023)



Source: ELSTAT, Labour Force Survey.
1 For 12 months or over.
2 As a percentage of the labour force of this age group.

The unemployment rate in 2023 dropped to 11.1%, decreasing for both men and women, although the female unemployment rate (14.3%) remained significantly above the male unemployment rate (8.5%). In addition, both the unemployment rate for the young aged 20-29 years and the long-term unemployment rate fell, respectively, to 21.1% and 6.2% (see Chart IV.15). Youth employment and participation in the labour market would benefit from strengthening demand in sectors and jobs with high added value, attracting foreign direct investment and increasing the openness of the Greek economy.

The short-term prospects for employment (IOBE/European Commission business surveys) reflected positive developments in 2023, slightly improving against 2022, mainly in trade and construction and, to a lesser degree, in services and manufacturing. The weighted employment outlook index increased against the previous year, reflecting good performance during the tourist season, as well as the expected positive effects following the implementation of the National Recovery and Resilience Plan.

Labour market tightness, which reflects an excess of job vacancies over persons looking for a job and is expressed as the job vacancy rate,[10] increased following the pandemic, while the labour market momentum was maintained in 2023, moving closer to the EU27 average. As a whole, the labour market still remains tighter than before the pandemic, with construction, manufacturing, trade and tourism showing the largest increases in tightness. Specifically, by economic activity sector, in 2023 construction (job vacancy rate: 2.6%), manufacturing (1.8%), trade (1.7%), accommodation (4.3%), professional, scientific and technical activities (4.0%), as well as real estate management (1.7%) recorded the highest levels of tightness. By contrast, financial and insurance activities and education registered the lowest job vacancy rates, albeit showing moderate increases against 2022.

As regards institutional interventions and active labour market policies, refining Law 5053/2023, which created a safety net for private sector employees and minimised red tape and administrative burdens, the new social security Law 5078/2023 introduced a fee (which does not translate into social security entitlements) payable to e-EFKA amounting to 10% of insurable earnings for employed pensioners (see also Annex to Chapter V).

10 The job vacancy rate (JVR) measures the proportion of total posts that are vacant expressed as a percentage as follows: JVR = number of job vacancies * 100 / (number of occupied posts + number of job vacancies).

Moreover, the Labour Inspectorate intensified on-site inspections, conducting over 72,000 within 2023. In addition, the number of unemployed beneficiaries increased, as did the budget for "Upskilling and reskilling programmes for unemployed people in high demand sectors, with particular emphasis on digital and green skills", funded by the Recovery and Resilience Fund.[11]

A substantial improvement in the labour market is attributable to the high growth rates of the Greek economy, significant structural reforms in the past and introduction of new reforms, which have increased labour market resilience and flexibility. However, the continuous increase in employment and the decline in the unemployment rate have significantly reduced the pool of staff available to firms for hiring, as shown by rising indicators of labour market tightness, concerning both skilled and unskilled workers. To address labour market tightness, it is necessary to further strengthen the technical education of workers and to reskill the long-term unemployed.[12] Continuing to implement effective training programmes for the workforce, in particular for vulnerable social groups, should help preserve jobs and integrate vulnerable groups into the labour market. In order to close the critical labour and skills gap in the domestic labour market, it is important to integrate immigrants and introduce incentives to attract skilled immigrants. However, it is crucial to establish an institutional framework for migrant inflows and to design strategies and policies to gradually and successfully integrate immigrants into the society. Appropriate mechanisms for matching labour force skills with labour market needs must also be put in place, particularly at a local level. Moreover, higher wage costs in 2023 call for reducing or subsidising social security contributions, in order to enhance the competitiveness of Greek enterprises and preserve jobs. Measures are also needed to improve the work-life balance, in order to integrate and keep in the labour market the inactive population, with a focus on women and youth. Lastly, implementing reforms under the National Recovery and Resilience Plan to enhance overall productivity, potential output growth and structural competitiveness should help boost economic growth, improve the labour market and maintain social cohesion.

5 INFLATION, WAGES AND BUSINESS PROFITS: DEVELOPMENTS AND PROSPECTS – INCOME INEQUALITY AND POVERTY

5.1 Inflation rates

Inflation, as measured by the Harmonised Index of Consumer Prices (HICP), stood at 4.2% in 2023, down from 9.3% in 2022. Core inflation (HICP excluding energy and unprocessed food) reached 6.2% in 2023, up from 5.7% in 2022 (see Tables IV.5 and IV.6 and Chart IV.16).

The surge in inflation in 2022 was propelled by all main components, with energy making the strongest average contribution (41.0%). A partial reversal of this course was registered in 2023 in terms of energy goods, which dropped by 13.4% on average and was the only component driving overall harmonised inflation to a lower average annual rate in 2023 compared with 2022 (see Chart IV.17). As opposed to energy, the other four components moved upwards, which is reflected in rising core inflation (6.2% in 2023 from 5.7% in 2022), thus mitigating a further decline in headline inflation.

Specifically, the contribution of energy to headline inflation was -1.69 percentage points. All key energy components recorded negative average annual rates in 2023: motor fuel: 7.8%; elec-

11 Specifically, the number of the unemployed beneficiaries rose from 150,000 to 250,000, and the corresponding budgeted amount increased from EUR 303,074,800 to EUR 504,149,200. The project provides vocational training to the unemployed, focusing on digital and green upskilling and reskilling, as well as financial literacy, in order to reduce labour supply and demand mismatches and improve employability. Under the project, participants are provided with training vouchers (Ministry of Labour and Social Security, press release, 22.12.2023).

12 Law 5082/2024 "Strengthening the National System for Vocational Education and Training and Lifelong Learning", passed in January 2024, promotes upgrading technical education and improved skills matching.

Table IV.5 Price developments in Greece and the euro area

(anual percentage changes)

	2019	2020	2021	2022	2023
A. Euro area					
Harmonised Index of Consumer Prices (HICP) and its components					
Overall index	**1.2**	**0.3**	**2.6**	**8.4**	**5.4**
Goods	1.0	-0.4	3.4	11.9	5.7
Food	1.8	2.3	1.5	9.0	10.9
Processed food[1]	1.9	1.8	1.5	8.6	11.4
Unprocessed food	1.4	4.0	1.6	10.4	9.1
Industrial goods	0.5	-1.8	4.5	13.6	2.9
Non-energy industrial goods	0.3	0.2	1.5	4.6	5.0
Energy	1.1	-6.8	13.0	37.0	-2.0
Services	1.5	1.0	1.5	3.5	4.9
Overall index excluding energy and unprocessed food	**1.2**	**0.9**	**1.5**	**4.8**	**6.2**
B. Greece					
Harmonised Index of Consumer Prices (HICP) and its components					
Overall index	**0.5**	**-1.3**	**0.6**	**9.3**	**4.2**
Goods	-0.3	-1.1	2.0	12.9	3.8
Food	0.0	1.3	1.2	9.7	9.9
Processed food[1]	-0.8	-0.1	0.7	9.5	9.3
Unprocessed food	2.0	4.5	2.2	10.1	11.1
Industrial goods	-0.5	-3.3	2.7	15.9	-1.0
Non-energy industrial goods	-0.4	-0.4	-0.7	5.0	6.4
Energy	-0.3	-9.8	12.4	41.0	-13.4
Services	1.3	-1.4	-1.0	4.5	4.5
Overall index excluding energy and unprocessed food	**0.5**	**-1.0**	**-0.7**	**5.7**	**6.2**

Sources: Eurostat, ELSTAT and calculations based on ELSTAT data.
1 Including alcoholic beverages and tobacco.

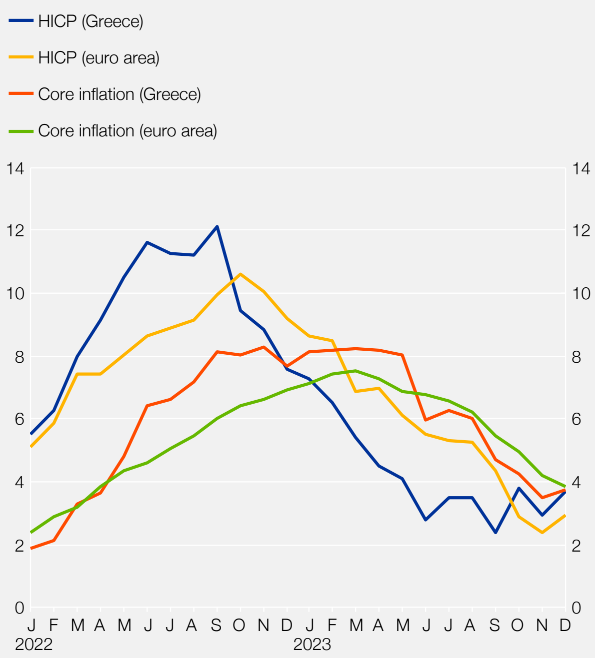
tricity: 15.0%; natural gas: 49.3%; and heating oil: 11.8%. Disinflation of the energy components is attributable to lower energy prices compared with 2022, government subsidies and strong downward base effects.

Food products registered an average annual increase of 9.9% in 2023 (processed food: 9.3%; unprocessed food: 11.1%), contributing to headline inflation by 2.61 percentage points (processed food: 1.71 percentage points; unprocessed food: 0.90 percentage points). Large average annual increases were registered by rice (12.8% in 2023 from 5.8% in 2022); pork (15.5% from 9.8%); cured meat products (12.9% from 6.1%); fresh fish (5.5% from 2.1%); eggs (16.1% from 12.4%); olive oil (30.1% from 20.1%); fresh fruit (9.6% from 4.8%); preserved or processed vegetables (10.9% from 8.2%); sweet preserves-jam-honey (7.5% from 2.4%); chocolate and chocolate products (8.2% from 4.4%); confectionery (8.1% from 3.2%); ice cream (9.0% from 6.5%); sauces and seasonings (13.5% from 9.7%); pre-cooked meals (11.2% from 8.7%); non-alcoholic beverages (10.9% from 6.7%) and alcoholic beverages (7.3% from 2.9%).

Total food inflation, which includes food, non-alcoholic beverages, alcoholic beverages and tobacco, peaked in December 2022 (12.9%), but has since been declining, with few exceptions, dropping to 7.6% in the last two months of 2023.

Chart IV.16 Harmonised index of consumer prices (HICP) and core inflation in Greece and the euro area (January 2022 - December 2023)

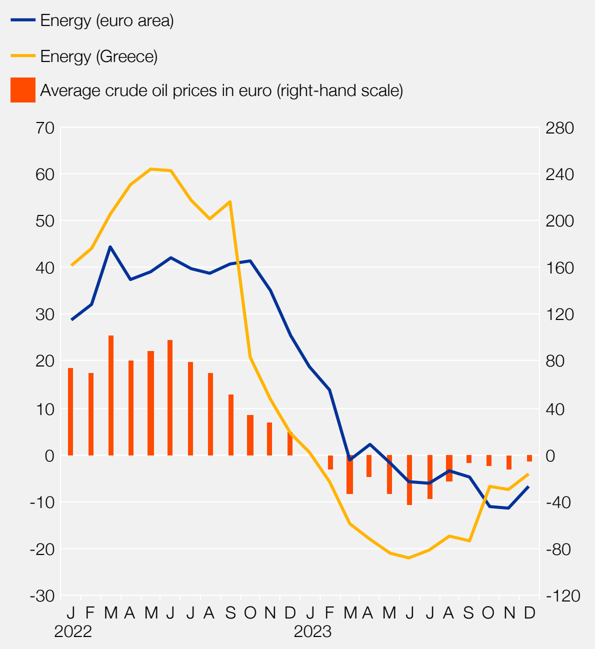
(year-on-year percentage changes)



Sources: Eurostat, ELSTAT and calculations based on ELSTAT data.

Chart IV.17 Evolution of energy prices in the euro area and in Greece and of Brent crude oil prices in euro (January 2022-December 2023)

(year-on-year percentage changes)



Sources: Eurostat; calculations based on ELSTAT data; for crude oil prices (UK Brent), calculations based on ECB data.

Table IV.6 Price indices

(annual percentage changes)

	Consumer price index (CPI)							
		Sub-indices						
Years	Overal index	Goods	Services	CPI excluding fresh fruit & vegetables and fuel	CPI excluding food and fuel	Food & non-alcoholic beverages	Fresh fruit & vegetables	Fuel
2019	0.3	-0.4	1.2	0.1	0.4	-0.1	5.6	0.4
2020	-1.2	-1.6	-0.8	-0.4	-0.6	1.4	6.5	-12.3
2021	1.2	2.4	-0.5	0.2	-0.1	1.4	1.2	14.9
2022	9.6	14.0	2.4	7.1	5.7	11.8	10.3	34.7
2023	3.5	3.3	3.8	5.1	3.4	11.6	11.5	-11.4

	Industrial producer price index						Import price index in industry	
	Domestic market				External market			
		Sub-indices						
Years	Overal index	Overall index excluding energy	Intermediate goods	Consumer goods	Overal index	Overall index excluding energy	Overal index	Overall index excluding energy
2019	0.6	0.3	1.1	-0.3	-0.6	-0.5	3.0	0.0
2020	-4.6	-0.1	-0.6	0.2	-15.5	-0.3	-10.8	-0.9
2021	11.9	2.3	4.1	0.8	20.0	5.5	20.0	2.8
2022	33.5	6.6	10.1	4.7	39.8	15.2	27.7	7.1
2023	-6.5	5.0	3.4	6.5	-9.0	4.0	-12.3	1.2

Source: ELSTAT and calculations based on ELSTAT data.

In 2023, inflation reached 6.4% for non-energy industrial goods and 4.5% for services, contributing by 1.22 and 2.01 percentage points, respectively, to headline inflation. From 2022 to mid-2023, there was a high pass-through of continuous strong increases, mainly in energy but also in food, to both harmonised inflation and core inflation. Since then, both components have been registering positive annual growth rates, with a clear decelerating trend.

The average annual rate of change of non-energy industrial prices in 2023 (6.4%) topped the corresponding rate for 2022 (5.0%), due to a further acceleration of the annual rate of change of clothing-footwear prices (6.7% in 2023 from 5.2% in 2022), as well as of durables and household goods (8.4% in 2023 from 5.0% in 2022). Falling prices of energy goods and easing international pressures on supply chains led to a deceleration of the annual growth rates of these goods in the second half of 2023.

Services inflation remained at its 2022 levels (4.5%). Stronger inflationary pressures were registered in 2023 mainly in food service activities (7.1% in 2023 from 4.7% in 2022), cultural activities (3.8% from 2.6%) and healthcare-associated services, i.e. medical, dental and paramedical (4.4% from 1.2%), and hospital care (1.1% from 0.6%).

Stronger non-energy industrial goods inflation in 2023 drove core inflation to an average annual rate of 6.2% (from 5.7% in 2022). Core inflation was higher than headline inflation throughout 2023, continuing on a trend that had started in December 2022. A gradual deceleration of core inflation components (non-energy industrial goods, services and processed food) in the second half of 2023 caused headline and core inflation to converge again.

A drop in both harmonised headline inflation and core inflation is expected in 2024, as all components appear to be following a downward path, despite heightened geopolitical uncertainty.

5.2 Labour costs

In 2023, the increase in average wages accelerated, while the rise in total compensation of employees remained around its 2022 levels, due to the decelerating growth of total and dependent employment. Thus, the rise in productivity was moderate and unit labour costs grew substantially (see Table IV.7), while the purchasing power of average wages increased by 1.2%. Moreover, the ELSTAT labour cost index grew at an annual rate of 5.9% in 2023 (non-seasonally or otherwise adjusted data).

Specifically, in January-December 2023, 209 new firm-level agreements were concluded in the business sector, covering 137,179 employees. Of these, 59 provided for salary increases, while for the rest wages remained unchanged.[13] The minimum wage was raised by 9.4%, as from 1.4.2023, reaching EUR 780.[14] In January-September, compensation of employees in the business sector increased by an average annual 6.6% (data from non-financial accounts of institutional sectors). In addition, electronic reporting data for employees on private-law contracts in businesses[15] show that from 1.10 to 15.12.2023 the average monthly earnings were up by 6.3% year-on-year.

13 The main sectoral or occupational agreements that affected wages in 2023 were the following: A three-year agreement for banks (April 2022), providing for a 2% increase as from 1.10.2022, 1% as from 1.12.2023 and 2.5% as from 1.12.2024; a biennial contract for hotels (Dec. 2022), providing for a 5.5% rise as from 1.1.2023 and 5.0% as from 1.1.2024; a contract for tobacco companies (April 2023), providing for increases of 4%-6.8% for the 2023-2024 two-year period; a biennial contract for the food sector (food and beverages – June 2023, to cover around 400,000 employees), providing for increases of 5.5% as from 1.6.2023 and 5% as from 1.6.2024; a biennial contract for the cement industry (Dec. 2023), providing for increases of 5% as from 1.1.2023, 5% as from 1.4.2023 and 4% as from 1.1.2024 (wages had not been raised in 2021 and 2022).

14 See also Law 5013/2023, Article 39.

15 Hellenic Labour Inspectorate-Independent Authority – Public Employment Service (DYPA) – Athens Labour Unions Organization (EKA), *Special Annual Issue – Electronic reporting data for total enterprises and employees/wage-earners on private law contracts, from 1 October to 15 December 2023*, February 2024.

Table IV.7 Compensation of employees and labour costs (2022-2024)

(annual percentage changes)

Greece	2022	2023	2024 (forecast)
Total compensation of employees	5.9	6.0	7.1
Compensation per employee	2.8	5.5	5.4
Labour productivity (GDP/total employment)	3.0	1.0	1.0
Unit labour costs (total economy)	-0.2	4.5	4.4
Total compensation of employees in the general government sector	0.7	3.3[1]	-
Total compensation of employees in the business sector	8.4	6.6[1]	-

Sources: For 2022-2023: ELSTAT, data from annual national accounts and accounts of institutional sectors, 18-26.10.2023 and 25.1-7.3.2024. For 2024: Bank of Greece forecasts.
1 January-September 2023.

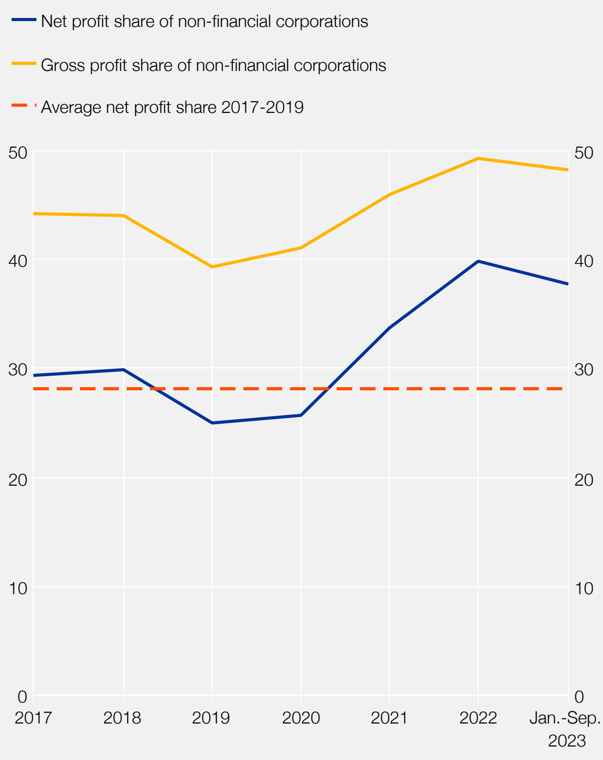
In general government, the wage bill grew by an annual average 3.1% in January-December 2023. According to the non-financial accounts, in January-September the growth rate stood at 3.3%.

In 2024, average earnings and unit labour costs are expected to continue increasing at rates similar to those of 2023, while productivity growth should remain moderate. Wage growth in 2024 should be affected by both an increase in public sector wages and the phasing out[16] of the suspension of seniority benefits for private sector employees, which had been legislated under the economic adjustment programmes. Moreover, legislation on setting the minimum wage was brought forward,[17] to allow for a new increase as from the 1st of April 2024.

5.3 Business profits

In January-September 2023, the profitability of Greek non-financial corporations decreased year-on-year (for profit margins, see also Box IV.3). The gross operating surplus of non-financial corporations declined by 1.3% in nominal terms in January-September 2023 (against a rise of 35.7% in January-September 2022), while the net operating surplus (net of the consumption of fixed capital) dropped even more, by 7.6% (against a rise of 56.9% in the corresponding period of 2022). This deterioration is mainly attributable to a significant deceleration in gross value added to 3.3% (from 25.7% in the corresponding period of 2022), while the compensation of employees grew at almost double the pace (6.2%) of gross value added (see Charts IV.18 and IV.19). Moreover, the impact of taxes less subsidies on production was significantly negative, as subsidies were markedly reduced year-on-year in January-September 2023. Specifically, pandemic-related measures were almost fully withdrawn, as were most of the energy-associated

Chart IV.18 Profit share of non-financial corporations (2017–Jan.-Sep. 2023)



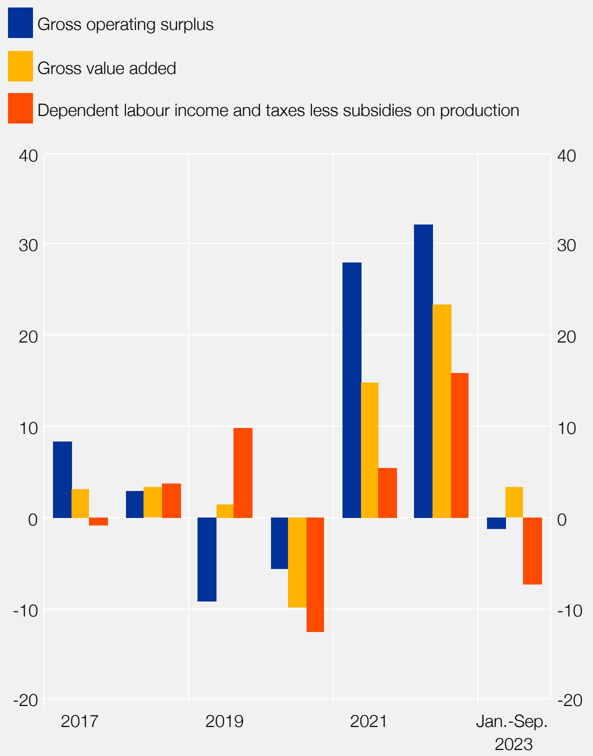
Source: Bank of Greece calculations based on ELSTAT data.
Note: The gross (net) profit share is defined as the ratio of the gross (net) operating surplus to the gross (net) value added.

16 Law 5053/2023, Article 33.
17 Law 5085/2024, Article 26.

support measures, since energy prices fell substantially. Thus, in January-September 2023, the share of net profits (defined as the ratio of net operating surplus to net value added), which reflects business performance in terms of operating profits, declined to 37.7%, against 41.4% in January-September 2022. Nevertheless, it remained impressively above the average of the pre-pandemic period 2017-2019 (28.1%). Strong performance in tourism and construction, combined with inflationary pressures and inflation expectations, as well as ongoing buoyant demand, fuelled the stellar performance of business profits in the past few years.

Chart IV.19 Contributions to the profit share of corporations (2017–Jan.-Sep. 2023)

(annual percentage changes)



Source: Bank of Greece calculations based on ELSTAT data.

5.4 Income inequality and poverty

The most recent annual data on inequality, poverty, social exclusion and living conditions in Greece come from ELSTAT, specifically from the 2022 Income and Living Conditions of Households (EU-SILC) Survey for 2021 incomes and the 2022 Household Budget Survey on consumer spending in 2022. As a result of the economic fallout of the pandemic, poverty and inequality indicators deteriorated in 2020. However, in 2021, following stronger economic activity and an improved labour market due to a decline in the unemployment rate and a rise in employment, incomes recovered, while poverty and inequality indicators improved.

Specifically, data on household incomes in 2021 derived from the EU-SILC 2022 survey show a downward shift for the following indicators:

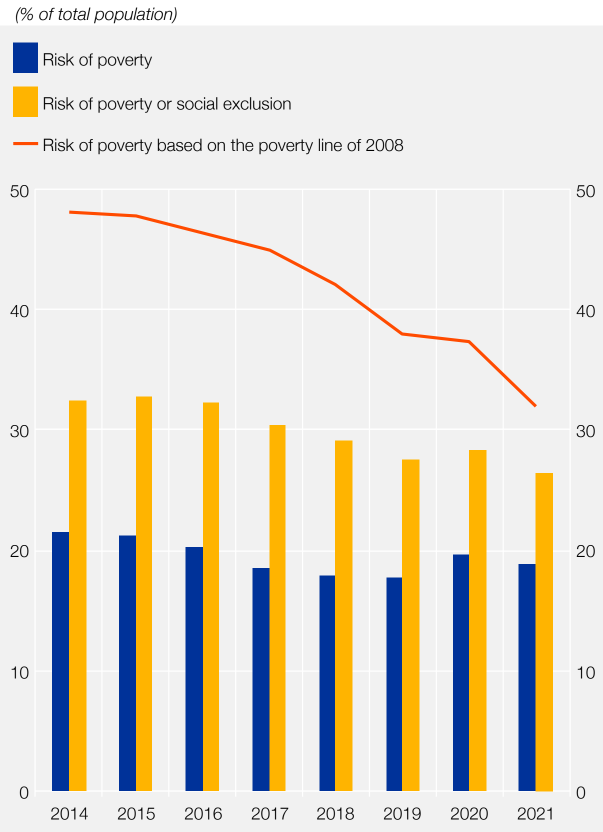
1) The at-risk-of-poverty rate decreased to 18.8%, from 19.6% for 2020 incomes (EU-SILC 2021),[18] resuming the downward trend registered before the pandemic. Nevertheless, the relative risk of poverty in Greece is the eighth highest in the EU27, remaining above the EU27 average (16.5%).

2) The Greek population living at risk of poverty or in social exclusion, in accordance with the revised definition,[19] decreased to 26.3% (or 2,722 thousand persons), from 28.3% in 2020 and 27.4% in 2019 (see Chart IV.20). According to the same survey, Greece registered the third highest risk of poverty or social exclusion among the EU27 countries in 2021. The EU27 average was 21.6%.

18 The relative poverty line, which helps calculate the relative risk of poverty, changes in accordance with the population's average living standards and is set at 60% of the median equivalised disposable income of all households (Eurostat definition). To calculate the equivalised household income, the first adult is given a weight of 1.0, the second and each subsequent person aged 14 and over are given a weight of 0.5 and each child under 14 is given a weight of 0.3. In the 2022 survey, the relative poverty threshold was EUR 5,712 for a single-person household and EUR 11,995 for a four-person household with two adults and two children under 14.

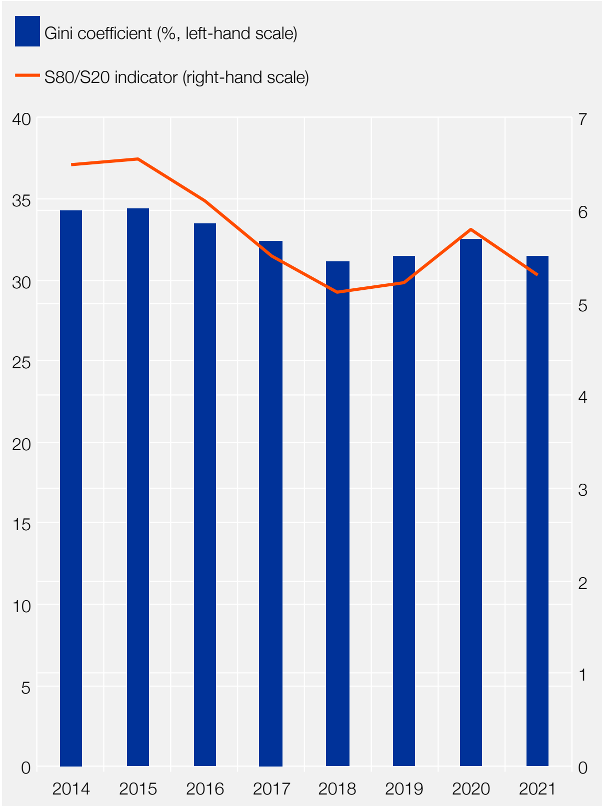
19 Revised definition under the "Europe 2030" programme; it refers to the share of population at-risk-of-poverty or in material or social deprivation (that is, lacking at least 7 out of a list of 13 goods and services) or living in households with low work intensity.

Chart IV.20 Risk of poverty (EU-SILC)



Source: EU Statistics on Income and Living Conditions (EU-SILC).
Note: Indices are illustrated according to income reference periods.

Chart IV.21 Income inequality index (EU-SILC)



Source: EU Statistics on Income and Living Conditions (EU-SILC).
Note: Indices are illustrated according to income reference periods.

3) Income inequality indicators in Greece improved in 2021, remaining above the EU27 average (see Chart IV.21). The Gini inequality coefficient dropped to 31.4% for 2021 incomes (EU27: 29.6%) from 32.4% for 2020 incomes. The S80/S20 ratio also decreased, from 5.8 for 2020 incomes to 5.3 for 2021 incomes (EU27: 4.7).[20]

In addition, the poverty indicator in absolute terms, which refers to a consistent poverty line set in terms of real purchasing power for 2008, decreased to 32.0% for 2021 incomes (from 37.3% for 2020 incomes), remaining on a downward path since 2015. However, it should be noted that the risk of poverty measured on the basis of the above poverty line barely reached 18.9% for 2008 incomes. The corresponding EU indicator is markedly lower, 12.4% for 2021 incomes.

The gap or depth of relative poverty also developed favourably,[21] dropping further to 23.8% in 2021 (from 26.4% in 2020 and 27.3% for 2019 incomes).

Nevertheless, a closer look at EU-SILC 2022 data highlights the need to better target social policy, which can also be supported by combatting tax evasion, as specific population groups

20 The Gini coefficient receives values between 0%, when the national income is equally distributed (i.e. the poorest x% of the population receives x% of national income for 0<x≤100), to 100% when the national income is distributed to a single person. The S80/S20 indicator refers to the ratio of total income received by the 20% of the country's population with the highest income to that received by the 20% of the country's population with the lowest income. Both indicators receive higher values as income inequality increases. However, the Gini coefficient takes into account the whole spectrum of income inequality, while the S80/S20 index focuses on differences in the extremes of the income distribution.

21 The poverty gap measures the difference between the median income of the poor and the poverty line as a percentage of the latter, i.e. it provides the average income deficit of the poor.

are at a higher risk of poverty: the unemployed (43.6%); the economically inactive population excluding pensioners (29.1%); households with dependent children (22.3%); single-parent households (37.7%); and children of up to 17 years of age (22.4%). These findings are consistent with another conclusion drawn from the survey results, namely that the main contribution of social policy spending to reducing the poverty rate comes from pensions (by 22.5 percentage points), while social benefits helped reduce the poverty rate by a mere 4.8 percentage points.

Relative progress has been made compared with the survey results of previous years, when the contribution of social benefits to reducing the poverty rate was smaller (e.g. 4.0 percentage points in 2016). This is also associated with a shift in social protection expenditure from 2017 onwards[22] – targeting family and housing expenditure rather than old age benefits – and the fight against social exclusion.

Favourable developments in inequality indicators in 2021 reflect the recovery of economic activity following the onset of the COVID-19 pandemic, as well as policy measures taken in 2021, which had an overall positive impact on households' disposable income. These include reducing social security contributions for employees and abolishing the solidarity levy for private sector employees. However, higher unemployment benefits and increases in the guaranteed minimum income granted in 2020 – in response to the coronavirus crisis – were suspended. As a whole, according to the EU-SILC 2022, the average equivalised disposable income of households grew by 8.8% year-on-year.

As regards the need for better targeting of social policy, some progress has been seen on multiple fronts in the past few years. For instance, on the basis of ELSTAT's quarterly data on the number of the unemployed and DYPA's monthly data on the number of the subsidised unemployed, the average coverage ratio of the unemployed[23] has been improving in the past few years and stood at 30.2% on average in 2023, probably as a result of recent changes affecting unemployed persons' obligations and the overall management of unemployment.[24]

Concerning very poor households, in line with Joint Ministerial Decision 97046 of November 2023,[25] the amount of the minimum guaranteed income was raised by 8% as from 1.12.2023, while the applicable means tests were adjusted to expand coverage. This positive development aims to consistently close protection gaps, in addition to the extraordinary financial support granted in the past few years under support measures, mainly to vulnerable households, addressing pandemic-related and energy-related implications.

Another relevant permanent legislative measure is an increase of 8% in welfare benefits as from 1.5.2023.[26] For families with children, a recent favourable reform was a hike in the tax-

22 According to data from the European System of integrated Social PROtection Statistics (ESSPROS).

23 The ratio of subsidised unemployed persons to the total number of unemployed persons.

24 See Law 4921/2022 renaming the Manpower Employment Organisation (OAED) as Public Employment Service (DYPA). Reforms include new digital tools (register, card, individual action plan); payment of a three hundred euro lump sum to the long-term (over five years) unemployed who prepare a Digital Individual Action Plan; introduction of means tests for persons registered in the DYPA digital records for over 12 months, to address the phenomenon of benefits abuse; removal from the register after 3 refusals to accept suitable jobs; continued payment of 50% of the unemployment benefit after a job seeker has found a job during the payment period of the regular unemployment benefit, up to the expiry of the payment period; introduction of a governance system supporting continued vocational training of the labour force; creating and outfitting childcare stations within business premises; etc. Evidence is insufficient as yet to assess how these changes could affect the share of the unemployed covered by an unemployment subsidy.

25 Government Gazette B 6546/2023 amending Joint Ministerial Decision Δ13/οικ. 53923/23-7-2021 "Amendment to the terms and conditions of implementation of the Minimum Guaranteed Income programme" (Government Gazette B 3359, corrigendum to Government Gazette B 3554).

26 See Law 5043/2023 "Provisions regarding Local and Regional Authorities – Provisions on the welfare of companion animals – Provisions on human resources in the public sector – Other provisions of the Ministry of Interior and other emergency provisions".

free threshold for taxpayers with dependent children as from 2024, by EUR 1,000, as well as the introduction of a maternity allowance for sole proprietors, the self-employed and farmers. Moreover, a rise in the birth allowance was recently announced, applicable retroactively as from 2023.

Complementary measures for better targeting and increased efficiency of social subsidies are the introduction of prepaid cards to receive social benefits from the Organisation of Welfare Benefits and Social Solidarity (OPEKA) and the Public Employment Service (DYPA), as well as an upgrade to the OPEKA platform, giving beneficiaries access to all social protection programmes and benefits.[27]

The 2022 Household Budget Survey provides the first available information for the year 2022 in Greece. On the basis of 2022 consumer spending, the data show an increase in the risk of poverty, in terms of both purchases by households (17.4% from 17.1% in 2021) and total consumption expenditure (13.4% from 12.2% in 2021), including the monetary value of goods and services received by households in kind (such as rental equivalence of owner-occupier, as well as goods and services by own production, own retail shop, or received from employer or otherwise). A similar trend emerges from the S80/S20 inequality ratio, which increased in terms of both household purchases and total consumption expenditure (to 5.4 and to 4.2, respectively, from 5.2 and 4.1 in 2021).

The adverse trends emerging from the Household Budget Survey data for 2022 can be interpreted in light of the recent inflationary crisis which peaked in 2022. Inflation affects disproportionately the purchasing power of lower-income households, given that their consumption basket includes a larger share of basic goods, such as energy and food (which have recorded the strongest price increases), and that they allocate a bigger share of their income to consumption.

The negative distributional effects of the inflationary shock were largely counterbalanced by support measures.[28] An increase in the minimum wage twice within 2022 (from EUR 650 to EUR 713) also helped support the disposable income of vulnerable households. A further rise to EUR 780 was decided in 2023. As a result, the share of employees on private-law contracts with gross monthly earnings of less than EUR 800 dropped to 30.9% in 2023, from 37.3% in 2022, according to the special annual census survey by the Hellenic Labour Inspectorate, DYPA and the National Social Security Organisation (EFKA).[29] For the year 2024, a new raise in the minimum wage as from the 1st of April 2024 is under way.[30]

As also noted earlier, the long-term objective should be a shift towards a “social investment state”,[31] which would create conditions for equal opportunities by facilitating social mobility, protect citizens from adverse events and help balance work and family; thus, it would function proactively to tackle poverty and income inequality by investing in human capital, e.g. in edu-

27 See Law 5078/2023 “Reform of occupational insurance, rationalisation of insurance legislation, pension arrangements, system of appointment and recruitment of teachers of the Public Employment Service and other provisions”.

28 For an empirical investigation of how inflation, the income support measures, as well as the measures aimed at containing prices affected households’ purchasing power and welfare in 2022 see: (a) for Greece, Flevotomou, M. (2023), “The distributional impact of fiscal measures to compensate for consumer inflation in Greece in 2022”, Bank of Greece, *Economic Bulletin*, No. 58; and Hua, S. and W. Shi (2024), “The Cost-of-Living Crisis: Impact and Policy Support to Households, Evidence from Micro-Level Data”, IMF Selected Issues Paper 2024/007; (b) for the euro area, Amores et al. (2023), “Inflation, fiscal policy and inequality: The distributional impact of fiscal measures to compensate for consumer inflation”, ECB Occasional Paper No. 330.

29 Special annual issue – Electronic reporting data for total enterprises and employees/wage-earners on private law contracts, from 1 October to 15 December 2023.

30 See Law 5085/2023, Article 26.

31 Matsaganis, M. (2021), “The welfare state as an accelerator of sustainable growth”, *diaNEOsis* (in Greek).

cation and healthcare.[32] In this manner, social policy is beneficial in achieving strong and sustainable growth rates.[33,34] Such policy proposals are of particular relevance today, as various developments – first the COVID-19 pandemic, then the impact of the wars in Ukraine and the Middle East on the energy sector and world trade and, lastly, climate change and, hence, extreme weather events and major natural disasters – have exacerbated inequalities at a global level,[35] disproportionately affecting the poor.[36] This brings to the fore the role social policy has to play and the need for purpose, efficiency and redistribution.[37] Nevertheless, the effectiveness of targeted social policy measures may be severely impaired by widespread tax evasion, which suggests the need for careful planning of the measures, backed by structural reforms aiming to combat tax evasion.

Lastly, Greece is provided with an excellent opportunity, as it can tap funding available under the European Recovery and Resilience Facility for actions associated with employment, skills and social cohesion. It is important to ensure effective absorption and utilisation of available resources by 2026. Based on data available so far, the outlook appears to be positive. Specifically, from 2021 up to and including the first half of 2023, disbursement of grants relating to the "Employment, skills and social cohesion" pillar reached EUR 449 million, or around 1/4 of total grants, mainly directed to reskilling projects.

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32 Regarding growth-enhancing benefits from reforming the Greek educational system, see Bank of Greece, *Annual Report 2019*, Box IV.2, pp. 120-125 (available in Greek). The establishment of the National System for Vocational Education and Training and Lifelong Learning by Law 4763/2020 may also contribute in this direction.

33 See Aiyar et al. (2017), Euro Area Policies, Selected Issues, *IMF Country Report 17/236*. Additionally, see (a) OECD (2018), "Opportunities for All: A Framework for Policy Action on Inclusive Growth"; (b) OECD (2018), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, Paris; (c) Hufe, P., R. Kanbur and A. Peichl (2018), "Measuring Unfair Inequality: Reconciling Equality of Opportunity and Freedom from Poverty", CESifo Working paper; and (d) World Bank (2018), *Growing United – Upgrading Europe's Convergence Machine*, World Bank Report on the European Union.

34 A step in this direction is the "National Strategy for Social Inclusion and Poverty Reduction", published in July 2022. It suggests actions under 4 pillars, with a view to making better use of national and European resources in 2021-27: (a) access to adequate resources and basic goods for persons living in extreme poverty conditions (with a focus on the homeless); (b) access to services for persons living in extreme poverty conditions, people with disabilities, children, the elderly, women that are victims of abuse and violence, the homeless and other vulnerable social groups; (c) integration into the labour market, improved employability and access to employment for the unemployed; and (d) horizontal governance of the strategy.

35 See Sánchez-Páramo, C. et al. (2021), "Covid-19 leaves a legacy of rising poverty and widening inequality", World Bank Blogs, Credit Suisse (2021), The Global Wealth Report 2021; and European Trade Union Institute (2021), *Benchmarking Working Europe 2021: Unequal Europe*.

36 According to Oxfam, an organisation fighting inequality and poverty, the wealth of the world's five richest billionaires more than doubled since 2020, while 60% of humanity have become poorer. For years, Oxfam has raised the alarm about widening and extreme inequality, warning that it has become the new normal. See Oxfam (2024), "Inequality Inc. How corporate power divides our world and the need for a new era of public action". See also World Inequality Lab, *Climate Inequality Report 2023 – Fair taxes for a sustainable future in the Global South*, 30.1.2023.

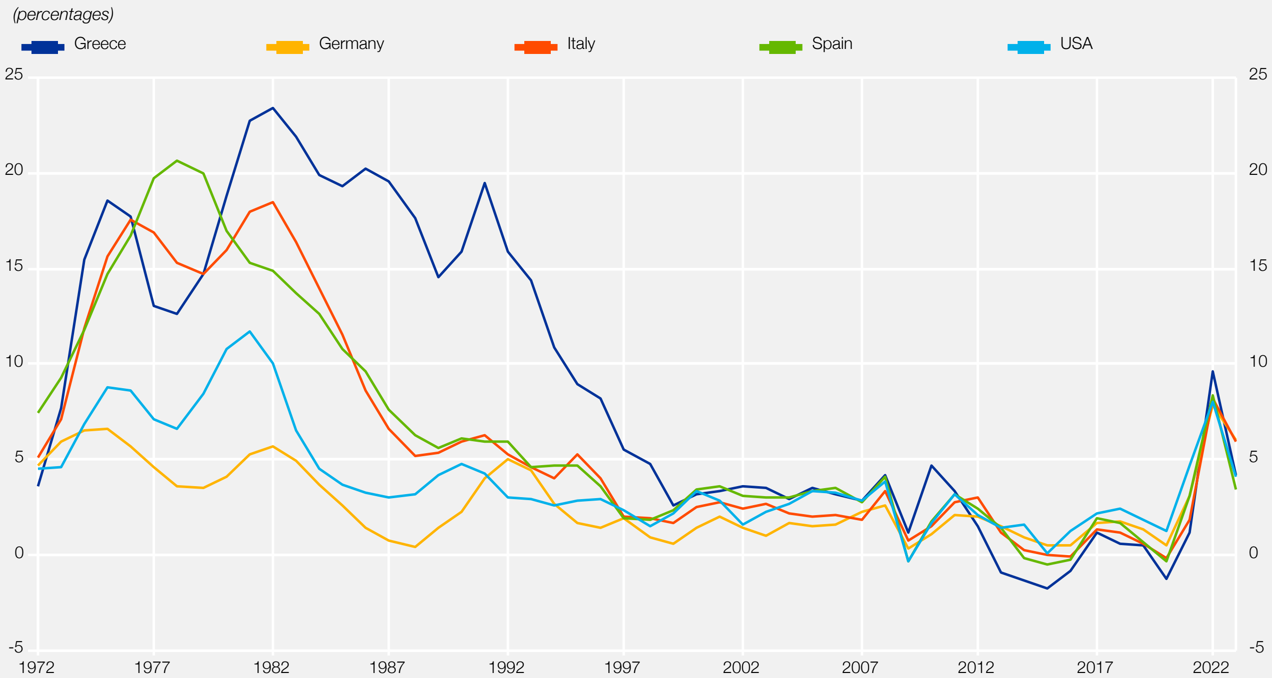
37 For the distributive impact of pandemic-associated measures in Greece in 2020, see Bank of Greece, *Annual Report 2020*, Box IV.4, pp. 141-143 [in Greek]. See also the recent study by Georgia Kaplanoglou (2023), *The uneven distribution of the tax burden among households in Greece*, Labour Institute of the General Confederation of Greek Workers (GSEE), analysing developments from 2008 to 2019, on the basis of microdata from the Household Budget Survey.

Box IV.1

DRIVERS OF INFLATION IN THE GREEK ECONOMY

The rise in global inflation over the period 2021-2023 was sharp and pronounced. After almost three decades, the rate of increase in the consumer price index (CPI) in Greece, as well as in most developed economies, was close to or above double-digit levels on an annual basis. This increase started in the second half of 2021 (see Chart A), as a consequence of the protracted disruption in global value chains caused by the coronavirus pandemic. Thereafter, inflation accelerated rapidly as a result of the war in Ukraine, which led to a surge in energy

Chart A Inflation in selected economies (1972-2023)



Source: Ha, J., M.A. Kose and F. Ohnsorge (2021), "One-Stop Source: A Global Database of Inflation", Policy Research Working Paper No. 9737, World Bank, Washington, DC.

and food costs, primarily for Europe, but also for the rest of the world. Finally, the unprecedented economic support measures implemented by monetary and fiscal authorities to counteract the effects of the pandemic may also have had an upward impact on prices, pushing up demand in conditions of tight supply.

Understanding the root causes of inflationary pressures is crucial for the proper design of macroeconomic policy. Macroeconomic (monetary and fiscal) policy acts through the demand channel. Therefore, if the rise in inflation is mainly driven by increased demand, then a tightening of monetary and fiscal policy would directly result in lower inflation. On the contrary, supply shocks pose a challenge to monetary policy. While a restrictive policy reduces demand, it also increases the cost of capital and thus the overall cost of running businesses. As a consequence, a tightening of monetary policy amid supply shocks tends to intensify downward trends in output.

This box aims to empirically investigate the drivers of inflation in the Greek economy in the post-pandemic period. To this end it uses the Blanchard and Bernanke model (2023),[1] which is a theoretical framework for the structural assessment and identification of inflationary pressures, distinguishing between labour market, energy and food shocks, as well as shortages caused by problems in global value chains.[2]

Drivers of inflation

Inflationary pressures typically have three possible sources. First, they can be a result of supply shocks that increase the cost of input factors, usually energy or imported intermediate goods. This is also known as cost-push

1 Blanchard, O. and B. Bernanke (2023), “What caused the US Pandemic-Era Inflation?”, NBER Working Paper 31417.

2 This model has been used extensively in similar ECB analyses (see Arce, O., M. Ciccarelli, C. MontesGaldón and A. Kornprobst (2024), “What caused the euro area post-pandemic inflation?”, Occasional Paper No 343, European Central Bank, and constitutes a follow-up exercise in *Annual Report 2022* (Box IV.1), which used the alternative simplified model of Shapiro (see Shapiro, A.H. (2022), “Decomposing Supply and Demand Driven Inflation”, Federal Reserve Bank of San Francisco Working Paper 2022-18) and identified inflationary pressures by distinguishing between supply and demand shocks. This model seeks to further refine the source of these shocks.

inflation. Second, they can be a result of higher demand for a given level of supply, e.g. due to capital inflows, fiscal and monetary easing or increased consumer confidence. This is commonly known as demand-pull inflation. Lastly, they can be a result of rising inflation expectations, which incentivises economic agents to renegotiate long-term contracts at higher prices (e.g. property rents, wages).[3]

Analysing the drivers of inflation is highly relevant for monetary policy. As a rule, monetary policy is effective in responding to demand shocks by raising borrowing costs and reducing liquidity, to contain aggregate demand. By contrast, it is less effective in small and temporary supply shocks, which increase input prices and reduce output. Moreover, any change in the monetary policy stance affects the real economy with a lag of several months, implying that a response of monetary authorities to temporary shocks could generate undesirable volatility with little gain to be achieved. Therefore, if the main source of the increase in inflation are small and temporary supply shocks, the monetary authority usually does not react ("looks through"), since it is assumed that no severe second-round effects are created and thus expectations of future inflation are not affected.

This concerns temporary and limited shocks. Strong and/or prolonged supply shocks, which typically start with an increase in energy prices, risk affecting prices of other goods and services as intermediate inputs for the rest of the economy, and, over the medium term, increase inflation and inflation expectations, leading to a self-sustaining rise in inflation. This happens through second-round pressures, which affect firms' pricing policies and workers' wage demands, and thus inflation expectations.

The oil crisis of the 1970s was such a shock. The consensus view is that the belated response of monetary authorities to rising oil prices at the time allowed inflation expectations to drift upwards and, together with other measures (wage indexation), led to a large and protracted rise in inflation. Indeed, a recent study by Hazell et al. (2022) showed that the steep decline in inflation in the United States in the early 1980s, following aggressive interest rate hikes by the Federal Reserve System, was due primarily to lower inflation expectations and, secondarily, to lower demand.[4] Therefore, in order to avoid a repetition of the high inflation episode of the 1970s, the central banks of developed countries reacted strongly to the current episode by raising key interest rates rapidly and consecutively. The ECB raised all Eurosystem interest rates by 450 basis points over 13 months, while the US Federal Reserve and the Bank of England made similar moves. These moves succeeded in curbing inflationary pressures before becoming entrenched and obviated the need for more drastic action in the future. Thus, they managed to reduce inflation significantly, with little impact on the labour market.

Model methodology

This box uses the semi-structural model developed by Blanchard and Bernanke (2023), as mentioned above, in order to disentangle the sources of higher inflation among the predominant possible sources. The model consists of four equations with four unknowns: change in wages, inflation (prices), short-term inflation expectations and long-term inflation expectations. More specifically:

Change in wages $$w_t - w_{t-1} = \left(\underbrace{p_t^e - p_{t-1}}_{expected\ inflation} \right) + \alpha \left(\underbrace{p_{t-1} - p_{t-1}^e}_{catch\text{-}up} \right) + \beta \left(\underbrace{x_t - \alpha x_{t-1}}_{labour\ market} \right) + z_w$$

Inflation rates $$p_t - p_{t-1} = (w_t - w_{t-1}) + (\underbrace{z_{p_t} - z_{p_{t-1}}}_{price\ shocks})$$

Long-term inflation expectations $$\pi_t^* = \gamma \pi_{t-1}^* + (1-\gamma)(p_{t-1} - p_{t-2})$$

3 Literature has focused on the first two channels, rather than on the role of expectations. The basic (neo-Keynesian) model in literature assumes that expectations have a full impact on inflation (pass-through 1:1). More recent literature shows that the pass-through can also be zero for small changes in expectations and that in general it may be significantly lower than 1:1 (see Werning, I. (2022), "Expectations and the Rate of Inflation", NBER Working Paper No. 30260). Moreover, different economic agents (households, businesses, banks, capital markets) have different expectations, with large discrepancies between them (see Reis, R. (2023), "Four Mistakes in the Use of Measures of Expected Inflation", *AEA Papers and Proceedings*, 113, 47-51).

4 Hazell, J., J. Herreño, E. Nakamura and J. Steinsson (2022), "The Slope of the Phillips Curve: Evidence from U.S. States", *The Quarterly Journal of Economics*, 137(3), 1299-1344.

Short-term inflation expectations $$p_t^e - p_{t-1}^e = \underbrace{\delta\pi_t^*}_{anchoring} + (1-\delta)(p_{t-1} - p_{t-2})$$

Wage growth is determined by expected inflation; a "catch-up" term (α) expressing the difference in the previous period's price level and the price level that had been expected for that period, i.e. unexpected inflation; and labour market tightness (β). The term z_w encompasses all other determinants of wages, including changes in productivity.

In turn, prices depend on wage growth, as well as on any price shocks (z_p). These may be due to supply chain disruptions caused by the pandemic, which in turn caused raw material shortages, but also shortages in intermediate/final products (such as semiconductors), or disruptions in the supply of food and energy goods as a result of the war. Long-term inflation expectations have a degree of anchoring (parameter γ), but are also influenced by last period's inflation. Accordingly, short-term inflation expectations are linked both to last period's inflation and to long-term expectations (π_t^*): the stronger the anchoring of expectations to the central bank's target (anchoring, coefficient δ), the greater the price fluctuation can be without affecting expectations. The literature tends to conclude that low inflation in the previous decades has led to well-anchored expectations, as central banks had gained high credibility in their ability to fight inflation.[5] The empirical model comprises three exogenous price shocks: shortages in the supply chain, food inflation and energy inflation.

The data in the assessment come from a variety of sources. Data for the general price index and for energy and food prices are taken from ELSTAT's Harmonised Index of Consumer Prices (HICP).[6] Wages are measured on the basis of ELSTAT's wage cost index. Supply chain shortages are assessed on the basis of the Federal Reserve Bank of New York GSCPI (Global Supply Chain Pressure Index). Labour market tightness is measured by the difference between real unemployment and the non-accelerating inflation rate of unemployment (NAIRU), known as the "unemployment gap", as estimated by the Bank of Greece.[7] Finally, short-term inflation expectations are calculated on the basis of Bank of Greece forecasts. Data on long-term expectations in Greece are not available, so the corresponding series for the euro area from the Survey of Professional Forecasters is used.[8]

Empirical results

In the inflation equation, estimates are almost identical for the wage growth and inflation variables, at around 0.3 and 0.7 respectively, both for Greece and the euro area.[9] The productivity and shortage variables are not relevant for Greece relative to the euro area, while the opposite is true for food inflation. This is to some extent due to the different weights of the respective goods in the household basket, as the weight in Greece is 5 percentage points higher for food. Finally, energy inflation is just as important. Although this variable is low relative to the others, the cost of energy is highly volatile and the magnitude of the change can become very high.[10]

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5 Structural identification in the empirical model is achieved by applying restrictions. Each equation is estimated with linear regressions, with four lags of all variables and assuming that wages respond to all other variables (inflation, expectations, labour market tightness, price shocks) with a lag. Inflation is affected by wages without a lag, but by expectations with lags. It is also affected by price shocks, including energy and food price shocks, as well as shortages (zpt).

6 No official seasonally adjusted data are available for individual consumer price indices. The seasonal adjustment of official ELSTAT data is based on the X13-TramoSeat methodology, based on calculations by the Bank of Greece.

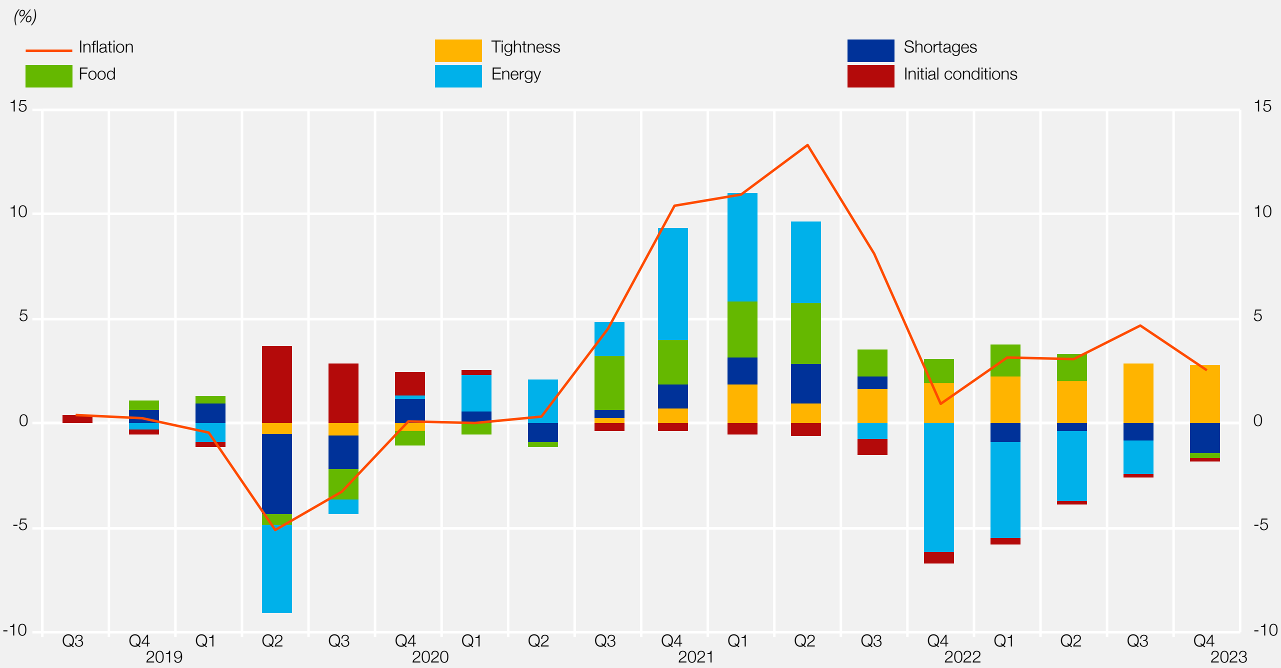
7 The original model, as well as literature in general, prefers the ratio of vacancies to the number of unemployed (v/u) as a measure of tightness. However, job vacancy data have been available since 2009 and on a quarterly basis the sample is too small to be reliable. The use of the unemployment gap is therefore preferred, but in any case the qualitative conclusions are similar.

8 Over the long term, and since the primary objective of the Eurosystem is price stability, it is assumed that inflation expectations converge across Member States.

9 The regression has been estimated with the restriction that the sum of the wage growth and inflation variables is equal to unity, implying that in the long run wage growth will be fully passed on to prices. The results for the euro area are from Arce et al. (2024).

10 For example, between the fourth quarter of 2021 and the second quarter of 2022 energy prices increased by more than 50% (on an annualised basis).

Chart B Inflation drivers (2019-2023)



Source: ELSTAT.

Using the model results,[11] Chart B shows the structural decomposition of inflation over 2020-2023 into the individual exogenous factors included in the model. Inflation in the chart is expressed as a quarterly annualised rise in prices and is therefore significantly more volatile than the more common pattern of annual price increases.[12] The sum of columns does not necessarily equal the value of inflation, as regression errors (the unexplained part) are not taken into account. The column "initial conditions" includes the sum of the regression constants, productivity developments and any pre-pandemic shocks.

The results of the chart are broadly as expected. The initial fall in inflation at the outbreak of the pandemic was primarily due to lower costs of energy goods, which subsequently rose. This increase was initially relatively small, but accelerated sharply, starting in the fourth quarter of 2021, driven by a pick-up in global demand that accompanied the gradual lifting of pandemic restrictions, and continued with the outbreak of the war in Ukraine. The same reasons also led to an increase in the contribution of food prices to overall inflation. The stabilisation of energy goods prices since mid-2022 dampened inflation, while the ensuing sharp fall in their prices reduced it even further to the point that in the fourth quarter of 2022 headline inflation was only 1% year-on-year.

Lower energy goods prices continued to lower inflation in the course of 2023, but food inflation remained high. At the same time, the increasingly improving labour market, with unemployment reaching a post-2009 low, led to a significant rise in labour costs (cumulatively up by 8% between early 2022 and the third quarter

11 As regards the wage equation, the wage growth variable is positive (0.6), higher than that of the euro area, but similar to the US one (0.5), as estimated by Blanchard and Bernanke (2023). By contrast, the short-term expectations variable (0.4) is significantly lower than that in the euro area, while it is roughly equal to that in the United States (0.5). It should be noted that the measurement of expectations is not entirely identical across samples, as for Greece it refers to inflation expectations based on Bank of Greece estimates, while for the euro area and the United States it refers to household expectations. In contrast, the role of labour market tightness is significantly greater in Greece than in the euro area and comparable to that of the US. Finally, the productivity and catch-up variables are very low and/or not statistically significant in all three economies.

12 Quarter-on-quarter changes are used for ease of model estimation and interpretation, as inflation measured as an annual change in prices is affected by base effects.

of 2023), with lagged effects on inflation (see Chapter IV). The experience in the US and the EU has been similar, despite concerns that the initial rise in inflation, coupled with a tight labour market, would trigger a wage-price spiral.[13] Shortages in global value chains affect inflation with a lag:[14] their upward contribution starts in 2021 and is intensifying in 2022. By contrast, the normalisation of supply chains in 2023 helped to contain inflationary pressures.

Conclusions

The pandemic and energy crises have induced upward pressures on inflation. The assessment of the relative contribution of the various factors to the rise in inflation at the current juncture is surrounded by considerable uncertainty. This analysis uses a new model to disentangle the sources of higher inflation in the Greek economy. The empirical model estimates that inflation fluctuations between 2020 and 2023 were driven mainly by energy market shocks and, to a lesser extent, by fluctuations in food prices. Upward price pressures from the labour market started after inflation moderated and have remained contained. Therefore, underlying inflation pressures during the peak period were mainly based on supply shocks. Such shocks pose challenges for monetary authorities, since monetary policy tools are less effective than in the case of demand shocks. However, it is important for monetary policy to react in time to prolonged supply shocks in order to prevent inflation expectations from rising, and interest rate hikes by the ECB, as well as by other central banks, have acted in this direction.

It is worth noting that recent literature has also examined whether the increase in consumer prices exceeded the rise in energy costs and, consequently, inflation has to some extent been driven by increased corporate profits.[15] Box IV.3 in this report discusses this channel. Such an analysis is not possible on the basis of this model, which includes business profit margins in the ceteris paribus conditions.

The experience of the inflationary shock in 2021-2023 is particularly useful in dealing with such supply shocks. An important conclusion is that a wage-price spiral, which occurs when rising prices lead to higher wages, which in turn cause prices to rise further, is not inevitable. According to Werning and Lorenzoni (2024),[16] when the economy is hit by a supply shock to an inelastic input, such as energy goods, prices rise faster than wages and thus real wages fall. This is because nominal wages are less flexible than prices, also because of the institutional wage bargaining framework. However, once the shock subsides, wages grow faster than prices, offsetting their earlier fall in real terms. Importantly, at the current juncture, wage increases have not been followed by a further increase in inflation for the time being, despite some fears of a wage-price spiral, given that the energy shock occurred amid tight labour market conditions.

Moreover, the decline in inflation in almost all advanced economies was not followed by wage-price spirals or by a marked increase in unemployment. By contrast, unemployment stabilised at low levels in the US and the EU, with vacancies declining. In Greece, where the labour market was less tight from the outset, unemployment continued to decline, albeit at a slower pace, but vacancies remained at historically high levels. Reducing inflation without sacrificing employment was unexpected for some scholars (e.g. Blanchard et al. 2022[17]). The commonality of inflation and unemployment trajectories in advanced economies, irrespective of the pattern of output, suggests the important role played by determined central bank action in order to prevent the destabilisation of inflation expectations.

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13 See Blanchard and Bernanke (2023) and Arce et al. (2024).

14 This lag explains the negative contribution in the second quarter of 2020.

15 See Hansen, N.J., F. Toscani and J. Zhou (2023), “Euro Area Inflation after the Pandemic and Energy Shock: Import Prices, Profits and Wages”, IMF Working Paper No. 2023/131, Arce, O., E. Hahn and G. Koester (2023), “How Tit-for-Tat Inflation Can Make Everyone Poorer”, ECB Blog, και Colonna, F., R. Torrini and E. Viviano (2023), “The profit share and firm markup: how to interpret them?”, Bank of Italy Occasional Paper No. 770, May.

16 Werning, I. and G. Lorenzoni (2024), “Wage-Price Spirals”, *Brookings Papers on Economic Activity*, forthcoming.

17 Blanchard, O., A. Domash and L. Summers (2022), “Bad news for the Fed from the Beveridge space”, Policy Brief PB227, Peterson Institute for International Economics.

Box IV.2

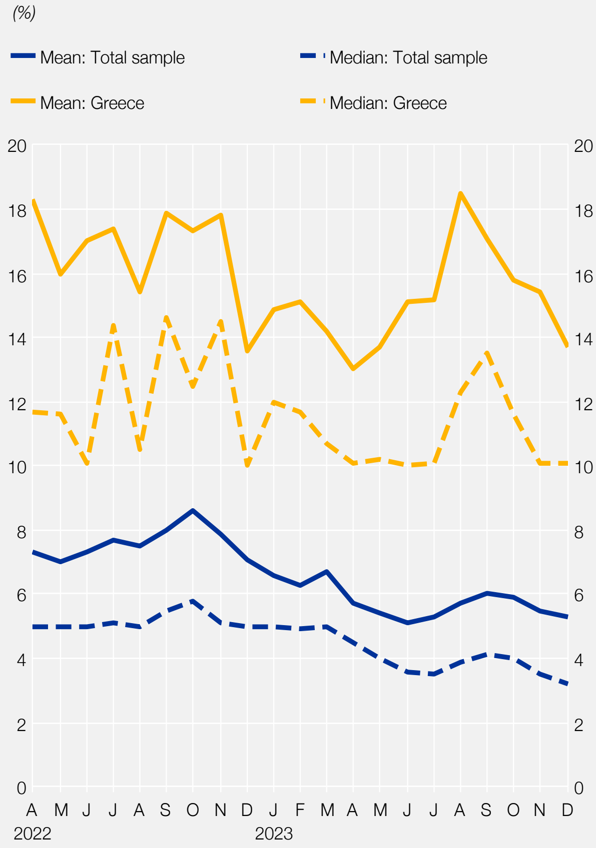
ECB SURVEY ON GREEK CONSUMER EXPECTATIONS

The ECB Consumer Expectations Survey (CES) allows for timely capture of Greek consumers' inflation perceptions and expectations. The survey has recently expanded its coverage and in January 2022 five more countries (Austria, Finland, Ireland, Greece and Portugal) were added to the six pilot euro area countries (Belgium, Germany, Spain, Italy and the Netherlands).[1] After a four-month "build-up phase", the target sample size (1,000 participants/month for each country) for these five new countries was reached in April 2022. Therefore, since then the CES has also been collecting monthly data on Greek consumers' perceptions of price developments over the past year and expectations about their future path.

Consumer expectations for inflation, unemployment and economic growth in Greece relative to the euro area

According to the CES findings, mean and median inflation expectations in Greece are higher than in the euro area (see Chart A). The survey captures consumers' inflation expectations over the next 12 months. The median, unlike the mean, is not influenced by outliers. Compared to the euro area, there is a much larger proportion of Greek consumers with very high inflation expectations, as the difference between mean and median inflation expectations is much larger in Greece than in the euro area. Mean and median consumer expectations in the euro area, based on the CES, peaked at 8.6% and 5.8% respectively in October 2022. Similarly, Greek consumers' mean and median inflation expectations reached high levels in September 2022 (17.9% and 14.6%).

Chart A Mean and median inflation perceptions: CES



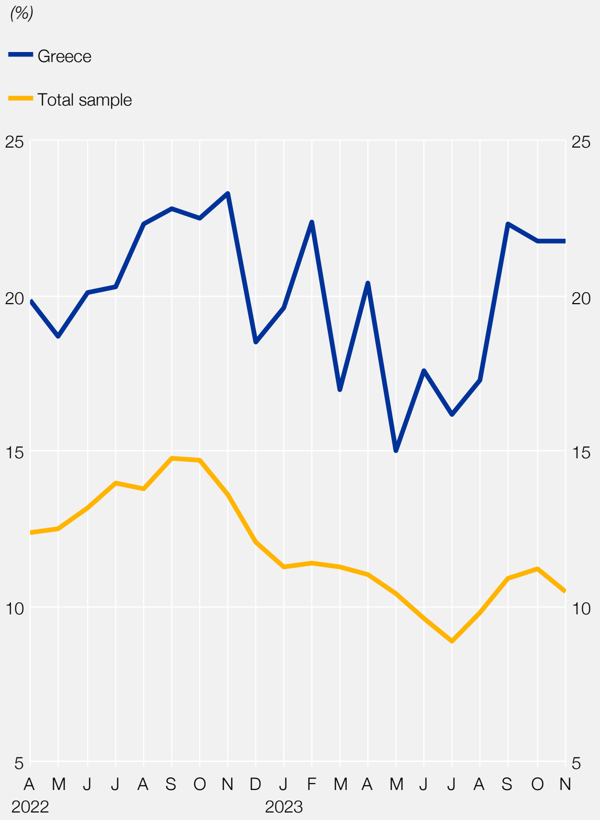
Source: ECB, Consumer Expectations Survey (CES).
Note: Mean and median inflation expectations over the next 12 months. Weighted estimates from April 2022 to December 2023.

After peaking in October 2022, mean expectations in the euro area continuously declined up to June 2023, except for a rise in March 2023. In contrast, mean inflation expectations in Greece started to rise again in April 2023 and peaked at 18.5% in August 2023, before falling significantly to 13.7%. Median expectations followed a similar pattern. This is in line with inflation expectations in the euro area, with mean expectations declining from 6% in September 2023 to 5.3% in December 2023.

The results of the CES follow the same pattern as the findings of the European Commission's survey on consumers' inflation expectations. Like the CES, the Commission's survey shows that mean consumer expectations in Greece are higher than in the euro area (see Chart B). Although there are methodological differences between the two surveys, both in the way data are collected and in the design of the questionnaire, the

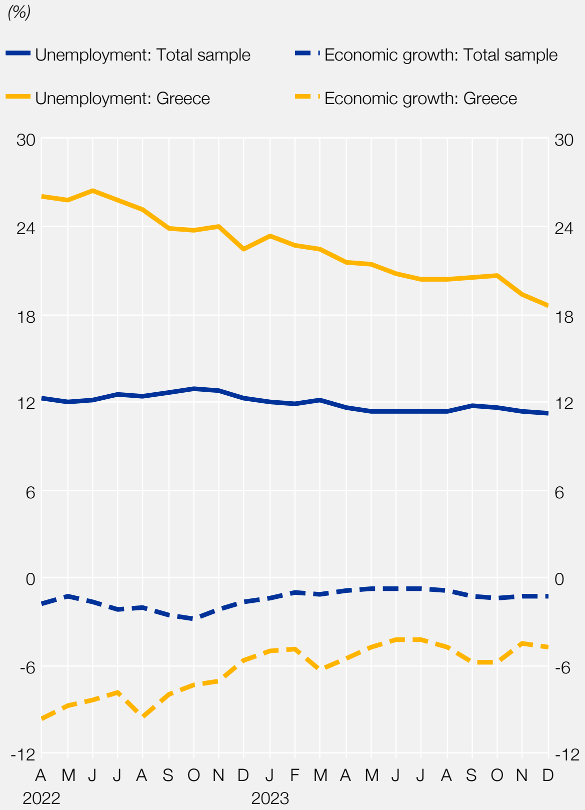
1 For a detailed description of the CES, see ECB (2021), "Consumer Expectations Survey: An Overview and First Evaluation", ECB Occasional Paper No. 287, December, και Georgarakos, D. and G. Kenny (2022), "Household Spending and Fiscal Support During the COVID-19 Pandemic: Insights from a New Consumer Survey", *Journal of Monetary Economics*, S1-S14.

Chart B Mean inflation expectations: Commission Survey



Source: European Commission Consumer Survey.
Note: Mean inflation expectations over the next 12 months. Weighted estimates from April 2022 to November 2023.

Chart C Mean unemployment and economic growth expectations



Source: ECB, consumer expectations survey (CES).
Note: Mean unemployment and economic growth expectations over the next 12 months in Greece and the euro area. Weighted estimates from April 2022 to December 2023.

Commission survey confirms the CES finding that consumers express more pessimistic inflation expectations in Greece than in the euro area.[2]

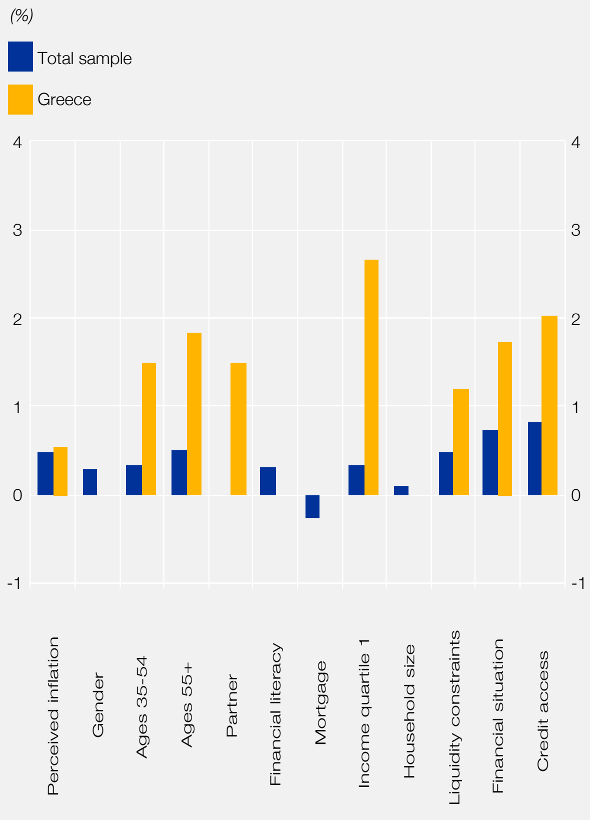
In addition to higher inflation expectations, Greek consumers are more pessimistic in their unemployment and economic growth expectations. In Greece, consumers' mean unemployment expectations are higher than in the euro area, while growth expectations are on average more negative for Greek consumers than euro area ones (see Chart C). This may be explained by the fact that Greek consumers experienced a debt crisis in Greece a few years ago, which led to a 27% spike in unemployment and a 25% contraction in GDP. However, it is noted that Greek consumers' unemployment and economic growth expectations improved significantly between April 2022 and December 2023. Specifically, Greek consumers' expectations for the unemployment rate declined on average from 26.1% to 18.6% and growth expectations became less negative, from -9.7% to -4.7%.

Identification of the determinants of consumers' inflation expectations

A linear regression model is used to assess the determinants of consumers' inflation expectations. In line with the relevant literature, the model includes the independent variables of households' perceived inflation, age group, gender, family composition, education, level of financial literacy, income quartiles, employment status, home ownership, mortgage, liquidity constraints, worse financial situation compared with 12 months ago and difficult credit access.

2 For example, the European Commission's survey has a different way of collecting data on Greece, based on telephone interviews rather than interviews via online platforms, as the CES does. Moreover, unlike the European Commission's survey, the CES does not allow for responses such as "don't know" or "no answer" to the quantitative questions on inflation expectations.

Chart D Estimated variables from the linear probability regression model



Source: Calculations based on ECB Consumer Expectations Survey (CES) data.
Note: The chart shows the estimated variables from a linear probability regression model with clustered standard errors. The regression model for Greece takes into consideration the effects of each survey wave for Greece, while for the euro area, in addition to wave effects, it also includes the effects of each euro area country. The sample comprises the following independent variables: perceived inflation, gender, age groups, partner, education, low financial literacy, mortgage, income quartile (1, 2, 3 and 4), employment status (unemployment), home ownership, liquidity constraints, worse financial situation compared to 12 months before and difficult credit access. The estimated variables shown in the chart are statistically significant at a confidence level of 1% and 5%. Estimated variables not shown in the chart are not statistically significant. Weighted estimates from April 2022 to December 2023.

The results indicate that the effect of consumers' (current) inflation perceptions on their inflation expectations is positive and strong both in Greece and in the euro area (see Chart D), but the size of inflation perceptions' pass-through to expectations is the same in both samples. Greek consumers aged 35-54 and 55+ have higher inflation expectations than younger ones (18-34). This is in line with the corresponding euro area finding, although the size of the estimated determinants for Greece is almost five times higher and almost four times the euro area figure. It is noted that consumers' inflation expectations increase as income decreases, both in Greece and in the euro area. Nevertheless, the impact of the lower income group (1st quartile) on consumers' inflation expectations is almost eight times higher in Greece than in the euro area. In addition, liquidity constraints, worse financial situation and difficult credit access have a significant positive impact on consumers' expectations in Greece and the euro area. It is worth noting, however, that the effect of these three factors is much greater on Greek consumers than on those in the euro area. Overall, the results show that Greek consumers' inflation expectations are positively correlated with age, low income levels, liquidity constraints, worse financial situation and difficult credit access, revealing what makes Greek consumers have pessimistic inflation expectations.

The presence of a household partner increases Greek households' inflation expectations, but there is no statistically significant effect in the euro area. On the other hand, while in the euro area gender (in the case of women), household size and low financial literacy increase inflation expectations, households with a mortgage have lower inflation expectations. However, in Greece, gender, level of financial literacy and mortgage are not correlated with inflation expectations.[3]

Conclusions

In conclusion, higher consumer expectations in Greece (as compared to the euro area) are correlated with a more pessimistic view on income, financial situation, liquidity and credit access. This is in line with the study by Coibion et al. (2023), who argue that, in general, consumers do not tend to associate high inflation with higher demand and higher economic growth.[4] By contrast, they associate inflation with bad news and a more pessimistic forecast of the economy and their financial situation. In addition, Greek consumers aged 35-54 and 55+, who have the highest inflation expectations, were those who were affected the most by the Greek debt crisis, since their income declined significantly at the time.

3 Education, employment status (unemployment) and home ownership are not correlated with inflation expectations in Greece and the euro area.

4 See Coibion, O., D. Georgarakos, Y. Gorodnichenko and M. van Rooij (2023), "How Does Consumption Respond to News about Inflation? Field Evidence from a Randomized Control Trial", *American Economic Journal: Macroeconomics*, 15(3), 109-152.

Box IV.3

PROFIT MARGINS IN THE GREEK ECONOMY

Corporate profits are directly linked to the growth of production costs (wages, intermediate goods and fixed capital costs). Firms determine their desired profits by setting prices at a certain level in excess of costs in order to achieve remuneration on their capital. Developments in wages and profits, as captured by the GDP deflator, are important determinants of underlying inflation, as evidenced by the strong correlation between the GDP deflator and indicators of underlying inflation, such as the Harmonised Index of Consumer Prices (HICP) excluding energy and food, or HICP excluding energy. This box analyses developments in profit margins and their impact on domestic inflation using national accounts data.[1]

Macroeconomic calculations of profit margins are surrounded by a degree of uncertainty, as they may be affected by measurement errors in other economic variables included in the indirect profit margin estimation. For this reason, we attempt to proxy profit margin developments in the Greek economy by using two indicators that are widely employed in the Eurosystem's macroeconomic projection exercises: the profit margin indicator and the unit profit indicator.

Profit margin evolution over time

The high inflation of recent years provides the basis for a more detailed monitoring of the evolution of profit margins. In particular, input price increases (e.g. for energy) raise production costs for firms. These additional costs can either be absorbed, reducing firms' profit margins, or passed on to consumers and, provided market conditions allow for it, may increase firms' profit margins. The relatively small size of the Greek product market for goods and services relative to other euro area countries, and, in some cases, the insufficient implementation of adequate structural reforms during the three economic adjustment programmes for Greece, are key factors contributing to a lack of competition and, economic conditions permitting, a widening of profit margins.[2]

As mentioned above, two widely used measures for gauging profit margins are the unit profit indicator and the profit margin indicator. The unit profit indicator is defined as gross operating surplus and gross income per unit of real GDP.[3] A change in unit profits indicates that profits contribute to a change in the GDP deflator (GDP_DEFL). The profit margin indicator, on the other hand, is defined as the ratio of the gross value added (GVA) deflator (GVA_DEFL) at basic prices to unit labour costs (ULC), calculated as the ratio of compensation per employee to labour productivity.[4] A change in the unit profits indicates the profits' contribution to a change in the GDP deflator.[5] The unit profit indicator and the profit margin indicator are used as alternative measures of profit margins.

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1 Indicative sources include: ECB (2004), "Measuring and analysing profit developments in the euro area", Monthly Bulletin, Issue 1/2004; ECB (2009), "Developments in profit margins", *Monthly Bulletin*, Box 6, Issue 11/2009; Bragoudakis, Z. (2014), "An empirical investigation of the relationship between unit labour cost and price developments: The case of Greece", Bank of Greece; *Economic Bulletin*, No. 40, 31-58; Hahn, E. (2021), "The role of profit margins in the adjustment to the COVID-19 shock", ECB, *Economic Bulletin*, Issue 2/2021; Hahn E. (2023), "How have unit profits contributed to the recent strengthening of euro area domestic price pressures?"; ECB, *Economic Bulletin*, Issue 4/2023; and Central Bank of Malta (2023), "Recent developments in profits and forecast implications", *Outlook for the Maltese Economy*, 3, 13-16.

2 Bragoudakis, Z. and D. Sideris (2021), "Asymmetric price adjustment and the effects of structural reforms and low demand in the gasoline market: the case of Greece", *Journal of Applied Economics*, 24(1), 504-522; and Bragoudakis, Z. (2018), "Are price adjustments asymmetric in basic food categories? The case of the Greek food market", Bank of Greece, *Economic Bulletin*, No. 47, 75-92.

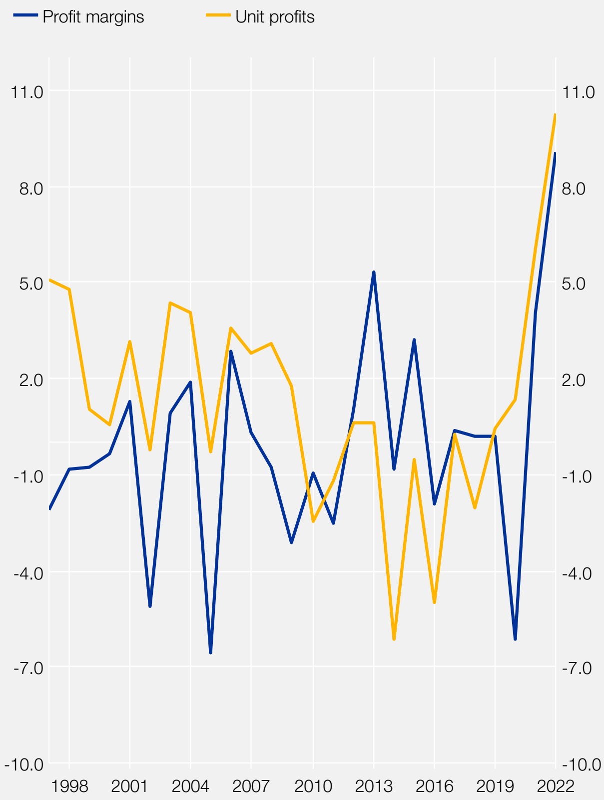
3 The indicators referred to in this analysis have been calculated using ELSTAT and Eurostat data.

4 More specifically, the profit margin indicator is calculated as: $PR\_MARG_t = GVA\_DEFL_t / ULC_t$, where GVA_DEFL_t, representing the gross value added deflator in year t, is defined as: GVA_NOM_t / GVA_REAL_t, and unit labour costs are obtained as: $ULC_t = CPE_t / LAB\_PROD_t$, where CPE_t is the compensation per employee in year t, while LAB_PROD, representing labour productivity, is calculated as: $GVA\_REAL_t / EMPL\_TOT_t$, where $EMPL\_TOT_t$ refers to the total workforce. Since GDP data by sector are unavailable, we use instead real GVA data (2015=100).

5 Assuming that compensation conditions remain unchanged, an increase in labour productivity will lead to a decrease in ULC.

Chart A Profit margins

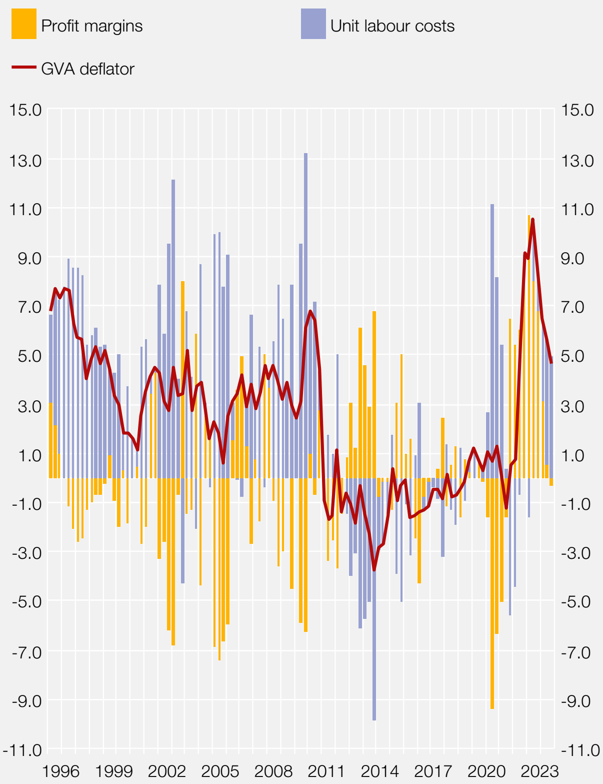
(annual percentage changes)



Sources: ELSTAT and Eurostat.

Chart B Profit margins, GVA deflator and unit labour costs at quarterly frequency

(annual percentage changes, seasonally adjusted data)



Sources: ELSTAT and Eurostat.

Chart A illustrates the historical trends of the above two measures of profit margins for the Greek economy. Both indicators rose sharply to historic highs during the 2021-2022 period, as the post-pandemic increase in consumption and elevated production costs, notably for energy and imported intermediate goods, contributed to strong price increases and hence higher profit margins.[6] This suggests that the solid growth in profit margins in 2021-2022 was likely a result of both supply and demand shocks.[7]

The profit margin indicator provides a basis for a more detailed analysis of developments in profit margins, the gross value added deflator and unit labour costs.[8] Chart B suggests that, during the first quarters of 2023, profit margin growth declined considerably from the highs reached in 2021-2022 in the economy as a whole. This is likely to reflect an easing of production costs (mainly energy), as well as a further dampening effect from the positive rates of change observed in compensation per employee since the second half of 2022.

Profit margins by sector

As mentioned above, developments in profit margins are not only analysed at the level of the Greek economy as a whole (that is, for GDP measured on the output side), but also by production sector. More specifically, sectoral analysis is conducted at different levels of aggregation, i.e. separately for each GVA production sector but aggre-

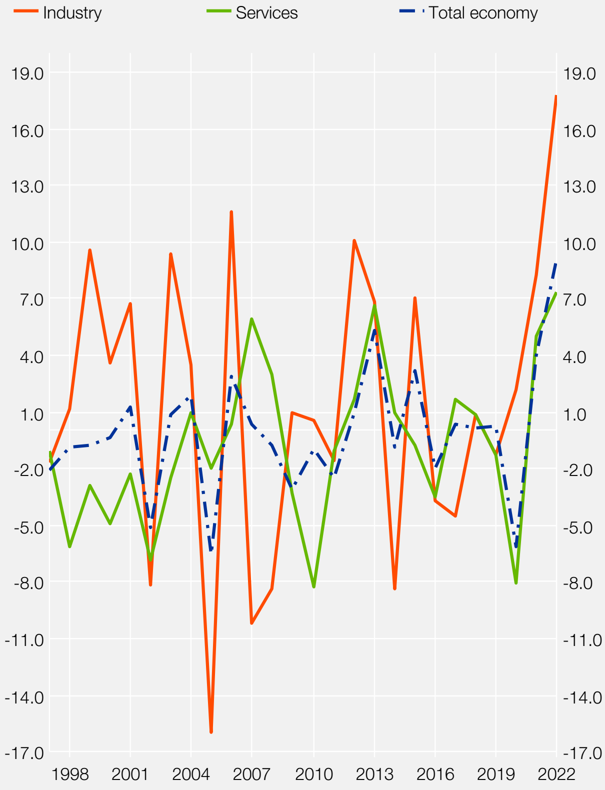
6 For a discussion of the main drivers of high inflation rates in 2021 and 2022, see Bank of Greece (2023), Annual Report 2022, Box IV.1.
7 For more details on supply- and demand-side drivers of inflation, see Kofina, I. and F. Petroulakis (2023), "Drivers of inflation in the Greek economy", Bank of Greece, *Economic Bulletin*, No. 57, 31-46.
8 The profit margin indicator was selected instead of the unit profit indicator because available data enable this indicator to also be measured at the sector level, which is not the case for unit profits.

gated across the component sectors of two selected broad sectors: "industry" and "services".[9] Within these two sectors, as shown in the table, the bulk of gross value added in 1996-2022 was generated in: (i) "industry (excluding construction)", representing an average share of 13.9%; (ii) "trade, hotels and restaurants, transportation and storage" (25.6%); (iii) "real estate activities" (14.3%); and (iv) "public administration and defence" (19.4%).

In both industry and services, profit margins grew strongly in 2021 and 2022, as shown in Chart C. In the industry sector, they even hit decades-highs. This could be put down to a combination of high energy costs and rising demand over this period. In other words, it seems that not only did higher energy costs pass through to final prices, but also that final prices rose significantly more than would have been justified by this pass-through alone, due to heightened demand. Turning to the services sector, the positive rates of change in profit margins in 2021 and 2022 can be considered to have stemmed from the recovery of economic activity following the first wave of the COVID-19 pandemic, and the resultant increase in labour productivity, which drove down ULC. Relatively low, below-inflation growth in compensation per employee up to the end of the first half of 2022 was another factor behind the drop in ULC.

Chart C Profit margins in industry and services

(annual percentage changes)



Sources: ELSTAT and Eurostat.

The analysis of the evolution of the profit margin indicator for industry reveals a surge in the period between the outbreak of the health crisis in early 2020 and 2022, as not only did industrial production manage to stay on par with its pre-pandemic levels, but there was also an acceleration in GVA growth over this period. By contrast, the services sector in 2020 had experienced a sharp decline in production and negative GVA growth of -15.8%, which led to positive rates of change in ULC and, therefore, a decrease in profit margins. Despite the fact that the services sector entered the pandemic with negative GVA growth, the rapid economic recovery that followed in 2021, coupled with rising production costs, sent the sector's profit margins soaring at rates of 5.0% in 2021 and 7.4% in 2022.

Within these two sectors, the highest profit margins in 2021-2022 were in "industry (excluding construction)"; "trade, hotels and restaurants, transportation and storage"; "construction"; and "arts, entertainment and recreation" (see table). Notable exceptions include "information and communication" and "real estate activities",[10] where the profit margin indicator posted negative growth during this period, declining by a cumulative 6.0% and 10.9%, respectively.

9 "Industry" comprises "Mining and quarrying, manufacturing, energy, water supply, sewerage, waste management and remediation" and "Construction". "Services" comprise "Wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation and food services"; "Information and communication"; "Real estate activities"; "Professional, scientific and technical activities, administrative and support service activities"; and "Arts, entertainment and recreation, repair of household goods and other services".

10 When it comes to growth in the profit margin indicator for the "real estate activities" sector, there are caveats as to the representativeness of the relevant calculations. Such caveats arise from the fact that, although financial costs and depreciation charges may constitute the main component of total costs in some segments of the real estate sector, they are excluded from the calculation of gross value added. As a consequence, productivity in this sector appears higher than it actually is, affecting calculations of the sector's unit labour costs and of changes in the relevant profit margin indicator (Source: Eurostat, [Archive: Real estate statistics NACE Rev. 1.1 Statistics Explained]()).

Profit margins by sector

(percentage points)	Average share in total GVA (1996-2022)	2019	2020	2021	2022
Total economy	100.0	0.2	-6.1	4.0	9.0
Agriculture, forestry and fishing	4.7	5.2	0.1	-9.0	1.0
Industry (excluding construction)	13.9	-3.3	1.6	6.5	19.5
Construction	4.8	10.7	1.7	3.6	12.4
Trade, hotels and restaurants, transportation and storage	25.6	-2.0	-10.3	11.1	17.0
Information and communication	3.6	-1.2	6.4	-1.0	-5.1
Financial and insurance activities	4.7	3.8	-2.0	2.4	5.1
Real estate activities[1]	14.3	-19.2	-11.2	-4.4	-6.5
Professional, scientific and technical activities	5.3	2.1	-9.1	0.5	5.1
Public administration and defence	19.4	-0.4	-3.0	1.1	2.2
Arts, entertainment and recreation	3.7	1.0	-16.3	7.9	7.2

Sources: ELSTAT and Eurostat.
1 See footnote 10 of the text.

In both industry and services, profit margin growth showed a pronounced downward trend in the first three quarters of 2023, which can largely be justified by the unwinding of excess pandemic demand, the fall in production costs through the reduction of input prices (energy, etc.), and the persistence of positive rates of change in labour costs. Industry, in particular, which was apparently more affected than services, experienced negative growth in profit margins of -3.2% in Q1 2023, -6.9% in Q2 2023 and -10.3% in Q3 2023. During the same period, profit margins in the services sector also declined from 2021-2022 levels, though to a lesser degree, and their growth rates stood at 4.1% in Q1 2023, -1.1% in Q2 2023 and 0.1% in Q3 2023, in line with the pattern seen for the Greek economy as a whole.

Conclusions

The euro area's high inflation readings over recent years have affected several economic variables, including profit margins. With specific regard to the Greek economy, the analysis of profit margin developments based on national accounts data revealed a significant increase in 2021-2022. More specifically, growth in the profit margin indicator for the economy as a whole exceeded historical averages by 4% in 2021 and 9% in 2022. Turning to broad economic sectors, in 2022 the rate of change in profit margins reached a historical high of 17.8% in industry and a notable 7.4% in services. Within these two broad sectors, the largest increases in profit margins were observed in "industry (excluding construction)", "trade", "construction", and "arts and entertainment". The relatively small size of the Greek product market and the insufficient implementation of adequate structural reforms – notably during the three economic adjustment programmes for Greece – are key factors contributing to a lack of competition and, economic conditions permitting, a widening of profit margins.

The rise in profit margins in 2021-2022 was likely due to firms' practice of setting higher prices to offset increased production costs, as well as to excess demand in the period following the post-pandemic reopening of the economy. These factors, alongside negative average growth in unit labour costs, seem to have driven up profit margins in 2021-2022. However, based on data from the latest quarters, profit margins seem now to have fallen back, driven by higher rates of change in compensation per employee since the second half of 2022 and a gradual normalisation of inflation rates mainly due to monetary policy tightening and the unwinding of excess demand.

6 COMPETITIVENESS

Following an overall significant improvement over the past two years, the international competitiveness of the Greek economy showed signs of stagnancy and/or deterioration in 2023.

A substantial appreciation of the euro, partly driven by a rapid increase in key interest rates in the euro area and a gradual narrowing of the interest rate differential vis-à-vis the United States, had a negative impact on the price competitiveness of the Greek economy in 2023. Specifically, the appreciation of the euro's effective exchange rate by 3.9% in 2023 lead to a significant appreciation of the nominal effective exchange rate of Greece, resulting in reduced competitiveness gains from lower domestic inflation than the weighted inflation of major trading partners. Moreover, continued heightened uncertainty combined with intensified geopolitical risks created an overall adverse external environment for world trade, while the growth rate of international demand also weakened significantly. In terms of structural competitiveness, Greece's ranking in the relevant composite indicators shows stagnation or even a decline, following strong progress in the preceding period (2020-2022). The pace of reform implementation in the areas of government efficiency, digital transformation and improvement of the business and macroeconomic environment appears to lag behind that of other states.

Price competitiveness

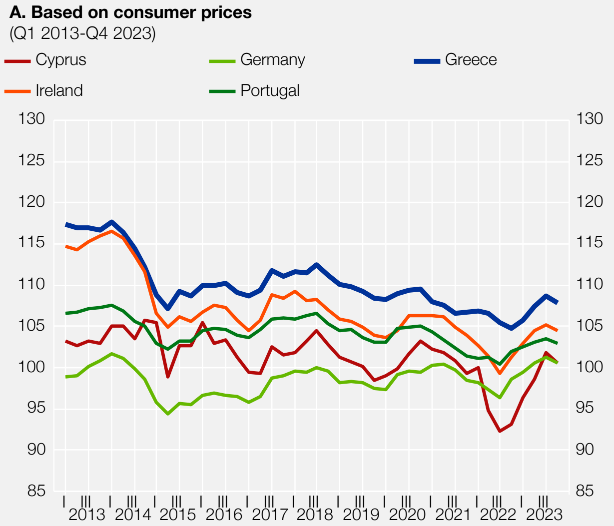
On the basis of the national harmonised competitiveness indicators (HCIs) compiled by the ECB both for Greece and for other euro area countries, the year 2023 saw a generalised increase (deterioration) in terms of relative prices, and stagnation specifically for Greece in terms of relative labour costs in January-September 2023 (see Chart IV.22).

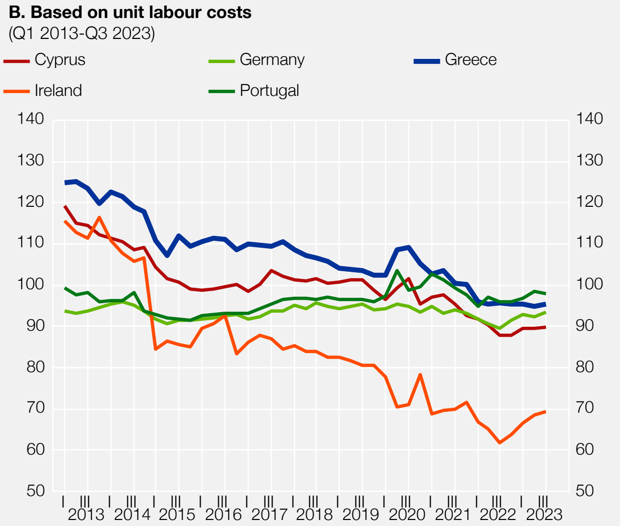
The nominal effective exchange rate increased by 2.9% in 2023 compared with 2022, as the euro appreciated vis-à-vis the US dollar, the Japanese yen, the Swedish krona, the Norwegian and the Danish krone, the Australian dollar, the pound sterling and the Turkish lira, while it depreciated vis-à-vis the Swiss franc.

Following a strong decline (improvement) in 2022, the real effective exchange rate based on relative unit labour costs for the economy as a whole, as calculated by the Bank of Greece, dropped slightly further (improved) in 2023. Unit labour costs in Greece rose in 2023, albeit at a significantly slower rate than in major trading partners. Unit labour costs in 2023 for the economy as a whole are estimated to have risen by a mere 4.0% in Greece; the corresponding rise in the euro area was 6.0% according to the European Commission and 6.2% according to the

Chart IV.22 Harmonised competitiveness indicators (real effective exchange rates)

(quarterly data; 2000=100)





Source: ECB, Statistical Data Warehouse.
Notes: An increase (decrease) suggests a deterioration (improvement) of competitivenes.
Changes in the HCI for Ireland in 2015 reflect a revision in the method of calculation of national accounts data.

Table IV.8 Nominal and real effective exchange rate (EER) indices for Greece

(index: 2000=100)

	Nominal EER		Real EER							
	Broad NEER[1]		Broad NEER[1]				REER-euro area			
			CPI-deflated		ULCT-deflated*		CPI-deflated		ULCT-deflated*	
Year		Percentage change		Percentage change		Percentage change		Percentage change		Percentage change
2000	100.0		100.0		100.0		100.0		100.0	
2010	112.4	-2.8	118.3	-0.4	131.2	4.7	118.3	-0.4	123.7	4.6
2015	110.6	-2.7	106.5	-4.6	111.1	-4.5	106.5	-4.6	107.8	-3.5
2016	112.0	1.3	107.1	0.5	107.3	-3.4	107.1	0.5	107.3	-0.4
2017	113.6	1.4	107.7	0.6	106.1	-1.1	107.7	0.6	106.6	-0.7
2018	116.0	2.1	108.4	0.6	104.0	-2.0	108.4	0.6	103.2	-3.2
2019	115.8	-0.2	106.7	-1.5	102.0	-1.9	106.7	-1.5	101.1	-2.0
2020	117.4	1.5	105.8	-0.8	104.2	2.1	105.8	-0.8	103.5	2.4
2021	118.7	1.1	104.4	-1.4	101.3	-2.8	104.4	-1.4	100.6	-2.8
2022	117.5	-1.0	102.0	-2.3	93.2	-8.0	104.9	0.5	97.1	-3.5
2023**	121.0	2.9	102.1	0.1	92.8	-0.4	103.7	-1.1	95.2	-2.0

Sources: Indices are calculated by the Bank of Greece on the basis of ECB and Eurpean Commission data. An increase (decrease) in EER indices suggestes a deterioration (improvement) of competitiveness. Data on exchange rates, consumer prices (CPI) and unit labour costs (ULCT) are provided by the ECB and the European Commission.
* The index is subject to regular revisions.
** Estimate.
1 Broad REER indices include Greece's 28 major European or non-European trading partners. Weights are calculated on the basis of imports and exports of manufacturing goods (SITC 5-8).

ECB, amid strong increases in nominal compensation per employee and small or even negative changes in labour productivity (5.3% and 0.8%, respectively, in the euro area according to the ECB). In fact, the estimated average increase in unit labour costs in 2023 within the broader group of trading partners inside and outside the euro area was even stronger (see Table IV.8).

The real effective exchange rate on the basis of relevant consumer price indices (CPI), as calculated by the Bank of Greece, registered a small increase (deterioration) of 0.1% in 2023, against an improvement of 2.3% in the previous year, mainly due to an appreciation of the nominal effective exchange rate, which more than offset the favourable – for Greece – domestic inflation differential from the corresponding weighted average of major trading partners. HICP inflation in 2023 remained lower in Greece (4.2%) than in major trading partners (euro area: 5.4%; EU27: 6.4%).

Structural competitiveness

Despite improvements in structural competitiveness over the past five years, the Greek economy still ranks relatively low in international structural competitiveness indicators. As regards technology and the adoption of renewable energy sources, the relevant indicators appear to be improving. The digital transformation of the public sector also registers continuing progress. Nevertheless, delays in the delivery of justice; red tape and persisting inefficiencies in some areas of public administration (e.g. property transfers, land use planning, the completion of the National Cadastre); shortcomings in some key infrastructures that are exacerbated by climate change-associated natural catastrophes of an unprecedented scale; insufficient combatting of widespread tax evasion; and quasi-oligopolistic conditions in specific goods and services markets that weaken competition and heighten inflationary pressures are all factors that act as a deterrent to foreign investment and large productive business ventures.

According to the IMD World Competitiveness Ranking (20.6.2023), Greece's position worsened by 2 notches in 2022, with the country ranking 49th out of 64 economies, same as in 2020. Government efficiency improved marginally (53rd from 55th), offsetting a marginal decline in business efficiency (48th from 46th). However, regarding macroeconomic performance, Greece's position dropped by 7 notches compared with 2021 (58th from 51st), mainly due to elevated inflation, low fertility and the high current account deficit. On the basis of the IMD survey, the least attractive characteristics of the Greek economy are a complex tax environment, despite multiple reductions in tax rates; ineffective delivery of justice and protection of private property; the observed low quality of corporate governance; and lack of a strong research and development culture.

On the basis of the Tax Foundation's International Tax Competitiveness Index (18.10.2023), which examines over 40 tax policy variables, Greece ranked again 25th out of 38 countries in 2022, same as in 2021. However, Greece's performance in absolute terms decreased slightly, based on the report, as the country's scores on consumption tax and cross-border tax regulations worsened, while they improved regarding property taxes. Greece is comparatively better placed in terms of individual and corporate income taxes (8th and 19th, respectively), while the country ranks lower in taxes imposed on assets (28th) and consumption (33rd). The main weaknesses concerned the fact that businesses may offset operational losses against future profits only to a very small amount and may not deduct losses from previous years' taxable income, as well as high VAT rates, in one of the narrowest tax bases that covers a mere 36% of final consumption.

Lastly, Greece's rating dropped, following ten years of progress, as regards the Transparency International Corruption Perceptions Index (31.1.2024). Greece's score declined by three notches; thus, in 2023, the country ranked 59th among the 180 countries under review, and 24th among EU27 countries. By contrast, in 2023 Greece returned to the "full democracy" category based on the Economist Democracy Index (15.2.2024), ranking 20th, i.e. 5 notches above its score in 2022.

Acceleration of investment and reforms under the Recovery and Resilience Facility, as well as other landmark investment, is expected to strengthen the productivity of the Greek economy in the coming years, which should also have positive effects on structural competitiveness.

7 BALANCE OF PAYMENTS: DEVELOPMENTS AND PROSPECTS

According to Bank of Greece data, the current account deficit in 2023 decreased compared to the previous year, standing at EUR 14.0 billion (6.3% of GDP), from EUR 21.2 billion in 2022 (10.3% of GDP). This development is attributable to the improved oil and other goods balances, since the corresponding imports dropped more than exports; a higher surplus in the travel balance; and the improved secondary income account and other services balance. However, this improvement was partly offset by an increase in the deficit of the primary income account, mainly as a result of higher interest payments, and, to a lesser degree, a decrease in the surplus of the sea transport balance (see Table IV.9 and Chart IV.23).

In 2024, the current account deficit is expected to improve further as a percentage of GDP. Although the estimated deceleration in domestic consumer spending, combined with a further decline in energy prices, is expected to limit the imports of relevant goods, the need to import investment goods should dampen this development.

A number of factors are expected to help improve the current account. Specifically, exports of goods, despite falling in 2023, maintained and widened their market share, which should boost performance in the years to come. The surplus of the services balance is expected to grow further – as travel receipts are projected to increase slightly in 2024 and should not be severely affected by developments in the Middle East (see Box IV.4) – mainly due to longer tourist seasons, the

Table IV.9 Balance of payments

(EUR millions)

	2020	2021	2022	2023
I CURRENT ACCOUNT BALANCE (I.A + I.B + I.C + I.D)	**-10,964.4**	**-12,271.6**	**-21,225.6**	**-13,970.5**
I.A BALANCE OF GOODS (I.A.1 - I.A.2)	**-18,528.1**	**-26,719.1**	**-39,557.6**	**-32,395.8**
I.A.1 Exports of goods	*28,904.4*	*39,327.9*	*53,755.0*	*49,457.4*
Fuel	6,102.5	10,210.2	17,601.7	14,267.8
I.A.2 Imports of goods	*47,432.5*	*66,046.9*	*93,312.6*	*81,853.2*
Fuel	9,298.4	16,087.3	30,853.2	21,155.6
I.B BALANCE OF SERVICES (I.B.1 - I.B.2)	**7,278.3**	**12,845.0**	**19,391.3**	**21,881.1**
I.B.1 Receipts	*22,711.3*	*35,056.4*	*47,761.9*	*49,091.4*
Travel	4,318.8	10,502.7	17,676.2	20,593.6
Transport	13,814.2	18,728.1	23,434.0	20,999.8
I.B.2 Payments	*15,,433.0*	*22,211.5*	*28,370.7*	*27.210.4*
Travel	792.9	1,112.5	1,924.6	2,431.7
Transport	9873.0	15,078.7	19,609.7	17,749.0
I.C PRIMARY INCOME ACCOUNT (I.C.1 - I.C.2)	**-275.9**	**368.7**	**-757.7**	**-4,781.3**
I.C.1 Receipts	*6,324.1*	*6,608.1*	*7,875.5*	*9,856.8*
Labour (wages, salaries)	201.4	220.2	224.7	208.8
Investment (interest, dividends, profits)	2,942.0	3,019.2	4,177.7	6,303.7
I.C.2 Payments	*6,599.9*	*6,239.4*	*8,633.1*	*14,638.1*
Labour (wages, salaries)	1,336.4	1,309.7	1,493.8	1,327.1
Investment (interest, dividends, profits)	4,838.8	4,433.3	6,478.8	12,795.1
I.D SECONDARY INCOME ACCOUNT (I.D.1 - I.D.2)	**561.2**	**1,233.8**	**-301.6**	**1,325.5**
I.D.1 Receipts	*4,064.5*	*5,008.2*	*4,390.6*	*5,541.5*
General government	2,452.7	3,561.7	2,642.7	3,255.8
I.D.2 Payments	*3,503.4*	*3,774.4*	*4,692.2*	*4,216.1*
General government	1,914.9	2,297.1	3,058.7	2,381.9
II CAPITAL ACCOUNT (II.1 - II.2)	**2,733.6**	**4,000.9**	**3,111.6**	**2,677.0**
II.1 Receipts	*3,124.5*	*4,915.0*	*3,857.0*	*3,367.7*
General government	2,932.0	4,055.5	2,523.2	2,824.7
II.2 Payments	*390.9*	*914.1*	*745.3*	*690.8*
General government	4.4	5.0	7.2	7.0
III FINANCIAL ACCOUNT (III.A + III.B + III.C + III.D)	**-7,747.7**	**-7,107.6**	**-16,152.0**	**-9,160.4**
III.A DIRECT INVESTMENT[1]	**-2.332.3**	**-4,412.6**	**-4,988.9**	**-1,366.9**
Assets	568.6	1,147.7	2,538.5	3,240.4
Liabilities	2,900.9	5,560.4	7,527.5	4,607.3
III.B PORTFOLIO INVESTMENT[1]	**48,339.5**	**23,829.9**	**8,934.9**	**-3,020.4**
Assets	35,443.0	27,316.7	10,206.3	2.601.4
Liabilities	-12,896.5	3,486.7	1,271.4	5,621.8
III.C OTHER INVESTMENT[1]	**-55,291.1**	**-29,060.9**	**-18,252.5**	**-5,303.6**
Assets	2,362.1	3,713.7	-3,688.1	-1,673.7
Liabilities	57,653.2	32,774.6	14,564.4	3,630.0
(Loans of general government)	1,342.6	-957.9	-4,496.0	-3,501.3
III.D CHANGE IN RESERVE ASSETS[1]	**1,536.2**	**2,536.0**	**-1,845.4**	**530.6**
IV BALANCING ITEM (I + II - III + IV = 0)	**483.2**	**1,163.1**	**1,962.0**	**2,133.2**
RESERVE ASSETS (STOCK)	**9,739**	**12,770**	**11,341**	**12,324**

Source: Bank of Greece.
1 (+) increase, (-) decrease.

Chart IV.23 Contributions to the annual change in the current account balance

(EUR millions)

Source: Bank of Greece.
Note: Positive (negative) values represent improvement (deterioration) of the current account.

emergence of other forms of tourism and a stronger cruising sector. Moreover, recent geopolitical developments in the Red Sea should help boost freight rates and, thus, sea transport receipts, at least in the short term. Lastly, the expected reduction in interest rates, combined with the return of Greece's credit rating to investment grade, should help reduce interest payments and, hence, improve the primary income account.

However, there are severe risks to current account improvement, mainly associated with a deceleration in global demand, especially by Greece's main destination countries, which does not favour significant export growth in 2024. Further risks include possible adverse geopolitical developments, new increases in fuel prices and the potential resurgence of inflationary pressures.

In the past few years, the export orientation of the Greek economy has been improving markedly. Based on balance of payments data, in 2023, exports of goods and services as a percentage of GDP doubled compared with 2010 and topped their levels in 2019.[38] The international trade openness index followed a similar course, rising to 94% (from 50% in 2010 and 80% in 2019).[39] From 2010 to 2019, the share of gross value added of tradable goods and services at current prices grew from 50.0% to 55.8%, with a corresponding decrease in the share of non-tradables. However, in 2020, when tourism was hard hit by the COVID-19 pandemic, the share of tradables dropped, returning to an upward path in 2021.[40] In 2022, the share of tradables exceeded its 2019 level and reached 57.3%. Nevertheless, over 50% of Greece's exports comes from three sources, that is travel services, sea transport and fuel, while the import content of exports is high.[41] Moreover, exports of high-tech products, although more than doubled in terms of value in the 2017-2023 period, still account for a small share of total exports of goods. Consequently, a rise in exports of goods and services calls for an acceleration of structural reforms and efficient utilisation of resources under the European Recovery and Resilience Facility, as well as improving the diversification of goods and services exports and strengthening the production of high-tech goods (see Box IV.5).

7.1 Balance of goods

The deficit of the balance of goods shrank by EUR 7.2 billion in 2023, as imports fell more than the corresponding exports. Specifically, around 89% of this improvement is attributable to a drop in the oil deficit. Exports of goods decreased, as a result primarily of lower oil exports and secondarily of other goods exports. Although oil exports, at constant prices, increased by 4.6%, the

38 The index had registered a temporary decrease in 2020, as a result of a pandemic-related drop in travel receipts and a significant rise in 2022 due to price increases associated with the Russia-Ukraine war.

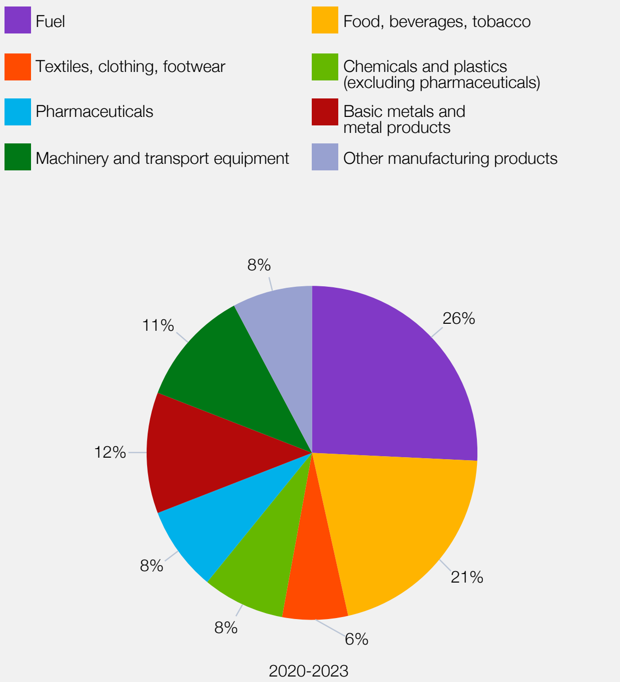
39 The openness index is defined as the sum of exports and imports as a percentage of GDP.

40 According to estimates by the Bank of Greece, based on ELSTAT national accounts data. Tradable goods and services include the following sectors: Agriculture, forestry and fishing (NACE Rev. 2 A); Mining and quarrying (B); Manufacturing (C); Energy-Water supply (D-E); Transportation and storage (H); Accommodation and food services(I); Information and communications (J); Financial and insurance activities (K); and Professional and administrative services (M-N).

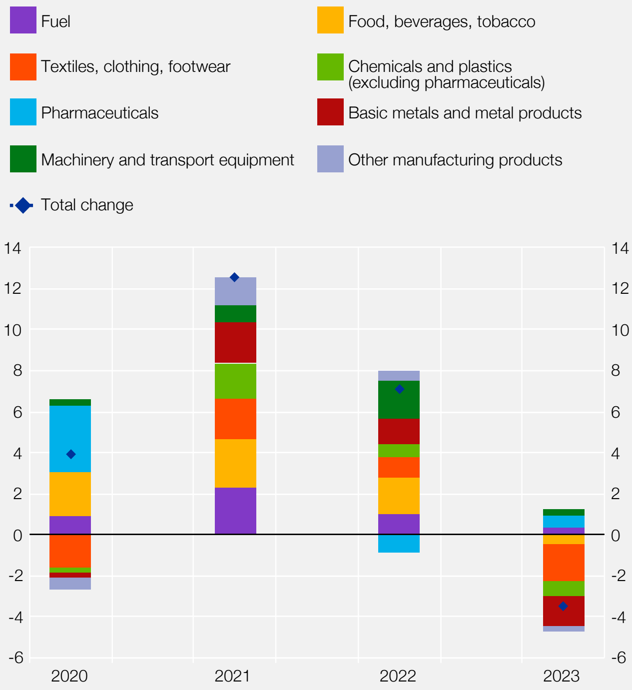
41 According to OECD data, the import content of total Greek exports in 2017-2020 exceeded 30% (euro area: 18%).

Chart IV.24 Exports of goods by sector

A. Sectoral participation in total exports
(percentages; 2020-2023 average)



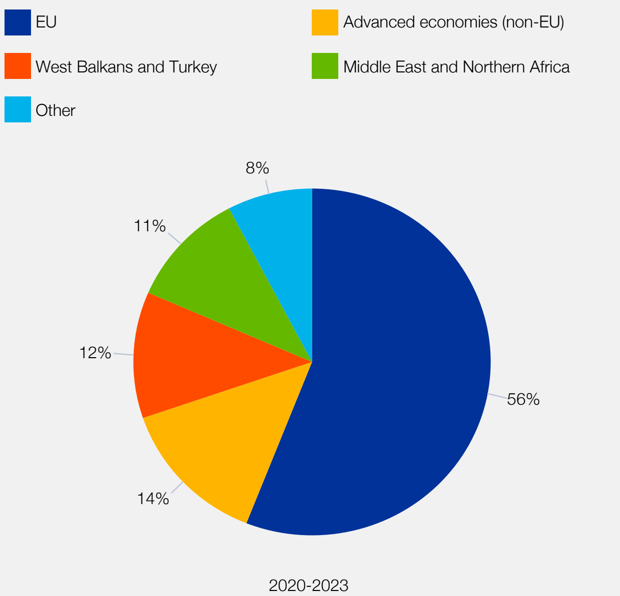
B. Sectoral contribution to the growth rate of exports
(percentage points; at constant prices*)



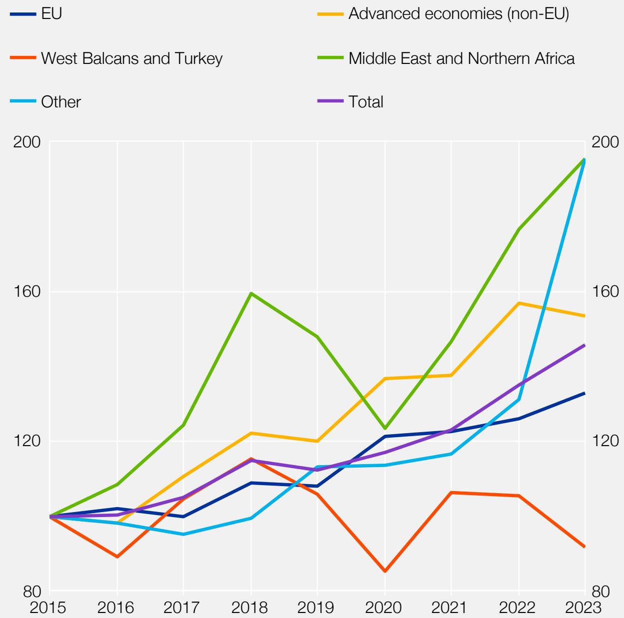
Source: Eurostat trade statistics, COMEXT database.
* Figures are deflated by the ELSTAT producer price index in exports.

Chart IV.25 Exports of goods by destination

A. Participation by destination in total exports
(percentages; 2020-2023 average)

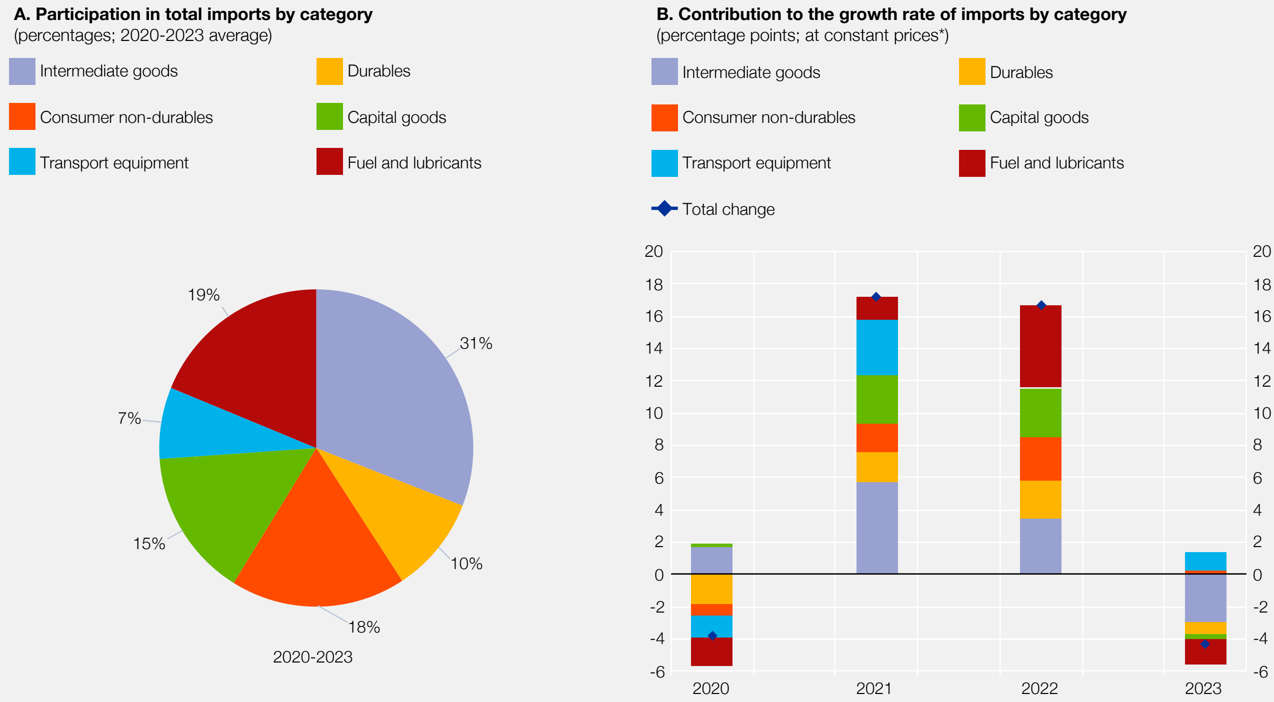


B. Greek exports market share developments
(share of imports from Greece in total imports for each destination; index: 2015=100)



Sources: Eurostat trade statistics (COMEXT database) and IMF (DOTS).

Chart IV.26 Imports of goods by use



Source: Eurostat trade statistics, COMEXT database.
* Figures are deflated by the ELSTAT import price index.

decrease in international energy prices more than offset this development in nominal terms. Non-oil exports at constant prices fell by 6.4%, as the negative contributions by textiles and basic metals were partly offset by the positive contributions from pharmaceuticals and machinery and transport equipment (see Chart IV.24). Despite a decline in the exports of goods, their market share grew in 2023, as they increased both in the EU and in the Middle East and North Africa (MENA), while a small decrease was registered in other developed countries (see Chart IV.25).

Furthermore, imports of goods declined, mainly due to a drop in oil imports, which reflects a decrease in international prices and volumes of energy goods (by 7.6%). The decline in non-oil imports (by 4.0%) at constant prices is associated with a decrease in the imports of intermediate and durable consumer goods, which was partly offset by an increase in the imports of transport equipment (see Chart IV.26).

7.2 Balance of services

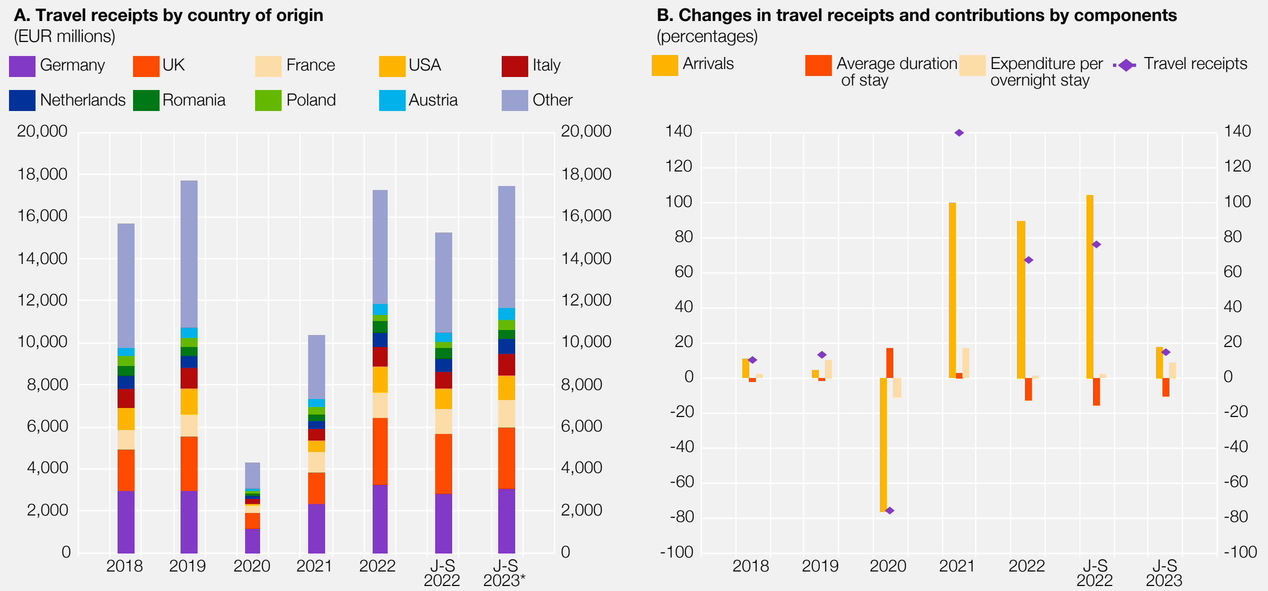
The services surplus in 2023 grew by 12.8%, mainly as a result of higher net travel receipts and, to a lesser extent, due to the fact that the other services balance registered a surplus as against a deficit in 2022. By contrast, the surplus of the transport services balance shrank.

Global tourism recovered 88% of its pre-pandemic level in 2023 and arrivals in the Mediterranean area have already exceeded their 2019 levels.[42] Greece still ranked fourth in terms of arrivals in the first nine months of 2023, with the largest share of visitors arriving during the summer compared with competitor countries, despite a recent extension of the tourist season.

Tourist arrivals and receipts continued to increase in 2023 – albeit at a slower pace than in 2022 – and grew by 17.6% and 16.5%, respectively, topping their 2019 levels. Nevertheless, the av-

42 UNWTO, *World Tourism Barometer*, 21(1), January 2024.

Chart IV.27 Breakdown of and changes in travel services (2018 - 2022 and January-September 2022-2023)



Source: Bank of Greece, Border Survey.
* Provisional data (excluding cruises).

erage expenditure per trip decreased by 2.7% in 2023, despite an upward trend registered by travellers outside the EU27, mostly from the USA. This suggests a decline in the average length of stay, which was offset to a degree by a rise in the average expenditure per overnight stay, also reflecting inflation developments (see Chart IV.27). Specifically, deflated receipts for 2023 nearly match their 2019 levels (99.2% of receipts in 2019), as the weighted price index for tourism[43] grew by 5.7% in 2023, standing above the CPI (3.5%).[44]

The main markets of origin, such as Germany and France, continue to contribute the bulk of total receipts, increasing their share in the total. Moreover, efforts to extend the tourist season appear to bear fruit, as increased arrivals are being registered in periods outside the tourist season, such as in April and November. Receipts in the cruising industry also recorded a substantial increase in 2023 (by 69.5% compared with 2022), although their share in total receipts remains small (3.5% for 2023).

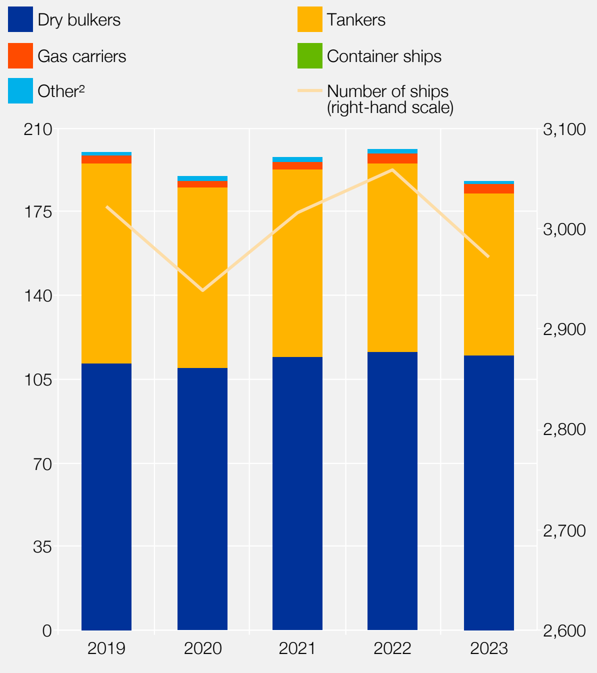
Moreover, according to data from the January-September 2023 Border Survey, in the island regions of the Southern Aegean (Cyclades and the Dodecanese), Crete and the Ionian Islands, which are popular tourist destinations, receipts fully returned to their corresponding 2019 levels (same as in the country as a whole). The share of the Attica region in total receipts grew by 1.3 percentage points year-on-year, while the Ionian Islands and Crete registered the strongest increases. The average expenditure per trip also rose considerably in the Northern Aegean and Crete, while it declined in Central Macedonia.

The surplus of the transport balance contracted in 2023, as a decrease in net sea transport receipts was partially offset by an improvement in the other transport balance. Following a historical high in 2022, sea transport receipts fell to EUR 18.2 billion (by 13.2%), while the corresponding payments dropped even faster. As a result, the sea transport surplus decreased by 10.8%. Lower sea

43 Bank of Greece (2023), *Annual Report 2022*, Box IV.3 "The Greek tourism sector: performance and changes following the pandemic".
44 The corresponding measure for the weighted price index for tourism was 13.5% in 2022, against 1.8% in 2019 (compared with 9.6% and 0.3%, respectively, for the aggregate CPI).

Chart IV.28 Developments in the merchant fleet[1] managed by companies located in Greece

(dwt millions; yearly averages)



Source: Bank of Greece calculations. For the set-up methodology of the fleet managed by Greece, see Papaspyrou, M. and A. Petralias (2019), "The Greek shipping estimation model", Bank of Greece, Economic Bulletin, No. 49, July.
1 Merchant ships in operation (excluding recreational and fishing) with gross tonnage of over 100.
2 Including passenger ships, barges, etc.

transport receipts mainly reflected a drop in freight rates – as captured by the ClarkSea index – by 37% compared with 2022, although the active commercial fleet managed in Greece also decreased, mainly in the oil tanker sector (see Chart IV.28). Specifically, freight rates for dry cargo ships declined by 41%, following port decongestion and low demand, particularly in the first half of 2023. Oil tanker freight rates increased slightly, albeit at a decelerating pace during 2023, due to higher demand. Lastly, a weakening US dollar against the euro further exacerbated the drop in sea transport receipts (see Box IV.6).[45] The deficit of other transport services shrank, mainly reflecting a decline in transport payments for imports of goods, which fell in 2023.[46]

Lastly, the other services balance improved compared with 2022, shifting from a deficit to a surplus in 2023, as an improvement in the balances of telecommunications, IT and information, and financial services was partly offset by a rise in net payments for intellectual property services. In 2023, other business services and telecommunications, IT and information services accounted for the largest share in total receipts, while other business and insurance services accounted for the largest share in relevant payments.

7.3 Primary and secondary income accounts – Capital account

In 2023, the primary and secondary income accounts followed diverging trends. The primary income account deficit deteriorated, registering a substantial increase against 2022, mainly due to higher net interest, dividend and profit payments, following a significant rise in interest rates – since mid-2022 – and the ensuing interest payments. The secondary income account shifted from deficit to surplus, chiefly on the back of net receipts, as against net payments in 2022, in the general government sector (inflows from the RRF). The capital account also deteriorated, registering a lower surplus than in 2022, mainly due to a shift from net receipts in 2022 to net payments in the other sectors of the economy excluding general government.

Inflows from the EU structural and investment funds, which are recorded under the primary and secondary income accounts, amounted to EUR 1.3 billion in 2023, while inflows of direct agricultural subsidies under the Common Agricultural Policy reached EUR 2.5 billion.[47] Disbursement of RRF funding is conditional on reaching certain project and reform implementation milestones.[48] Specifically, within 2023 two tranches were disbursed under the RRF, bringing

45 The US dollar is the main trading currency in the merchant shipping industry.
46 In the balance of payments, the value of imports is registered in f.o.b. (free on board) terms. The value of imports in c.i.f. (cost, insurance, freight) terms is converted into f.o.b. by applying a fixed rate of 5%, which represents the amount for transport and insurance services on these imports. This amount is split in 4/5 and 1/5 in the payment accounts of the respective services.
47 Based on Bank of Greece data on cash inflows from EU structural funds (provisional data). Structural funds include the European Regional Development Fund, the European Social Fund and the Cohesion Fund.
48 The timelines of the projects are set out in the Annex to the Proposal for a Council Implementing Decision on the approval of the assessment of the recovery and resilience plan for Greece (COM 328, 17.6.2021).

the aggregate absorption rates of RRF resources (capital inflows) to 41% for grants and 57% for loans.

By the end of 2023, disbursement of RRF funds reached EUR 7.4 billion (in the form of grants), with EUR 3.3 billion as a direct transfer to the secondary income account (i.e. the general government account) and EUR 4.1 billion to the capital account (for fixed capital formation), thus boosting the current account financing.[49]

Another tranche under the RRF is expected within 2024, conditional on reaching the associated milestones. As regards the absorption of funds under the 2014-2020 Partnership Agreement (PA), Greece was required to absorb the total of the allocated resources by the end of 2023; thus, the projects planned more than covered the remaining amount, also taking into account the pick-up typically observed at the end of a programming period. Any pending accounting issues are expected to be resolved in order to achieve full absorption. In addition, the year 2022 saw the deployment of a new programme (Multiannual Financial Framework 2021-2027) with an aggregate disbursement of EUR 630 million from launch to end-2023. Lastly, a prefinancing payment of EUR 158.7 million was disbursed in the form of a grant under RePowerEU. It should be noted that Greece ranks fourth, standing above the EU country average, in terms of disbursements under the new programme.

7.4 Financial account

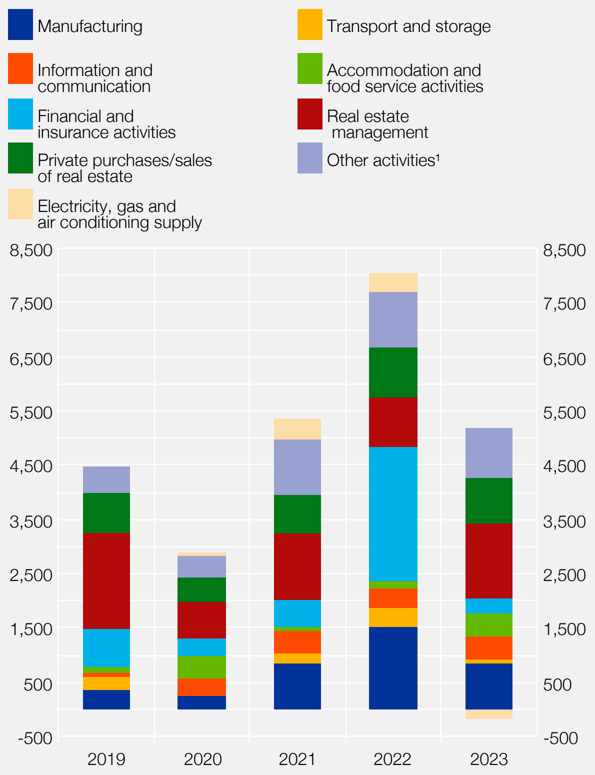
In 2023, residents' external liabilities under direct investment, which represent non-residents' direct investment in Greece, registered a EUR 4.6 billion flow (2.1% of GDP), compared with EUR 7.5 billion (3.6% of GDP) in 2022. Despite a drop, foreign direct investment (FDI) flows remained above the 2019-2021 three-year average, mainly due to heightened investment interest for real estate in Greece (see Footnote 9). A decrease in capital flows chiefly reflects Greece's domestic environment and, to a lesser extent, the country's external environment. In the former case, lower FDI flows are explained by, *inter alia*, a stagnation reflected in competitiveness indicators for the Greek economy,[50] limited investment in equities from capital increases, mergers and acquisitions in the country, and the fact that several projects under the privatisation programme are still at the public procurement stage.[51] As for the external environment, the decline is associated with global economic uncertainty, wars and conflicts, high energy prices and high interest rates, which appear to have had a negative impact on the evolution of FDI flows, both in Greece and globally. Specifically, global FDI flows in 2023 showed a marginal increase over 2022,[52] mostly attributable to higher amounts invested, in absolute terms, rather than larger numbers of investments.

In 2023, FDI inflows to Greece from abroad which were directed to real estate management and private purchases/sales of real estate almost doubled over 2022. This reflects, *inter alia,* an amendment[53] to the Golden Visa programme[54] by the Ministry of Migration and Asylum. Manufacturing, telecommunications, wholesale and retail trade, construction, accommodation and food services attracted the interest of foreign investors, as was also the case in 2022 (see Chart IV.29). FDIs mostly originated from the United Kingdom, Germany, the United States[55] and Hong Kong. It should be noted that the most important transactions under the 2023 privatisation pro-

49 A further EUR 7.3 billion was disbursed in the form of loans and is recorded under the financial account.
50 See *Annual Report 2023,* Chapter IV.6 "Competitiveness".
51 See Ministry of Economy and Finance, Report on the 2024 Budget [in Greek].
52 United Nations, Investment Trends Monitor, Issue 46, January 2024.
53 Under the programme, the minimum investment amount was raised on 1.8.2023 from EUR 250,000 to EUR 500,000 in the major cities, i.e. Athens (centre, northern and southern suburbs) and Thessaloniki (centre), for non-EU citizens (and their family members) aiming to acquire a residence permit. The remaining provisions were kept unchanged. The government has announced a new amendment.
54 See Bank of Greece, *Annual Report 2022*, Box IV.4, p. 119.
55 The USA remained the largest recipient of global FDIs for 2023.

Chart IV.29 Breakdown of FDI flows in Greece by sector of economic activity

(EUR millions)



Source: Bank of Greece, Balance of payments statistics.
Note: The sum of individual FDI items in the chart may diverge from the corresponding amount in the Balance of payments table, due to the different methodology applied.
1 Other activities: mining and quarrying; agriculture, forestry and fishing; construction; wholesale and retail trade; and other.

gramme that supported FDIs in Greece were the disbursement of the second tranche by the Hellinikon Global I S.A. for the acquisition of 100% of Hellinikon S.A. and the payment of initial capital by Grimaldi Euromed S.p.A. (Italy) to Port of Igoumenitsa Holdings S.A.

Regarding residents' external assets, which represent Greece's foreign direct investment abroad, the flows recorded in 2023 amounted to EUR 3.2 billion. The most significant transaction was the acquisition of ENEL Romania (Romania) by Public Power Corporation S.A.

For 2024 as a whole, also taking into account the Report on the 2024 Budget, the FDIs are projected to pick up, supported by the completion of privatisation projects already at an advanced stage.

Under portfolio investment, a rise in residents' external assets is almost exclusively due to an increase of EUR 2.8 billion in residents' holdings of foreign bonds and Treasury bills. A rise in residents' external liabilities is due primarily to an increase of EUR 4.1 billion in non-residents' holdings of Greek bonds and Treasury bills and secondarily to a EUR 1.5 billion rise in non-residents' holdings of Greek equities. Under other investment, a drop in residents' external assets was attributable to a decline of EUR 7.2 billion in residents' deposit and repo holdings abroad, which was partly offset by a EUR 5.1 billion statistical adjustment associated with the issuance of banknotes, and, to a lesser extent, by a EUR 457.3 million rise in loans extended to non-residents by domestic financial institutions. An increase in residents' external liabilities was related to the EUR 5.1 billion statistical adjustment with regard to the issuance of banknotes, and, to a lesser extent, to a EUR 4.1 billion rise in non-residents' deposit and repo holdings in Greece (the TARGET account included), which was partly offset by a decline of EUR 5.5 billion in residents' outstanding debt to non-residents. At end-2023, Greece's reserve assets stood at EUR 12.3 billion, compared with EUR 11.3 billion at end-2022.

Box IV.4

DEVELOPMENTS IN GREEK-ISRAELI TRADE AND THE IMPACT OF THE CONFLICT IN THE MIDDLE EAST

At the start of the fourth quarter of 2023, the military conflict between Israel and Hamas exacerbated geopolitical concerns, particularly for the South Eastern Mediterranean and the Middle East, raising questions about the potential impact on the Greek economy and, more specifically, on Greece's trade balance. This impact can be both direct and indirect, stemming from the conflict's effects on Greek-Israeli trade and from higher energy and other commodity prices and rising global uncertainty. This box primarily attempts to provide an overview of Greek-

Israeli trade and analyse foreign direct investment (FDI) flows from Israel in order to assess the possible direct impact of the conflict on the Greek economy.

Balance of goods and services between Greece and Israel

Greece's overall balance of goods and services with Israel is positive, with a surplus recorded both in the balance of goods and in the balance of services. However, the main driver of this surplus is the balance of services, with travel receipts being its main component. More specifically:

Balance of goods

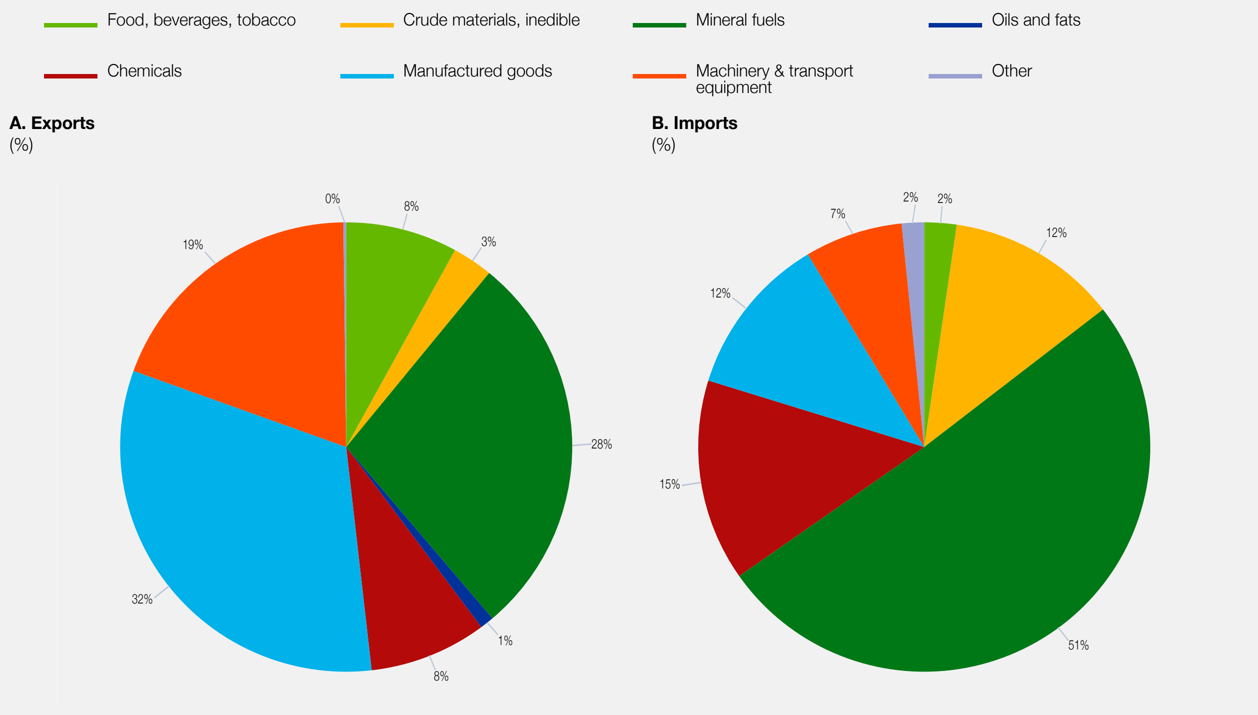
According to Bank of Greece data, exports of goods to Israel accounted for about 1.4% of Greece's total exports of goods, while imports of goods from Israel accounted for less than 1% of the country's total imports over the past five years (2019-2023). Even in 2023, the balance of goods in the bilateral trade between Greece and Israel showed a surplus, albeit small (about €200 million). The main categories of goods exported to Israel include manufactured goods, mineral fuels and machinery and transport equipment, while imports consist mostly of chemicals and crude materials (see Chart A). Therefore, the bilateral trade of goods between Greece and Israel is relatively small and no significant negative impact on Greece's balance of goods is anticipated. More specifically, according to fourth-quarter 2023 data, total exports to Israel have not recorded a downturn.[1]

Balance of services and travel services

The balance of services surplus accounts for almost two thirds of the overall balance of goods and services surplus in Greek-Israeli trade, with travel receipts being its main component.

Chart A Structure of bilateral trade in goods between Greece and Israel by sector

(2019-2023 average)

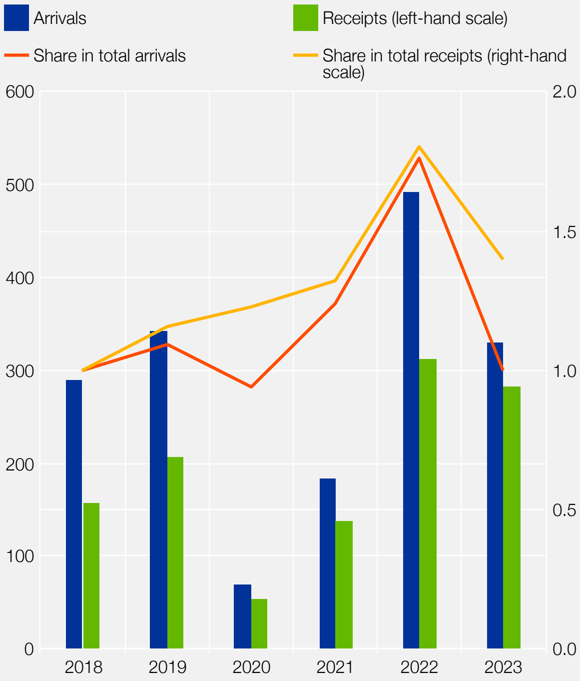


Source: Eurostat trade statistics, COMEXT database.

1 According to trade statistics (Eurostat, COMEXT database), in the fourth quarter of 2023, exports of fuels to Israel recorded a significant increase year-on-year.

Chart B Arrivals and travel receipts from Israel (2019-2023) and their shares in the respective totals

(arrivals in thousand travellers, receipts in EUR million, shares in percentages)



Source: Bank of Greece, Border Survey.

While Israel is not among Greek travellers' top destinations, Greece is one of the main travel destinations for Israeli residents. Outbound tourism from Israel is estimated at 3 million travellers in 2023.[2] Top international destinations for these travellers include, in descending order, Turkey, the USA, Greece and Austria, while top destinations in the Mediterranean include, by order of preference, Turkey, Greece, Cyprus, Spain and Italy.

Tourist arrivals from Israel to Greece and the corresponding receipts have followed an upward trend in recent years. In particular, the share of tourists from Israel in inbound travellers was close to 2% in 2022 in terms of both arrivals[3] and receipts, above the corresponding 2019 levels (1% in arrivals and receipts) (see Chart B). This points to a rising momentum of tourist arrivals from Israel, although their share in the total is small. The average expenditure per trip of Israeli travellers in Greece in 2022 exceeded the national average, while their average duration of stay was shorter compared with total travellers. These indicators show that travellers from Israel have a higher than average income level, although their length of stay is shorter.

If the military conflict continues into 2024, the loss of receipts from Israeli travellers may be partly offset by a higher number of cruise ships calling at Greek ports due to cancellations of calls at Israeli ports. This would further enhance growth in the Greek cruise market, as also demonstrated by the construction of home-porting infrastructures in Greece.

Seat scheduling in incoming flights from Israel

Before the onset of the conflict, 112.9 thousand air seats from Israel had been scheduled for October 2023, corresponding to 11.8% of all seats in flights from Israel for the period January-October 2023.[4] However, the conflict led to extensive military conscription in Israel, which minimised travel abroad,[5] while a number of international airlines (such as Cathay, Lufthansa and Air France) suspended flights to Israel. Thus, in the fourth quarter of 2023 air passenger arrivals from Israel at airports across Greece fell by 71% year-on-year.[6]

With hostilities still unfolding in the first quarter of 2024, the extent and duration of the conflict's impact is surrounded by uncertainty. The impact of the conflict seems to be reflected in scheduled air seats from Israel for 2024. More specifically, during the summer period of 2024 (April-October), the number of scheduled air seats from Israel to destination airports in Greece (Athens, Thessaloniki, Heraklion, Mykonos, Santorini, etc.) fell by 7.6% to 856.8 thousand seats (from 927.1 thousand seats in the corresponding period of 2023) (see table, panels A and B).

2 UNWTO Tourism Recovery Tracker.
3 Israel is among the top 20 countries of origin for Greek tourism, although it holds a relatively small share in total arrivals and receipts.
4 According to seat distribution data from INSETE's Airdata Tracker.
5 With the exception of Israelis' arrivals in Athens who had no military obligations and opted to come to Greece in order to limit risks for themselves and their families. Meanwhile, the repatriation of Israelis still in mainland Greece and the islands continued, as they were required to report for duty due to the war in their country.
6 On an annual basis, air passenger arrivals from Israel to all Greek airports (excluding the Athens International Airport) fell by 15% compared to 2022 (482 thousand travellers from Israel in 2023, against 570 thousand in 2022), according to data from the Civil Aviation Authority.

Scheduled air seats on inbound international flights[1] from Israel

A. Distribution of air seats per month - Summer period

Country of origin: Israel	April	May	June	July	Aug.	Sep.	Oct.	Total
Athens	45,674	48,139	52,523	50,737	50,496	49,243	39,907	336,719
Rhodes	14,749	16,822	24,466	33,329	33,195	31,634	25,306	179,501
Heraklion	10,105	11,050	18,338	33,023	33,081	30,473	24.752	160.822
Thessaloniki	4,786	7,101	6,931	7,836	7,632	7,835	5,891	48,012
Mykonos			4,676	8,377	8,066	7,892	5,794	34,805
Kos	945	189	3,591	5,859	5,859	5,670	4,914	27,027
Corfu		720	6,417	8,109	8,127	8,145	6,417	37,935
Chania		1,296	1,476	1,656	1,665	1,656	1,296	9,045
Aktion	360	1,620	1,800	2,340	2,520	1,440	1,440	11,520
Santorini	189		1,479	2,409	2,586	744	744	8,151
Kalamata				945	756	945	567	3,213
Total	**76,808**	**86,937**	**121,697**	**154,620**	**153,983**	**145,677**	**117,028**	**856,750**

B. Annual change (%) in air seats

Country of origin: Israel	April	May	June	July	Aug.	Sep.	Oct.	Total 2023/24
	-20.2%	-17.6%	-11.7%	-3.1%	-5.4%	-3.3%	2.1%	-7.6%

Source: Airdata Tracker INSETE, 22.3.2024.
1 Seats available for reservation in airline systems.

Foreign direct investment from Israel in Greece

Over the past five years (2019-2023),[7] foreign direct investment (FDI) flows from Israel to Greece represented on average only 1.3% of total FDI inflows, although Israel ranks second among Middle Eastern countries, behind the United Arab Emirates.[8] Investor interest from Israel mainly focuses on the real estate market, as investment from Israel held a share of 4.1% in total real estate FDIs in 2023. This development is also reflected in the number of permanent residence permits for investors (Golden Visa programme) granted to Israeli nationals, which almost doubled by end-2023 compared to 2022,[9] although still accounting for about 1.6% of the total number of such permits (against 1.0% at end-2022).

Conclusions

The direct impact of the armed conflict between Israel and Hamas on Greece's current account is estimated to be small, provided that military operations remain limited in space and time. If the conflict continues into 2024, but remains geographically limited, the decline in the number of travellers from Israel is not expected to have a significant impact due to the small size of this market and the diversification of Greece's inbound tourism markets, as well as the potential substitution by other dynamic markets, such as the US.

Of greater concern would be a further escalation of the war in the Middle East with the involvement of other co-untries and a protracted duration of the conflict. Such developments could have an indirect negative impact on the current account through channels mainly associated with fuel prices and increased uncertainty, which would affect the choices of all travellers, transport and supply chains. Already, attacks by Houthi rebels in the Red Sea

7 The main countries of origin for 2023 include China-Hong Kong, Germany, the United Kingdom, the USA and Belgium.
8 It should be noted that FDI inflows to Israel from Greece (i.e. Greek investment in Israel) are close to zero and the relevant FDI stock is very low.
9 At end-2022 they stood at 101, compared with 188 at end-2023. Data from the Greek Ministry of Migration and Asylum, https://migration.gov.gr/wp-content/uploads/2024/01/ΠΑΡΑΡΤΗΜΑ-Β_Δεκέμβριος_2023_ΥΜΑ-GR-Ενημερωτικό-Δεκέμβριος-Β-Νόμιμη-Μετανάστευση.pdf (in Greek).

have led to a rerouting of merchant ships away from this region, with vessels now following the longest route (around Africa) rather than sailing through the Suez Canal. More specifically, the balance of payments and, more broadly, the Greek economy are expected to be affected through the following channels: a) reduced external demand for Greek products and postponement of travels due to geopolitical developments and the fear of terrorist attacks, resulting in smaller inflows under the balance of payments; b) rising fuel prices, with upward pressures on the prices of oil, natural gas and, therefore, electricity; c) transport and supply chain bottlenecks triggering a rise in the prices of imported raw materials; and d) postponement of investment projects, reduced FDI flows and possibly tighter financing conditions in the global and domestic economies due to increased uncertainty and risk repricing.

Box IV.5

THE TWIN DEFICITS IN THE GREEK ECONOMY: RECENT DEVELOPMENTS AND PROSPECTS

The Greek economy has historically been characterised by high current account deficits. Nevertheless, the past decade saw a gradual improvement in competitiveness and an increase in the export orientation of the economy, which contributed to a reduction in the current account deficit, from close to 15% of GDP in 2007-2008 to 1.5% at end-2019. However, the outbreak of the pandemic in 2020 and subsequently the war between Russia and Ukraine halted the improvement, driving the current account deficit to levels above 6% in 2020-2021 and over 10% in 2022, also as a result of higher energy prices. 2023 saw a significant decrease of the current account deficit, to 6.3% of GDP, with further improvement expected in the coming years. Moreover, extraordinary fiscal interventions in the form of support measures for addressing the pandemic, which were launched in 2020 and continued into 2021, compounded by fiscal measures in response to high energy prices due to the war between Russia and Ukraine in 2022, led to a worsening of the budget balance during these years. However, the withdrawal of these measures since 2023, helped to improve the budget balance. Specifically, the general government budget balance (national accounts data, convergence criterion), which was in surplus (0.9% of GDP) in 2019, turned into a deficit of 9.7% of GDP in 2020, 7% of GDP in 2021 and 2.4% of GDP in 2022 and is estimated at a deficit of 2.3% of GDP in 2023.

A conjunctural re-emergence of the twin deficits, i.e. the external deficit and the fiscal deficit, raises questions about whether the Greek economy will return to its pre-pandemic and pre-war state and resume its upward trajectory in 2022, while the fiscal balance improved, the current account further deteriorated. This analysis provides an overview of recent developments in the current account in the context of the twin deficits hypothesis and attempts to estimate whether the fiscal deficit contributes to the current account deficit, also quantifying their correlation in the recent past, based on information available so far.

The twin deficits

According to the system of national accounts, the current account deficit can be associated with the general government deficit via the gap between saving and investment as follows:[1,2]

$$CAB = S - I = (S_p - I_p) + (S_g - I_g) \quad (1)$$

1 For an analysis of current account developments in terms of saving and investment during 2000-2018, see Bank of Greece *Annual Report 2014*, Box IV.4.

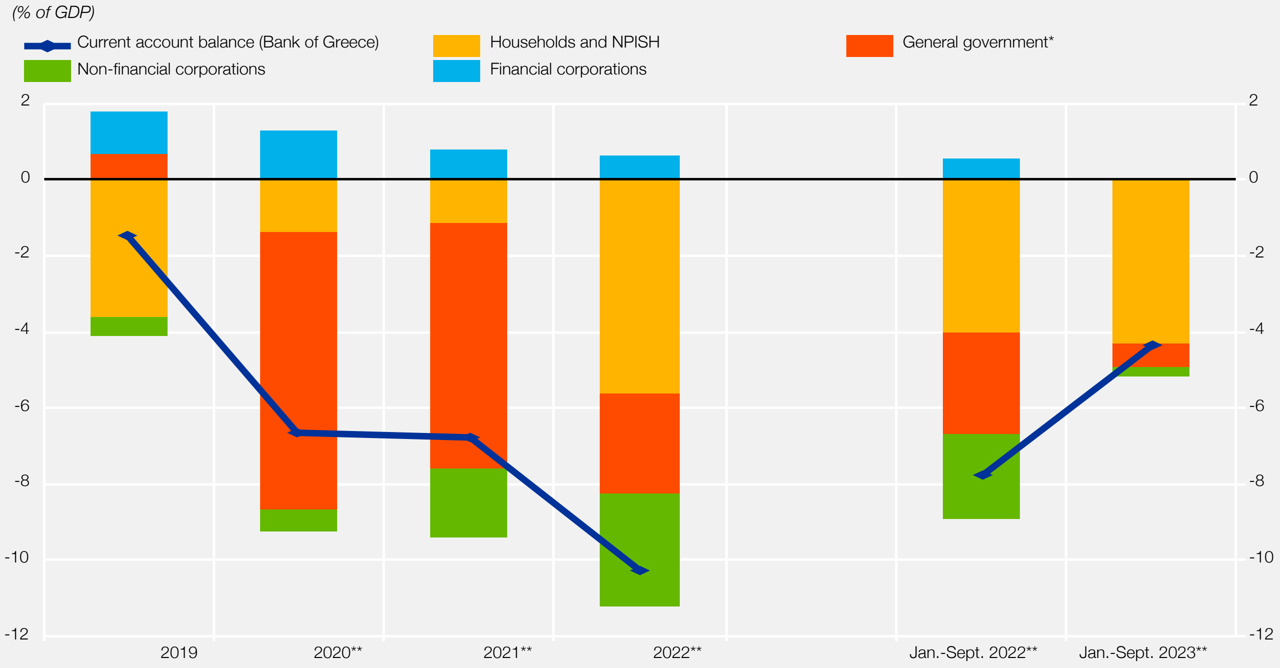
2 Gross domestic product (GDP) is defined as: GDP = C + G + I + X - M, where C and G are household and government consumption, respectively, I is government and private sector gross capital formation (investment), X and M are exports and imports of goods and services, respectively, with the differential X - M reflecting the goods and services balance. The current account balance (CAB) is defined as: CAB = X - M + NY + NCT, where NY and NCT are net income and net current transfers from abroad. Given that gross national disposable income (GNDY) is defined as: GNDY = C + G + I + CAB and gross saving is defined as: S = GNDY - C - G, CAB can be expressed as the gap between saving and investment. For a detailed calculation of the current account based on identity (1), see IMF (2009), *Balance of Payments and International Investment Position Manual*, Sixth edition (BPM6), Chapter 14.

where S is gross saving and I is gross capital formation (investment) of the private sector (p) and the government sector (g).

The two terms of the sum denote the saving gap of the private sector (households and firms) and of general government, respectively. Thus, identity (1) links the budget balance (S_g - I_g) with the current account balance.[3] More specifically, a widening in the saving gap of general government, unless covered by the private sector, will lead to a worsening in the current account balance.

Following a widening in the 2020-2021 period as a result of the pandemic, the saving-investment gap of general government registered a significant contraction in 2022, which continued into the first nine months of 2023. This is mainly attributable to a rise in saving and chiefly reflects a recovery in tax revenue as a result of a rebound in economic activity, as well as a gradual withdrawal of fiscal measures to address the pandemic and higher energy costs. The household saving-investment gap followed an opposite trajectory, expanding in 2022, as household saving decreased and household investment increased. Lower household saving mainly reflects stronger consumption, which more than offset an increase in households' disposable income. The first nine months of 2023 witnessed a further increase in household investment, while household saving, although remaining negative, registered a small improvement year-on-year. A worsening of the saving-investment gap of non-financial corporations in 2022 is associated with an increase in their investment, which was larger than the corresponding rise in their saving to finance this investment. In January-September 2023, the gap contracted substantially, as the saving of non-financial corporations covered almost the total of their investment. Overall, a contraction in the general government saving gap only partially offset the broadening of the corresponding

Chart A Evolution of the current account balance and the saving gap (S-I)



Sources: Bank of Greece for balance of payments data, ELSTAT for savings-investment data and Bank of Greece calculations.
* The saving gap of general government approximates the budget balance.
** Provisional data.
Note: Due to different data sources, the saving gap is not identical to the current account balance.

3 Following the saving-investment gap-based approach, saving takes a positive sign and investment takes a negative sign. However, this does not mean that higher investment has a negative impact on the economy, given that investment is a positive component of GDP and disposable income, as defined above. The equation implies that if domestic saving does not cover investment activity, the current account balance is negatively affected, as this gap must be covered by the external sector of the economy.

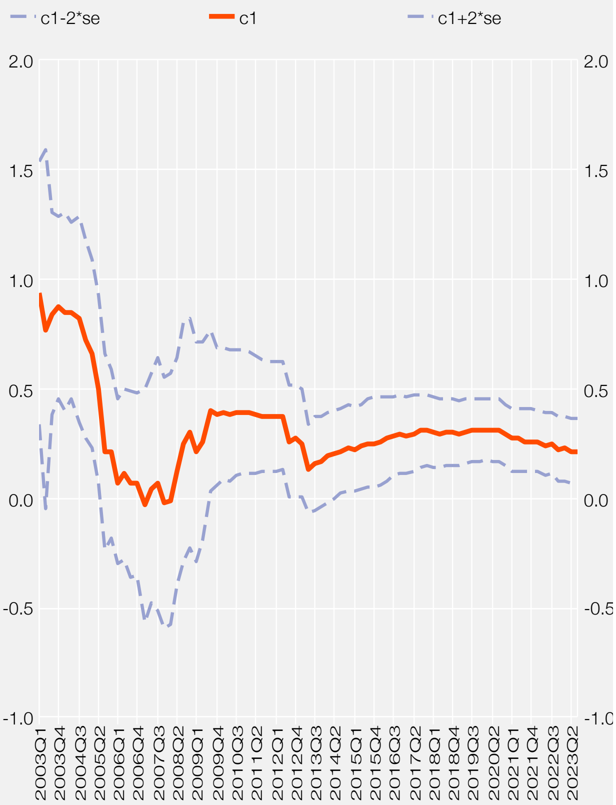
gap primarily for households and secondarily for non-financial corporations, leading to a deterioration of the current account in 2022 (see Chart A).[4]

An empirical investigation of the twin deficits hypothesis after the pandemic

Previous studies on the Greek economy empirically confirm the validity of the twin deficits hypothesis in the Greek economy, examining different periods.[5] On the basis of a simple linear model[6] estimated for the period Q1 2002-Q3 2023 that links the two deficits with the current account as the dependent variable, the estimated long-term correlation between the two deficits is positive and statistically significant, though not particularly strong (almost 0.24).[7] This implies that improvements in the fiscal deficit translate into marginal improvements in external imbalances, as reflected in the current account.

The abovementioned model is an average estimate of the degree of correlation during the period under review. An alternative linear model[8] using the same set of variables illustrates the correlation between the twin deficits over time. It appears that the period prior to the adoption of the first economic adjustment programme was marked by a strong increase (decrease) in the degree of correlation; this trend was reversed after 2010 during the period of fiscal stabilisation (see Chart B). Moreover, following the pandemic and at the beginning of the war in Ukraine, the correlation of the fiscal deficit with the current account appears to increase slightly (0.31), before declining through to the third quarter of 2023 (0.21) and converging towards the historical average. This highlights the temporary nature of the twin deficits at the current juncture, as reflected in a comparatively lower degree of correlation compared with the historical correlations of the two deficits.[9] Hence, the return of the Greek

Chart B Recursive coefficients for the impact of the fiscal balance on the current account



Source: Bank of Greece calculations.
Note: c1: linear model-recursive LS coefficients, se: standard deviation.

4 The data used in the analysis are drawn from the quarterly non-financial accounts of institutional sectors (published by ELSTAT), i.e. the household sector (households and non-profit institutions serving households (NPISH) – S.1M); the corporate sector (non-financial corporations – S.11 and financial corporations – S.12); general government (S.13); and the external sector (rest of the world – S.2).

5 See for instance Chronis, P. and G. Palaiodimos (2014), "Optimal fiscal policy mix and current account imbalances: the case of Greek economy", *Banca d'Italia workshop on Fiscal Policy and Macroeconomic Imbalances*, No. 16, 285-307; Paparas, D., C. Richter and H. Mu (2016), "An econometric analysis of the twin deficits hypothesis in Greece during the period 1960-2014", *Applied Economics Quarterly*, 62(4), 341-360; Litsios, I. and K. Pilbeam (2017), "An empirical analysis of the nexus between investment, fiscal balances and current account balances in Greece, Portugal and Spain", *Economic Modelling*, 63, 143-152; Trachanas, E. and C. Katrakilidis (2013), "The dynamic linkages of fiscal and current account deficits: New evidence from five highly indebted European countries accounting for regime shifts and asymmetries", *Economic Modelling*, 31, 502-510.

6 A linear model illustrating the long term relationship between quarterly variables of the current account balance (% of GDP); fiscal balance (% of GDP); credit to the private sector (% of GDP); and real effective exchange rate, is employed suggesting causality from the fiscal balance to the current account balance, using Fully Modified OLS estimators (given that the series are non-stationary and cointegrated).

7 The estimated pass-through is about 0.24, i.e. an improvement (deterioration) of 1 percentage point (pp) of GDP in the fiscal balance leads to an improvement (deterioration) of 0.24 pp in the current account balance.

8 Using least squares recursive coefficients.

9 Similar results are obtained using the alternative ARDL (autoregressive distributed lag) methodology.

economy to fiscal surpluses should, ceteris paribus,[10] contribute marginally to a further improvement in the current account over the short to the medium term.

Conclusions

The return of the twin deficits, initially as a result of the COVID 19 pandemic and then due to the Russia-Ukraine war, should –on the basis of recent data releases– be regarded as temporary, as it is largely associated with the fiscal expansion that took place during the pandemic and developments in energy prices during the same period. This conclusion is confirmed by the empirical analysis, which also reveals that the withdrawal of the emergency fiscal policy measures during 2022 and 2023 and the gradual return to fiscal sustainability should henceforth, ceteris paribus, have a limited contribution to a further improvement in the current account.

The increase in the current account deficit in 2022 raised concerns about the country's possible return to conditions similar to those observed in 2007-2008, which led to the 2010 crisis. However, a number of features highlight the conjunctural differences, such as the reduced budget deficit, improved price and cost competitiveness since 2010 and a higher share of goods and services exports in GDP. Nevertheless, the above-mentioned qualitative differences between the 2007-2008 and 2022 periods should not give rise to complacency. If the current account is to further improve, structural reforms should be accelerated, with the aim of further enhancing the competitiveness and export orientation of the economy, as well as promoting the share of Greek goods and services in foreign markets. In this context, effective and timely use of NGEU funds and promotion of reforms set as milestones for the disbursement of those funds are expected to play a significant role. Lastly, Greece's credit rating upgrade to investment grade, which is expected to keep borrowing costs at lower levels, should also boost the necessary –public and private sector– investment.

10 It should be noted that other determinants such as (unexpected) supply and demand shocks currently affecting inflation could also have an impact on the current account.

Box IV.6

MARITIME CLUSTERS: GLOBAL EXPERIENCE AND THE CASE OF GREECE

The Greek-owned fleet accounts for almost 1/6 of the world's tonnage and a large part of it is managed in Greece. The sector's activity would thus benefit from a cluster of maritime enterprises sharing common geographical and business features. This box first explains the concept of business clusters and discusses their significance for the Greek and European economies. Then, acknowledging the pivotal role of shipping in Greece's economic and social life, it examines the functioning and the key success factors of a maritime cluster.

Clusters in Europe

A "business cluster" is a geographic concentration of interconnected businesses that opt to cooperate in order to enhance their competitiveness and foster innovation. This collaborative approach allows the members of the cluster to tap business opportunities through enhanced knowledge sharing, access to financing on potentially more favourable terms and achieving economies of scale. At the core of a business cluster lies the notion that, while individual firms maintain their autonomy, the cluster itself operates as a gathering that benefits all participating businesses, tapping both the resources and the business environment. In this sense, it fosters research/development and innovation, attracts skilled human resources, disseminates knowledge, nurtures new business startups and ultimately promotes industry and regional growth.[1] The cluster can be managed formally, i.e. by a

1 The literature on the advantages of geographic concentration dates back to 1890, when Alfred Marshall referred to localised industries (Marshall, A. (1890-1920/2009), *Principles of Economics* [1890], Complete 8th Edition, New York: Cosimo Classics), while the term "cluster" was coined by Porter (Porter, M. (1990), "The Competitive Advantage of Nations", *Harvard Business Review*, March-April, 73-91). For Greek shipping in particular, see the University of Piraeus research paper entitled: *Maritime clusters: exploring the case of the Greek maritime cluster and its potential role in steering the Greek economy out of crisis*, Department of Maritime Studies, 2014 (in Greek).

dedicated body overseeing its activities and fostering synergies, or informally, taking advantage of the geographical proximity of enterprises and organisations within the cluster.

At the EU level, clusters are identified as a driver of innovation, excellence and competitiveness. This is because a cluster combines the advantages of a sector of activity, the research centres specialising in this sector and the competent authorities. As early as 2008 the European Commission concluded that “clusters play an important role in driving competitiveness, innovation and job creation in the EU”.[2] Hence, both the European Commission and the European Council have endorsed initiatives such as the European Clusters Alliance aiming at stimulating practical cooperation between regional governments,[3] or the European Cluster Collaboration Platform (ECCP), which merged with the European Observatory for Clusters and Industrial Change in 2020. Today, more than 1,500 clusters are scattered across over 200 EU regions,[4] while in terms of employment they account for almost 25% of total employment in the EU.[5]

In Greece, under Law 4399/2016[6] (Article 52), business clusters are identified as eligible beneficiaries and the role of the cluster’s management body is defined, implicitly underscoring its importance. This management body "acts as the authorised representative of the cluster, responsible for pursuing and implementing activities aimed at its growth, and adding value to each of its participants.”

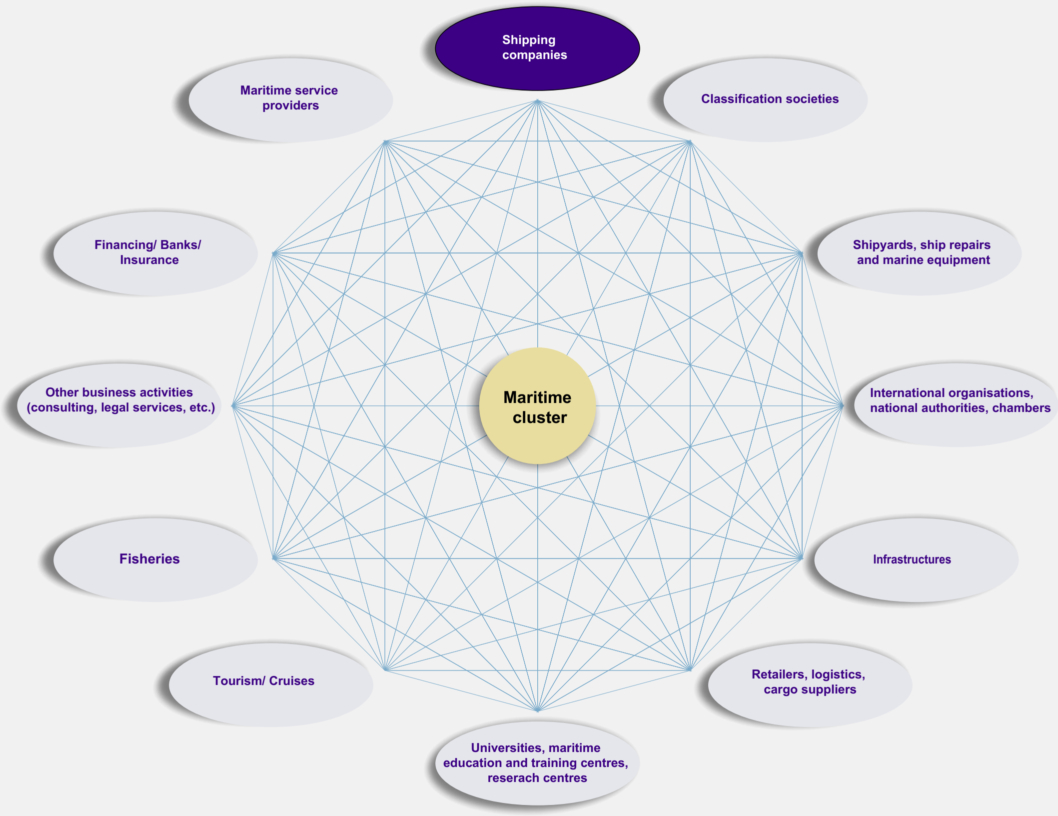
According to the assessment carried out by the ECCP in 2022,[7] the score of Greece in terms of maturity of cluster policy at the national level is 5 out of 8. The methodology used scores: (a) the existence and scope of the national policy; (b) its continuity; (c) evidence of its performance; and (d) the existence of cluster support instruments. (For example, the Netherlands, Norway, Germany and France score 8/8, Denmark, Austria and Estonia 7/8.)

The importance of shipping for the Greek economy

The Greek-controlled fleet ranks first globally in terms of tonnage (dwt), accounting for more than 17% of the world fleet.[8] However, only 13% of the Greek-controlled fleet is registered under the Greek flag, although a large part of it is managed in Greece. Effectively, ship management is the core operation of the Greek shipping industry, around which a variety of supporting and other related activities are developed.[9]

To illustrate the importance of shipping activity in the Greek economy, it is worth mentioning that, under the current account, sea transport receipts, which in 2022 reached an all-time high of EUR 21 billion, over the past five years (2019-2023) accounted for more than 42% of total services receipts and 21% of total exports of goods and services. A recent study estimates the total share of Greek-owned shipping in GDP at 7.9% (2018-2021 average).[10] However, according to the Input-Output Tables,[11] over 60% of direct inputs in the sea transport services sector in Greece are imported, with the remainder being domestic. The primary input, both imported and domestic, is from intra-industry sources (i.e. from within the maritime sector itself), while the second most significant input is associated with the fuel industry.[12] Substituting imports with domestically produced intermediate products could

2 European Commission, *Towards world-class clusters in the European Union: Implementing the broad-based innovation strategy*, COM (2008) 652 final/2.
3 European Council (2006), Council conclusions on a broad-based innovation strategy: Strategic priorities for Innovation action at EU Level, 2769th Competitiveness (Internal Market, Industry and Research) Council Meeting, Brussels, 4.12.2006.
4 For more details, see the interactive map of the European Cluster Collaboration Platform. Although the map does not show a national cluster association, it does feature a cluster located in Northern Greece.
5 European Commission, Cluster policy.
6 “Institutional framework for establishing Private Investment Aid schemes for the country’s regional and economic development - Establishing a Development Council and other provisions”, Government Gazette A 117/22.6.2016.
7 ECCP (2022), Country factsheet: Greece.
8 UNCTAD, Review of Maritime Transport 2023, UN, Geneva.
9 See also: Vaggelas, G.K. and A.A. Pallis (2019), “Configuration and Prospects of the Piraeus Shipping Cluster”, *SPOUDAI – Journal of Economics and Business* [Online], 69(1-2), 3-17.
10 IOBE (2023), “The contribution of Shipping to the Greek economy: prospects and challenges”.
11 Source: Eurostat, Symmetric Input-Output Tables for 2020.
12 Other important inputs include storage, architectural and engineering services, financial services and retail trade.



Source: Bank of Greece (adapted from Innovation types in the Finnish maritime cluster).

potentially enhance the contribution of Greek shipping to the economy by decreasing the sector's reliance on imports while enhancing the prospects for boosting the exports of companies within a shipping cluster.[13]

Maritime clusters

A shipping cluster may encompass businesses engaging in purely maritime activities (fisheries or sea transport of passengers and cargo), alongside a wide range of ancillary services including port services, outfitting, logistics, marine insurance, shipyards, nautical and leisure activities, transport, energy, services, research and innovation, shipping finance, legal services, education and training.

Maritime clusters can play a crucial role in both the sector and the national/regional economy. For instance, in the Netherlands, the maritime cluster had a total output of approximately EUR 55.1 billion in 2017 and employed 260,000 individuals. Moreover, a substantial number of suppliers offering related products and services were integrated within the same cluster, with over half of firms' expenditures allocated within its ecosystem.[14,15]

The largest maritime cluster in Greece is Maritime Hellas, established by the Hellenic Chamber of Shipping, the Union of Greek Shipowners and the Piraeus Chamber of Commerce and Industry. It currently comprises 234 members (2023 data) and it brings together businesses from seven sectors: (a) ship management; (b) maritime

13 See, for example, IOBE (2022), "Marine equipment manufacturing: Trends, prospects and contribution to the Greek economy".
14 Li, M. and M. Luo (2021), "Review of existing studies on maritime clusters", *Maritime Policy & Management*, 48(6), 795810, doi: 10.1080/03088839.2020.1802786.
15 De Langen, P.W. (2002), "Clustering and performance: the case of maritime clustering in the Netherlands", *Maritime Policy & Management*, 01/3, 209-221, doi: 10.1080/03088830210132605.

technology, research and education; (c) manufacturers and dealers of marine equipment; (d) sea tourism; (e) maritime tradition and water sports; (f) administrative services-services to shipping; (g) logistics and forwarding services,[16] and aims to enter three new markets: marine equipment manufacturing, green shipbuilding and green ship breaking.

Success factors – Proposals

At the heart of a business cluster is the simultaneous growth of a sufficient number of different businesses, tapping synergies and fostering healthy competition. In particular, the gathering, unlike each individual firm, can benefit from more favourable and quicker access to resources and sources of financing, while synergies among individual businesses help to overcome external difficulties more easily, since the strength of a number of businesses within the cluster can support and make up for the weaknesses of others.

However, the success of a cluster is not solely determined by the willingness of its members. Three key factors contribute to this, namely:

- Support by regional/national authorities fostering an environment in which clusters can flourish,[17] e.g. by offering incentives or integrating them into regional investment projects.

- The engagement of educational institutes and research centres within the cluster, which contribute by providing vocational training and by staffing businesses within the cluster with highly skilled personnel. Additionally, they play an active role in promoting research and adopting innovation.

- A clear structure. To operate effectively and thrive, a cluster should be perceived as an autonomous entity, where members share common goals and are committed to fostering a network of knowledge for the benefit of all. It should have a well-structured organisation, clear governance, sufficient financial and human resources, expertise, and the capability to tap or, most importantly, attract available resources.

In conclusion, Greek shipping –especially amid ongoing historical changes in the regulatory framework, fuel use, geopolitical dynamics and shifts in global trade– may benefit from the successful operation of a dynamic shipping cluster. At the national level, this could benefit the Greek registry, as it promotes the Greek flag. Moreover, implementing a national policy may be more feasible at the cluster level than at the individual firm level, which could be particularly beneficial in advancing green solutions for shipping.

16 See: https://www.maritimehellas.org/el/.
17 "… an environment in which clusters can flourish": Opinion of the Committee of the Regions on 'Clusters and cluster policy'.

8 INTERNATIONAL INVESTMENT POSITION AND EXTERNAL DEBT

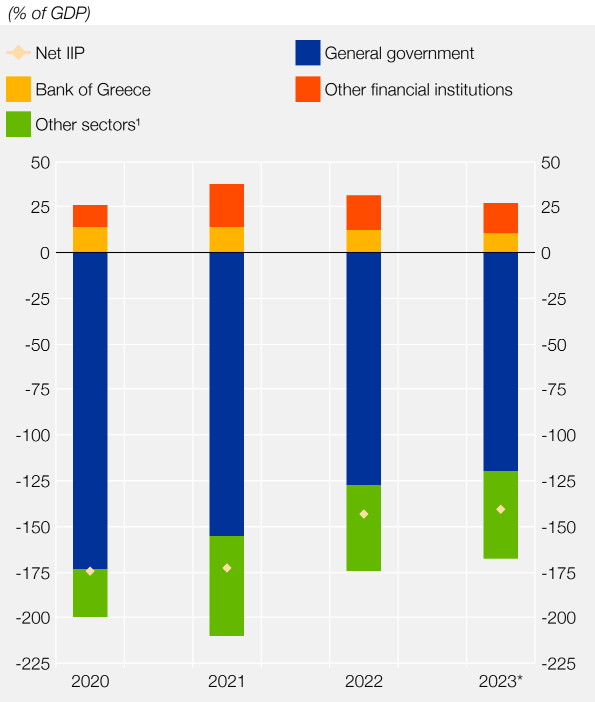
At the end of 2023, Greece's net external liabilities stood at EUR 310 billion, up by EUR 13 billion compared with 2022, since residents' liabilities grew more than the corresponding assets.[56] Specifically, the net liabilities of the other sectors of the economy increased, while the net assets of both the Bank of Greece and the other financial institutions decreased slightly. These developments were partly offset by a decline in the net liabilities of general government (see Table IV.10).[57] However, the ratio of the negative net International Investment Position

56 Changes in the International Investment Position (IIP) are primarily attributable to current account flows and, to a lesser extent, revaluations of portfolio investment items (mainly securities). Revaluations are difficult to calculate, as they are associated with fluctuations in the market prices of portfolio investment items (shares, bonds) that make up the country's external liabilities, as well as with exchange rate fluctuations.
57 It should be noted that the changes in residents' external assets and liabilities between 2023 and 2022 reflect primarily financial transactions and, secondarily, revaluations of securities or other adjustments.

(IIP)[58] to GDP improved, owing to an increase in nominal GDP (from 143% of GDP in 2022 to 141% of GDP in 2023).

Greece's negative net IIP (as a percentage of GDP) was the highest in the EU also in 2022, still exceeding the relevant threshold under the macroeconomic imbalance procedure.[59,60] The risks facing the country are currently contained, since the main component of the net IIP is accounted for by general government low-interest, long-term loans under the support mechanism. However, in recent years the other sectors of the economy have also registered an increase in net liabilities, mainly reflecting the sale of relevant loans (mostly of corporations and households), which were transferred to foreign financial institutions and other financial enterprises abroad and, to a lesser extent, non-residents' FDIs in Greece. Achieving the necessary improvement in the net IIP over the medium term requires a gradual reduction of the general government external debt or strong economic growth or adequate and permanent current account surpluses.

Chart IV.30 Net international investment position by sector



Source: Bank of Greece.
* Bank of Greece estimates based on provisional balance of payments and IIP data.
1 As from the fourth quarter of 2022, according to the monetary and banking statistics methodology of the Bank of Greece, the nominal value of loans serviced by CSFs does not include off-balance-sheet interest and the amounts of write-offs/write-downs of loans made by the credit institution that transferred the loan portfolio.

A breakdown by investment category shows that net liabilities under direct investment grew, reflecting FDI inflows in Greece (see also Section 7.4 above). Under portfolio investment,[61] net assets dropped by EUR 11 billion. This is mainly associated with an increase in general government net liabilities, as well as a decline in the net assets of other financial institutions. Under other investment, the negative net position fell by EUR 1 billion in 2023, mainly due to a decrease in the net liabilities of general government – which also reflects early repayment of tranches of bilateral loans under the first economic adjustment programme (Greek Loan Facility) – and, to a lesser extent, of other financial institutions. This was partly offset by a rise in net liabilities, primarily of the Bank of Greece (the TARGET account included) and secondarily of other sectors of the economy. Lastly, Greece's reserve assets increased.

A sectoral breakdown (see Chart IV.30) reveals that the deterioration of the net IIP in 2023 is associated, primarily, with an increase in the net liabilities of the other sectors of the economy and, secondarily, with a decline in the net assets of the Bank of Greece and other financial

58 The net IIP is the difference between a country's external assets and liabilities. A positive (negative) IIP value indicates that the country is a net creditor (debtor) vis-à-vis the rest of the world. The IIP reflects, at a given point in time, the level of a country's assets and liabilities vis-à-vis non-residents. Assets and liabilities are broken down by main category into direct investment, portfolio investment, other investment and foreign reserve assets, as well as by sector of the economy, into general government, Bank of Greece, other financial institutions and other sectors. It should be noted that, in compliance with international reporting requirements, direct investment, bonds and equities are valued at market price as at the last day of the reference period.

59 European Commission, Alert Mechanism Report 2023, November 2023.

60 The macroeconomic imbalance procedure (Macroeconomic Imbalances Procedure Scoreboard) set the net IIP threshold at -35% of GDP.

61 This category also includes investment in IIP financial derivatives.

Table IV.10 International investment position by type of investment and sector

(EUR millions)

	2020	2021	2022	2023*
I. DIRECT INVESTMENT	**-20,703**	**-25,257**	**-31,765**	**-36,442**
I.1 Assets	16,142	18,342	20,389	23,617
I.2 Liabilities	36,845	43,599	52,154	60,059
II. PORTFOLIO INVESTMENT[1]	**112,996**	**138,084**	**163,942**	**153,050**
II.1 Assets	165,044	192,622	211,431	213,640
II.2 Liabilities	52,047	54,538	47,489	60,590
1. General government	**-27,202**	**-21,553**	**-7,810**	**-10,947**
1.1 Assets	663	906	7,529	6,931
1.2 Liabilities	27,865	22,459	15,339	17,878
2. Bank of Greece	**90,286**	**112,955**	**122,593**	**122,749**
2.1 Assets	90,286	112,955	122,593	122,782
2.2 Liabilities	0	0	0	33
3. Other financial institutions	**42,247**	**44,765**	**51,186**	**43,995**
3.1 Assets	54,719	55,498	59,849	56,519
3.2 Liabilities	12,472	10,733	8,663	12,524
4. Other sectors	**7,665**	**1,917**	**-2,027**	**-2,747**
4.1 Assets	19,376	23,263	21,460	27,408
4.2 Liabilities	11,710	21,346	23,487	30,155
III. OTHER INVESTMENT	**-389,586**	**-439,632**	**-439,920**	**-438,521**
III.1 Assets	68,173	78,214	75,273	76,650
III.2 Liabilities	457,759	517,847	515,192	515,171
1. General government	**-259,755**	**-260,842**	**-255,902**	**-252,497**
1.1 Assets	2,439	3,424	3,915	3,710
1.2 Liabilities	262,193	264,265	259,817	256,207
2. Bank of Greece	**-76,368**	**-99,993**	**-109,295**	**-111,656**
2.1 Assets	12,904	17,225	21,786	26,999
2.2 Liabilities	89,272	117,218	131,081	138,655
3. Other financial institutions	**-27,549**	**-7,001**	**-16,000**	**-13,933**
3.1 Assets	22,124	28,841	23,892	23,429
3.2 Liabilities	49,672	35,842	39,891	37,362
4. Other sectors[2]	**-25,914**	**-71,796**	**-58,722**	**-60,434**
4.1 Assets	30,707	28,725	25,681	22,513
4.2 Liabilities	56,621	100,521	84,403	82,947
IV. RESERVE ASSETS	**9,739**	**12,770**	**11,341**	**12,324**
NET INTERNATIONAL INVESTMENT POSITION (I+II+III+IV)	**-287,554**	**-314,036**	**-296,401**	**-309,589**
Net IIP as a % of GDP	**-174.3**	**-173.0**	**-143.5**	**-140.5**

Source: Bank of Greece.
* Bank of Greece estimates on the basis of provisional balance of payments and IIP data.
1 Portfolio investment includes financial derivatives.
2 As from the fourth quarter of 2022, according to the monetary and banking statistics methodology of the Bank of Greece, the nominal value of loans serviced by Credit Servicing Firms (CSFs) does not include off-balance-sheet itnerest and the amounts of write-offs/write-downs of loans made by the credit institution that transferred the loan portfolio.

Table IV.11 Gross and net external debt (current prices)

(EUR millions)

	2020	2021	2022	2023*
A. General government	286,398	285,347	275,033	273,878
B. Bank of Greece	89,272	117,218	131,081	138,655
C. Other financial institutions	52,912	40,394	45,698	45,110
D. Other sectors[1]	57,645	103,603	87,424	86,603
E. Direct investment – total economy	7,779	8,702	8,360	8,582
Gross external debt (A+B+C+D+E)	**494,007**	**555,265**	**547,596**	**552,828**
Gross external debt as % of GDP	299.4	305.9	265.0	250.9
Gross external debt of general government as % of GDP	173.6	157.2	133.1	124.3
Net external debt	**267,189**	**291,659**	**280,180**	**278,170**
Net external debt as % of GDP	161.9	160.7	135.6	126.3

Source: Bank of Greece.
* Bank of Greece estimates on the basis of provisional balance of payments and IIP data.
1 As from the fourth quarter of 2022, according to the monetary and banking statistics methodology of the Bank of Greece, the nominal value of loans serviced by Credit Servicing Firms (CSFs) does not include off-balance sheet interest and the amounts of write-offs/write-downs of loans made by the credit institution that transferred the loan portfolio.

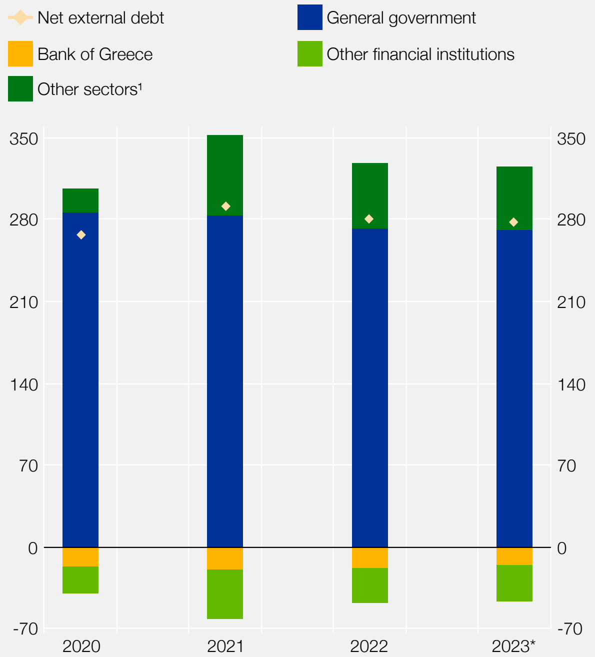
institutions, which were partly offset by a small improvement in the net position of general government.

Greece's gross external debt[62] at current prices grew by EUR 5 billion to EUR 553 billion (251% of GDP) at end-2023, due to increased liabilities of the Bank of Greece, which were partly offset by lower general government liabilities (see Table IV.11). It should be noted that the gross external debt-to-GDP ratio improved markedly, owing to a significant rise in nominal GDP in 2023.

The net external debt[63] stood at EUR 278 billion (126% of GDP), dropping by EUR 2 billion in 2023, which is associated with an improvement in the net position, chiefly of the other sectors of the economy and, to a lesser extent, of general government and other financial institutions. This was partly offset by a deterioration in the net position of the Bank of Greece (see Chart IV.31).

Chart IV.31 Net external debt by sector

(EUR billions)



Source: Bank of Greece.
* Bank of Greece estimates based on provisional balance of payments and IIP data.
1 As from the fourth quarter of 2022, according to the monetary and banking statistics methodology of the Bank of Greece, the nominal value of loans serviced by CSFs does not include off-balance-sheet interest and the amounts of write-offs/write-downs of loans made by the credit institution that transferred the loan portfolio.
Note: Negative values denote net assets.

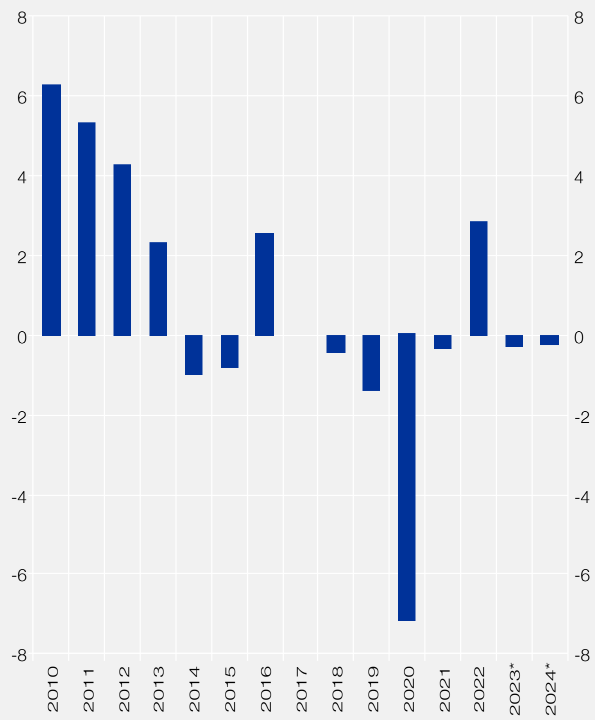
62 A country's gross external debt equals IIP liabilities minus the liabilities in equity and financial derivatives.
63 The net external debt equals the net IIP minus the net position in equity from direct investment and portfolio investment, as well as the net position in derivatives, gold and equity included in reserve assets.

V FISCAL DEVELOPMENTS AND PROSPECTS

The year 2023 was a milestone for fiscal management, as the 2022 shift in the budget balance to a primary surplus was confirmed and the Greek sovereign credit rating was restored to investment grade by three of the four Eurosystem-approved rating agencies. The latter achievement, attesting to credit rating agencies' solidified confidence in the outlook of the Greek economy, is attributable to the country's steadily improving fiscal position, mainly on the back of past structural reforms and the timely reversal of expansionary measures introduced in 2020-23, as well as to the government's commitment to swiftly implement its ambitious investment-oriented reform agenda. Despite persistent inflationary pressures and rising borrowing costs amid further monetary tightening by the ECB, the Greek economy has shown remarkable resilience in an international context of heightened uncertainty. However, these achievements should not lead to complacency, but instead to continued efforts for fiscal prudence, also with a view to further sovereign credit rating upgrades. In an environment characterised by successive crises and high uncertainty, with elevated geopolitical risks and with the impacts of climate change increasingly visible, a credible medium-term policy planning becomes crucially important. Key to designing an appropriate medium-term fiscal path are the assessment of risks and a focus on building sufficient fiscal buffers over time, capable of shielding the economy in downturns. Moreover, under the new EU economic governance framework, consolidating public finances and effectively addressing fiscal sustainability issues are now at the top of the medium-term agenda, while respecting the EU's investment priorities. The timely implementation of the national reform plan would support public debt sustainability by helping to further improve the structural characteristics of the economy and ensure strong and durable growth.

Chart V.1 Change in the cyclically adjusted primary balance of general government

(% of potential GDP)



Source: Bank of Greece.
* Forecast.
Notes: The cyclically adjusted primary balance is calculated according to Eurosystem methodology. It excludes support to the financial sector and receipts from the NGEU.

1 OVERVIEW OF DEVELOPMENTS AND PROSPECTS[1]

In 2023, higher-than-targeted tax revenues enabled the financing of extraordinary fiscal interventions required to address the protracted energy crisis, as well as the impacts of climate change-related extreme weather events, without throwing the fiscal path off track. The fiscal

1 The cut-off date for data and information used in this chapter is 24 March 2024.

stance is estimated to have been expansionary in 2023 and is expected to remain so in 2024; however, this reflects increased investment spending backed by the Recovery and Resilience Facility (RRF). Excluding this impact, the fiscal stance remains broadly consistent with monetary policy efforts to contain inflation (see Chart V.1). The fiscal stance in 2023-24 is in line with the European Commission's guidance on the coordination of fiscal policies, calling on Member States to phase out energy support measures and reduce their budget deficits, while preserving the fiscal stimulus from RRF-financed investment spending so as to support economic recovery.

Meanwhile, the public debt ratio is estimated to have declined further in 2023, driven down by a primary surplus and real GDP growth. Greece's debt reduction was one of the largest in the euro area.

Under the revised EU fiscal framework, Greece needs to keep up credible fiscal consolidation efforts. Maintaining primary surpluses, building fiscal buffers and achieving further upgrades of the sovereign credit rating should be key policy priorities. Continued structural reforms to further improve the structural characteristics of the Greek economy are crucial in this regard. The focus should be on increasing those productive investments that are conducive to sustainable growth, higher productivity and a steady downward path of public debt.

2 FISCAL DEVELOPMENTS IN 2023

In 2023, the fiscal data notified to Eurostat for the year 2022 indicated a significant improvement in the primary balance – greater than projected in the Introductory Report on the 2023 Budget – as well as a drastic reduction in the debt-to-GDP ratio. Moreover, Greece showed the greatest improvement in key fiscal aggregates among euro area countries.

Specifically, according to the second EDP notification of fiscal data for 2019-2022 by the Hellenic Statistical Authority (ELSTAT) in October 2023, the general government primary balance for 2022 was confirmed at a surplus of 0.1% of GDP, compared with a deficit of 1.6% projected in the Introductory Report on the 2023 Budget and a deficit of 4.5% of GDP in 2021 (see Table V.1), and general government debt was confirmed at 172.6% of GDP in 2022, down from 195.0% of GDP in 2021.

The primary balance improvement in 2022 relative to 2021 was due to significant expenditure savings from the unwinding of the majority of pandemic-related measures, which was only partially offset by the budgetary cost of emergency energy support (totalling 5.0% of GDP, with only 2.2% of GDP burdening the budget[2]), but also due to robust economic growth. The better primary balance than projected in the 2023 Budget was driven by higher-than-budgeted tax revenue on the back of stronger economic activity, as well as by more extensive use of electronic payments that enhanced tax collectability. Compared with the other euro area countries, Greece achieved the largest improvements relative to 2021, 4.6 percentage points of GDP for the primary balance and 22.4 percentage points of GDP for public debt. The fiscal response to the exceptional circumstances of the past three years has highlighted the benefits of preceding fiscal structural reforms, particularly in terms of support measure design, financial management, as well as state budget monitoring, execution and control.[3]

2 A large part of fiscal interventions was financed by the Energy Transition Fund and thus did not burden the State Budget. The Fund was established in 2021 as a special account to finance energy-related subsidies. Its revenues are derived from auctions of emissions allowances, the levy on the windfall profits of energy producers, the extraordinary tax on oil refineries, as well as from surpluses in the renewable energy sources (RES) special account.

3 See Bank of Greece, *Monetary Policy – Interim Report 2023*, Box V.1 "Public finance management reform: the recent experience of Greece".

Table V.1 General government balances

(% of GDP)

	2019	2020	2021	2022
General government balance[1] *(national accounts data – convergence criterion)*	0.9	-9.7	-7.0	-2.4
- Central government	0.1	-10.1	-7.8	-3.5
- Social security funds, local government, legal entities in public law	0.7	0.4	0.8	1.2
General government primary balance	**3.9**	**-6.7**	**-4.5**	**0.1**

Sources: Ministry of Finance and ELSTAT.
1 ELSTAT data, as notified to the European Commission (Excessive Deficit Procedure). Totals/subtotals may not add up due to rounding.

Based on stronger-than-expected economic activity and tax revenues in 2022, further temporary fiscal support measures, amounting to 0.4% of GDP, were introduced in early 2023, while part of the energy and food subsidies remained in place. The initial forecast in the Introductory Report on the 2023 Budget for a primary surplus of 0.7% of GDP in 2023 was revised to a surplus of 1.1% of GDP in the 2023 Stability Programme. This figure incorporates the additional support measures, a positive carry-over effect on tax revenues and social security contributions from 2022, as well as a revision of the 2023 growth projection (to 2.3%, up from 1.8% of GDP in the 2023 Budget).

In the second half of 2023, national parliamentary and local authority elections were finalised, and further fiscal interventions were adopted – some of them fulfilling pre-election promises – aimed to support incomes and to address the energy crisis and the economic impact of natural disasters. Accordingly, further to the revised forecasts of the 2023 Stability Programme, two supplementary budgets were adopted, totalling EUR 1.3 billion, or 0.6% of GDP.

These developments were incorporated into the projections of the Introductory Report on the 2024 Budget, published on 21 November 2023 (see also Section 6). According to the Introductory Report, the 2023 general government primary balance (based on ESA definition) is estimated at a surplus of 1.1% of GDP, unchanged from the projection in the 2023 Stability Programme. For general government debt, the new estimates point to a substantial decline of 12.3 percentage points of GDP in 2023 relative to 2022, to 160.3% of GDP (see also Section 5.5).

The projected increase in the primary surplus in 2023 relative to 2022 is driven by the timely withdrawal of pandemic- and energy-related fiscal support, as well as by higher-than-targeted tax revenues. Revenue from taxes and social security contributions increased thanks to stronger economic activity and inflation, as well as by more extensive use of electronic payments and tax audits that enhanced collectability. Tax revenues in 2023 exceeded both the original 2023 Budget target and the upwardly revised target in the 2023 Stability Programme. This outperformance mainly reflected the increase in electronic payments and improved tax compliance[4] and, to a lesser extent, marginally higher nominal GDP growth than projected in the Stability Programme. The resulting fiscal space allowed to finance the additional interventions that were introduced in the second half of the year to support incomes and address the economic impact of natural disasters, without causing a deviation of the primary balance from the 2023 Stability Programme projection. Financing of energy-related measures was facilitated by the use of Energy Transition Fund revenues.

Based on available fiscal data, the primary surplus for 2023 could turn out higher still, mainly reflecting even stronger primary expenditure restraint and, to a lesser extent, tax revenue per-

4 See Bank of Greece, *Monetary Policy Report 2022-2023*, Box V.1 “The factors behind the overperformance of tax revenue after the pandemic”.

formance compared with the revised targets (see also Section 5). According to the revised projection of the Bank of Greece, the primary surplus of general government is expected at 1.4% of GDP and general government debt at 161.9% of GDP in 2023, implying that the fiscal targets of the 2023 Budget have been met with a safe margin. For 2024, based on available data and announced fiscal measures, the primary surplus is projected to increase to 2.1% of GDP and general government debt should decline further to 153% of GDP.

The rise in the general price level continued at a decelerating pace in 2023. With euro area inflation projected to remain above the 2% target over the medium term, the ECB tightened its monetary policy further, intensifying its efforts to rein in inflationary pressures in a context of mounting uncertainty. Amid rising borrowing costs in international markets, the yields on Greek government bonds remained at high levels. Yet, the Greek government continued its debt issuance activity and raised a total of EUR 11.5 billion in 2023, thereby maintaining its cash reserves at a high level and increasing the liquidity of the domestic market for Greek government bonds across the entire yield curve. In particular, the Public Debt Management Agency (PDMA) issued a ten-year government bond in January 2023, raising EUR 3.5 billion at a yield of 4.279%, and the issue was oversubscribed 6.26 times. In response to increased investor demand for Greek long-term debt, five reopenings of the issue followed in the course of the year, bringing an additional EUR 1.2 billion. In most of these reopenings, the yield was lower than in the original issue, but oversubscription ratios remained high.[5] In April, the PDMA launched a five-year bond, raising EUR 2.5 billion at a yield of 3.919%, which met with strong demand from international investors and was oversubscribed 7.64 times. The issue reopened twice during the second half of 2023, raising a total of EUR 400 million[6] at a lower yield than in the original issue. The PDMA raised EUR 150 million in May, by reopening the 2017 20-year bond issue, at a yield of 4.14%[7], and EUR 200 million in June through the reopening of a past 25-year bond issue at a yield of 3.99%[8], both signalling strong investor demand also for very long-term government debt. In June, the PDMA launched a 15-year bond, raising EUR 3.5 billion at a yield of 4.464%[9], and the issue was oversubscribed 3.89 times.

In December 2023, the Greek government made an early repayment of the 2024 and 2025 instalments on bilateral loans under the Greek Loan Facility (GLF), in an amount of EUR 5.3 billion. By this move, the PDMA sought to reduce the stock of outstanding debt and the related servicing costs, as well as lower medium-term financing needs.

Meanwhile, short-term government borrowing continued to take place through the issuance of 13-, 26- and 52-week Treasury bills at positive and gradually increasing yields, as well as through cash management operations in the form of repurchase agreements (repos), mostly with entities within general government to utilise their cash reserves (see Table V.2). In 2023, for the first time in two years, the PDMA made Treasury bills accessible to natural persons, with a view to offering a more attractive saving option to retail investors, given the higher interest rates of Treasury bills compared to those of time deposits.

5 Namely: EUR 300 million in April (yield 4.31%, oversubscribed 5.65x); EUR 250 million in May (3.97%, 5.28x); EUR 200 million in September (4.01%, 5.08x); EUR 250 million in October (4.34%, 3.79x); and EUR 200 million in November (3.76%, 4.67x).
6 Namely: EUR 250 million in July (3.3%, 4.18x) and EUR 150 million in October (3.85%, 3.61x).
7 This was 630 basis points higher than in the previous reopening of this bond in May 2022, i.e. before the ECB's monetary policy tightening cycle began.
8 This was 430 basis points higher than in the previous reopening of this bond in May 2022, i.e. before the ECB's monetary policy tightening cycle began.
9 This yield was significantly (some 2.5 percentage points) higher than in the previous 15-year bond issue that had been launched in February 2020 under very different market and monetary policy conditions. The Greek sovereign's higher borrowing costs were driven by tighter global monetary conditions, whereas country risk premia fell, indicating improved confidence in the long-term outlook for the Greek economy.

Table V.2 Financing sources of the net cash state budget deficit

(change in EUR millions)

	2020	2021	2022	2023
Treasury bills	-812	-1	0	188
Greek government bonds	11,815	14,800	3,850	5,457
Cash reserves[1] (- = increase, + = decrease)	5,477	696	-848	-3,490
Short-term borrowing (repos)	6,453	1,601	12,968	4,615
External borrowing[2]	1,205	-1,215	-3,305	-4,083
Total	**24,138**	**15,880**	**12,664**	**2,685**

Source: Bank of Greece.
1 Including changes in the central government accounts with the Bank of Greece and other credit institutions, as well as changes in the debt management account. Excluding changes in the OPEKEPE (Payment and Control Agency for Guidance and Guarantee Community Aid) account.
2 Comprising loans from abroad (European Investment Bank, SURE, Recovery and Resilience Facility) and securities issued abroad in any currency. Excluding non-residents' holdings of securities issued in Greece.

Cash reserves remained at high levels, boosted by EUR 415.4 million in privatisation proceeds, of which EUR 156 million was from the sale of Hellinikon S.A. shares. At end-2023, total general government cash reserves stood at an estimated EUR 33.6 billion,[10] up from EUR 32.7 billion one year earlier.

Despite the deterioration of the international environment and heightened uncertainty, the resilience of the Greek economy was acknowledged by rating agencies, as reflected in the Greek sovereign credit rating upgrades to investment grade by R&I (in July), Scope (in August), DBRS (in September), S&P (in October) and Fitch (in December). Also, in September, Moody's upgraded the Greek sovereign by two notches to just one notch below investment grade. Key factors behind the upgrades were a steadily improving fiscal performance, supported by positive and strong economic growth rates above the European average, as well as rating agencies' assessment that the clear election outcome led to political stability with prospects for maintaining the reform efforts.

The reinstatement of the Greek sovereign to investment grade status was a milestone recognition of the credible economic policies pursued in recent years, while also restoring the eligibility of Greek government bonds as collateral for Eurosystem monetary policy operations without the need for a waiver of the minimum credit quality requirements. Although interest rates remained elevated amid a further tightening of monetary policy, the yield spreads of Greek government bonds over the corresponding German bonds trended downwards during 2023.

The Greek sovereign upgrade is also having a positive impact on domestic businesses and banks by helping to reduce their borrowing costs and to attract new capital. Moreover, it facilitates the active management of public debt by deepening the domestic market for government bonds and reducing bond price volatility in the secondary market. With enhanced market access, the PDMA can more flexibly manage liquidity and financing needs. A deeper market for government bonds will enable longer-term bond issues, thereby keeping the weighted average maturity of public debt relatively long and annual debt financing needs relatively low. Moreover, greater flexibility in cash management would enable the PDMA to make further early repayments of official sector debt and reduce the stock of Treasury bills in order to cut nominal public debt.[11] The investor base for Greek government debt issued in 2023 was dominated by long-term institutional investors, which confirms investor confidence in the growth

10 PDMA, Public Debt Bulletin No. 112, December 2023.
11 PDMA, "Hellenic Republic - Funding Strategy for 2024", 22.12.2023.

prospects of the Greek economy and the effectiveness of the public debt management strategy. However, efforts need to be sustained towards further enhancing policy credibility and preserving fiscal responsibility in order for the Greek sovereign to maintain investment-grade status and achieve further upgrades.

In the early months of 2024, the ECB kept its monetary policy unchanged, continuing its efforts to stem the rise in inflation. Thanks to the recovery of the investment grade, market sentiment towards Greece improved noticeably.

In January and February 2024, the PDMA launched two reopenings of the January 2023 five-year bond issue, raising a total of EUR 450 million,[12] at significantly lower yields than both the original bond and its reopening in 2023, confirming strong investor demand for Greek medium-term debt. In February 2024, it raised EUR 4 billion by a new ten-year bond issue at a yield of 3.478%, significantly lower than the yield of 4.279% in the respective new issue in January 2023. It is worth noting that this issue hit a triple record: (1) the largest orderbook ever for Greek debt issues, at more than EUR 35 billion, with an oversubscription ratio of 8.75 times (compared with 6.26 times in the previous ten-year issue); (2) the tightest final spread;[13] and (3) the largest deal size for a ten-year bond since 2010.

These were the first bond issues following the recovery of the investment grade from major rating agencies. Their success evidences investors' keen interest in Greek securities, which is due not only to the expanded investor base for Greek bonds following their inclusion in international indices, but also to stronger demand for government issues in general, as markets anticipate some easing of monetary policy in the second half of this year.

Regarding the absorption of funds available under the Recovery and Resilience Facility (RRF), Greece is one of the top absorbers in the EU and also one of few countries to have received three instalments of RRF funding (in grants and loans) having completed 26% of the agreed targets and milestones in its national recovery and resilience plan.[14]

Overall, Greece has received EUR 14.9 billion of RRF funding (or 41% of its total allocation), of which EUR 7.7 billion in grants and EUR 7.3 billion in loans.[15] Specifically, in January 2023, it received the second instalment, in the amount of EUR 3.65 billion (EUR 1.72 billion in grants and EUR 1.85 billion in loans), upon completion of the required milestones and targets relating mainly to institutional reforms. In August, Greece submitted an amendment to its "Greece 2.0" National Recovery and Resilience Plan (RRP), along with a request for EUR 5 billion and EUR 795 million in additional loan and grant funding from the REPowerEU Plan. Further projects were also added, in view of the emergency needs that arose due to the recent natural disasters that hit parts of Greece. The final version of the Plan, endorsed by the European Commission in November, incorporates new investment projects to absorb the additional funding, and also redistributed funds from investments of the original plan which had been insufficiently mature to be completed by the end of the RRF programme period to new projects aimed at restoring disaster-hit infrastructure. This additional funding brought Greece's national allocation to EUR 36 billion (up from EUR 30.1 billion[16]), of which EUR 18.2 billion in grants and EUR 17.7 billion

12 Namely: EUR 250 million in January 2024 (yield 2.72%, oversubscribed 4.34x) and EUR 200 million in February 2024 (2.850%, 3.12x).

13 80 basis points above the mid-swap rate, almost half the spread in the previous 10-year issue in January 2023.

14 Overall, the European Commission has so far disbursed EUR 224.1 billion (31% of the total available funding under the RRF) to EU countries, with two-thirds earmarked for grants (43% of the total) and the remainder to be used for loans (21% of the total), based on the achievement of 18% of the agreed targets and milestones.

15 Loan maturity: 20 years. Interest rate: yearly floating rate of about 2% based on EU borrowing rates.

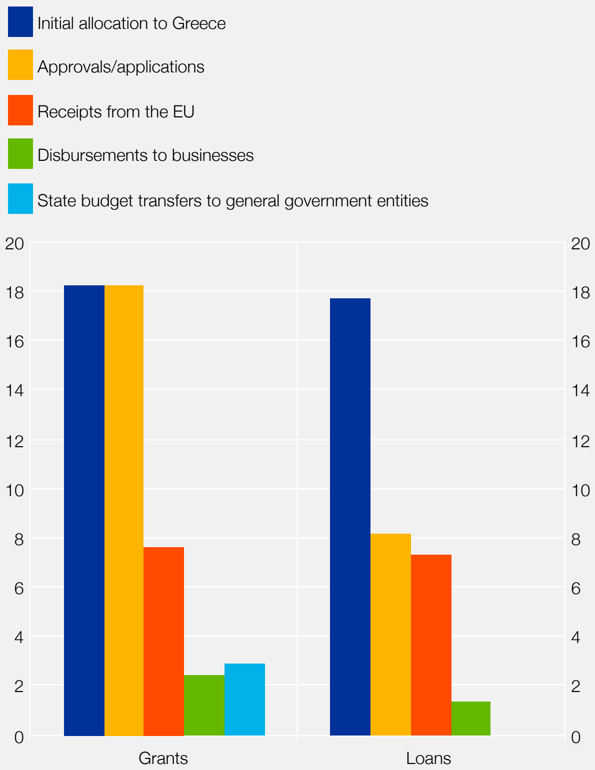
16 As it stood after an update, in June 2022, of Member States' maximum financial contributions, based on the final data on real GDP growth for the period 2020-2021. See European Commission, *Update of the maximum financial contribution*, June 2022.

in loans. Finally, in December, Greece received the third instalment, in the amount of EUR 3.64 billion (EUR 1.69 billion in grants and EUR 1.95 billion in loans), after confirmation that Greece had completed the prior actions required for this payment, including the signing of several grant and loan agreements.

Considerable headway was also made in respect of the approval of projects for funding under the "Greece 2.0" Recovery and Resilience Pan. Based on data from the Special Coordination Service for Recovery and Resilience Facility, projects with a total budget of EUR 20.7 billion (including VAT) were approved and included in the RRF grants programme. Moreover, by the end of December 2023, 624 projects, with a total budget of EUR 8.17 billion, had been submitted for financing from RRF loans, so far resulting in the signing of 269 loan agreements, with a total budget of EUR 4.36 billion.

Chart V.2 Recovery and Resilience Facility

(EUR billions)



Sources: Ministry of Finance and Bank of Greece.
Note: RRF execution data cover the period 2021-January 2024.

However, disbursement of grants to project owners lags behind. As at end-December 2023, state budget transfers for approved RRF projects to entities inside and outside the general government were EUR 5.3 billion, of which only EUR 2.4 billion had been paid out to project owners by the end of September 2024, reflecting the administrative capacity constraints and other challenges faced by local and regional authorities in implementing the RRPs. In terms of loans, as at the end of January 2024, disbursements to businesses amounted to EUR 1.36 billion. On the other hand, RRF loan signatures rose significantly to 4.36 billion, which is in line with the RRP target (see Chart V.2).[17]

The double parliamentary elections (in May and June), as well as the two rounds of local authority elections are seen as having contributed to the delays in actual grant disbursements. Other factors that have been identified by the European Commission and represent a common challenge in all countries include the administrative burden required at the local and regional level to implement the RRF.[18] Going forward, given the government's commitment to its reform agenda, efforts to ensure timely implementation of projects and effective use of available funds are expected to intensify, bringing gains in growth and total factor productivity in coming years. Close monitoring of the achievement of intermediate steps in reforms and investments, and cooperation with the European Commission will contribute towards that end.

3 INSTITUTIONAL FRAMEWORK AND FISCAL REFORMS

In 2023, a number of further measures were enacted to support vulnerable social groups by using part of the better-than-expected budget balance in 2022. Most notably, these included a

17 The contribution of RRF loans to the external financing of domestic NFCs is analysed in Box VI.1.
18 See European Commission, *Mid-term evaluation of the RRF*, February 2024.

one-off allowance to pensioners for Easter 2023 and the extension, until the end of 2023, of reduced VAT rates on certain goods and services.[19]

Also, new extraordinary measures in support of incomes were introduced. These mostly related to: (i) a one-off allowance granted in December 2023 to pensioners who were not entitled to a pension increase in 2023, due to the so-called “personal difference”; (ii) introduction of a permanent “youth pass”, subsidising young adults aged 18-19 for travel, cultural activities and tourism; and (iii) retroactive pay scale adjustment for teaching and research staff of tertiary education institutions.

Energy support continued to be provided in various forms, such as: (i) subsidies on households’ and farmers’ electricity and gas consumption, albeit at lower levels than in 2022 due to falling energy prices; (ii) an increase in the heating allowance and an expanded scope of eligible beneficiaries; (iii) reinstatement and expansion of the so-called “market pass” as short-term compensation for food inflation; and (iv) a refund of the excise tax on agricultural diesel oil.

In line with the government’s pre-election announcements, permanent measures were also enacted, with effect mainly from 2024, relating to a revised public sector wage grid and a EUR 1,000 increase in the tax-free allowance for taxpayers with dependent children.

Finally, further interventions included measures to broaden the tax base by combatting tax evasion; important legislation to reform and modernise the regulatory framework of occupational pension funds; compensation for losses and damages from natural disasters, alongside establishment of related social relief appropriations (see the Annex “Fiscal policy measures” to this chapter).

In March 2023, the European Commission published its fiscal policy guidance for 2024,[20] including the deactivation of the general escape clause of the Stability and Growth Pact at the end of 2023. The proposed policy recommendations emphasised compliance with the fiscal targets Member States set out in their national stability programmes, so long as those targets were consistent with ensuring that the public debt ratio was put on a downward path or stayed at a prudent level and that the budget deficit was below the 3% of GDP reference value over the medium term; Member States should also maintain nationally financed investment and ensure effective use of funds under the Recovery and Resilience Facility and other EU funds, in particular in light of the green and digital transitions and resilience objectives.

In May 2023, as part of the 2023 European Semester Spring Package,[21] the European Commission emphasised the need to phase out energy support measures currently in force, except where still necessary, in which case they should be targeted at vulnerable groups, preserve incentives for energy savings and be financed within the available fiscal space. In its country-specific guidance,[22] the Commission recommended that Greece should continue efforts to maintain the implementation momentum of reforms under its ambitious National Recovery and Resilience Plan. It also called for continued efforts to enlarge the tax base, strengthen tax compliance and ensure adequate and effective staffing of public administration and healthcare.

Also, the European Commission published its second (May 2023) and third (December 2023) post-programme surveillance reports on Greece,[23] concluding that, despite current challenges, Greece retained its capacity to service its debt, thanks to the resilience of its economy and pub-

19 See Bank of Greece, *Annual Report 2022*, Annex to Chapter V “Fiscal policy measures”.
20 See “Communication from the Commission to the Council, Fiscal policy guidance for 2024”, 8 March 2023.
21 European Commission, “2023 European Semester: Spring Package Communication”, May 2023.
22 European Commission, *2023 Country Report – Greece*, May 2023.
23 European Commission, *Post-Programme Surveillance Report – Greece*, Spring 2023 & Autumn 2023.

lic finances. Regarding debt sustainability, the Commission acknowledged that Greece's debt ratio would remain on a downward path, conditional on maintaining primary surpluses. Regarding the completion of outstanding fiscal reforms, despite progress in the clearance of pension arrears, the stock of government arrears to hospitals and other central government entities remained high, pointing to a need for structural improvements.

In December 2023, the ECOFIN Council reached an agreement on the proposed reform of the EU's economic governance framework with a view to supporting public debt sustainability and inclusive growth through reforms and investment. Under the new framework, the two benchmarks of the Stability and Growth Pact – 3% of GDP for the deficit and 60% of GDP for debt – will remain unchanged, whereas the excessive deficit procedure (EDP) will be expanded in scope to include breaches of not only the deficit target of 3% of GDP but also of the agreed debt reduction path (debt criterion). Member States will enjoy greater autonomy in setting their medium-term fiscal paths to reduce deficits and debt, in line with the specific features and needs of their economies, thereby strengthening national ownership of fiscal consolidation plans (see Special Feature in this chapter). Implementation of fiscal plans will be monitored, and compliance with the revised framework will be assessed against a single operational expenditure rule. This will ensure the objectives of simplifying and enhancing the efficiency and transparency of fiscal rules, while promoting less procyclical fiscal policies (see Box V.1).

The proposed reforms are in line with the Bank of Greece proposals for the revision of fiscal rules,[24] and leave little room for deviation from the agreed target of average primary surpluses of around 2% of GDP annually.

24 See Ventouris, N. and G. Palaiodimos (2022), "Proposals for the reform of EU fiscal rules", Bank of Greece, *Economic Bulletin*, No. 55; and Special Feature of Chapter V in Bank of Greece (2022), *Annual Report 2021*, p. 173.

Box V.1

THE KEY FEATURES OF FISCAL EXPENDITURE RULES

The primary objective of fiscal rules is to introduce incentives and restrictions in order to ensure fiscal prudence and promote sustainable policies. The implementation of fiscal rules became necessary, as the past few decades saw: (i) a rise in deficits and public debt-to-GDP ratios across most advanced economies;[1] and (ii) a tendency among governments to pursue procyclical fiscal policies (amid a strong political cycle), leading to considerable macroeconomic imbalances and instability. Ideally, fiscal rules should be designed to promote in tandem fiscal discipline and macroeconomic stabilisation, taking into account key elements such as early monitoring mechanisms and appropriate corrective procedures, with a view to ensuring their effectiveness. Surveillance mechanisms include, among other things, operational rules for the monitoring of various indicators serving as operational tools, such as expenditure growth, revenue growth, the change in the structural fiscal balance and the pace of reduction in public debt.

The recent agreement on the reform of the economic governance framework of the European Union (EU),[2] with the long-term sustainability of public debt at its core,[3] includes the primary expenditure rule as the main operational tool to achieve fiscal targets. Expenditure rules present a number of features that make them

1 According to the International Monetary Fund (IMF, World Economic Outlook Database, October 2023), the debt-to-GDP ratio increased by 42 percentage points on a cumulative basis over the 2001-23 period in advanced economies. The budget deficit also followed an upward trend (2001-10 average: 3.7% of GDP; 2011-20 average: 4.2% of GDP; 2021-23 average: 5.3% of GDP).
2 Council of the EU, Press Release, 21.12.2023.
3 For further details about the proposal of the European Commission on the new fiscal rules, see EC proposal for a regulation: New economic governance rules fit for the future, 26.4.2023.

a more effective tool in policymaking relative to other types of fiscal rules,[4] as they can promote a better balance between the fiscal discipline and macroeconomic stabilisation objectives.[5]

This box seeks to shed light on the key characteristics of this type of fiscal rule, focusing on: (i) the design of the expenditure rule, based on the experience of different countries under the current fiscal framework and the specification of a number of desirable features, as well as their incorporation into the reform proposal; (ii) their effectiveness in pursuing a counter-cyclical fiscal policy; and (iii) EU countries' compliance with the current European "expenditure benchmark".

Design

Expenditure rules have the following main characteristics:[6]

- They are aimed at public expenditure, i.e. the budget item that is **more directly under the government's control, thus reducing uncertainty** as to the achievement of a specific fiscal target and ensuring **greater accountability**.

- The government is publicly committed to a medium-term **visible and operational target**. This creates a **transparent and simple system for monitoring compliance** with fiscal rules. Contrary to alternative indicators, such as the structural balance, expenditure rules **rely less on unobservable variables** (such as the output gap) and are therefore more transparent and easier to monitor in real time.

- They are aimed at the **elimination of procyclical expenditure overruns** against the initial targets, which are the key factor behind large deficits and increasing debt ratios and a source of fiscal risks.

- **They do not hamper the operation of automatic stabilisers**, especially on the revenue side, and discourage higher expenditure in good times.

- They can greatly **improve the composition of government expenditure** by breaking down the overall expenditure ceiling into separate ceilings for each main expenditure item, which in turn provide clear policy guidance and set priorities for the relevant policymakers.

Most EU countries have adopted the "expenditure benchmark" in the context of the Stability and Growth Pact (SGP) reform in 2011 ("Six-Pack" reform).[7] Notwithstanding this, the European expenditure rule was never actually implemented in the context of monitoring compliance with the Fiscal Compact. As a result, the national expenditure rules that are currently in force in different Member States vary in terms of legal status,[8] scope of coverage of public expenditure,[9] reference time horizon and the possibility of revising the expenditure benchmark,[10] as well as the degree of automatic triggering of the correction mechanism in the event of non-compliance.

4 E.g. structural budget balance rule, debt rule, or revenue rule.
5 Ayuso-i-Casals, J. (2012), "National Expenditure Rules – Why, How and When", *European Economy – Economic Papers*, No. 473, European Commissi
6 Belu-Manescu, C. and E. Bova (2020), "National Expenditure Rules in the EU: An Analysis of the Effectiveness and Compliance", European Commission Discussion Paper No. 124.
7 The European "expenditure benchmark" provides that the annual growth rate of expenditure must not exceed the medium-term growth rate of potential GDP in nominal terms, unless such expenditure increases are matched by discretionary revenue measures.
8 In some countries expenditure rules are legally binding under their constitutions, whereas in other countries they are enshrined in statute law or government practice. Another important institutional feature of expenditure rules is the degree of monitoring and enforcement by an independent fiscal body (e.g. Fiscal Board).
9 For example: central government, general government, local and regional governments, social security sector, autonomous entities (for federal states).
10 The ease with which expenditure ceilings can be modified and the type of such modifications give a good sense of the binding nature of the rule.

In light of the above, the existing national expenditure rules are weakly designed in comparison with other fiscal rules, on the basis of the Fiscal Rule Strength Index (FRSI)[11] of the European Commission.[12] Looking into the individual elements of the index, the binding nature of expenditure rules and the ease of their monitoring appear to be the main advantages that enhance their effectiveness in achieving the objective of fiscal discipline, if properly designed. By contrast, the main disadvantages of expenditure rules are reduced implementation incentives in good times, as well as lack of an effective sanction mechanism in case of non-compliance.

The appropriate design of expenditure rules should have a number of desirable features:

- The target should be defined as either the **growth rate** or the **level of expenditure (in euro)** so as to avoid procyclicality in fiscal policy.
- In the short term, it is advisable that annual targets are expressed in **nominal terms**, for reasons of transparency and better monitoring.[13]
- **Interest payments, cyclically sensitive items** (cyclical expenditures, e.g. unemployment benefits), **public investment** and **EU co-financed programmes** should be excluded from the rule.
- The expenditure rule should also cover **social security spending**, which accounts for a substantial part of total public expenditure in most EU countries.

Regarding the time horizon, a multi-annual rule is better than a rule that only sets a target for one year, since medium-term planning is more binding and circumvention becomes more difficult. Annual expenditure ceilings allow for some discretion on the part of policymakers who can freely adjust their levels, failing to maintain fiscal discipline. Against this backdrop, targets that are set on a yearly basis do not exercise a permanent constraint on fiscal policy and suggest a weak fiscal governance framework. Conversely, expenditure rules that are embedded in medium-term budgetary frameworks, as part of a comprehensive fiscal strategy, may better adapt to country-specific economic circumstances, while making stabilisation and consolidation objectives more com-

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11 The **Fiscal Rule Strength Index** (FRSI) or **design index** is a composite indicator that is calculated for each fiscal rule after assessing five specific dimensions: (1) legal base; (2) binding nature of the rule; (3) mechanisms for the monitoring and enforcement of the rule; (4) existence of ex-ante defined correction mechanisms in case of non-compliance; and (5) resilience to exogenous shocks outside the control of the government.

12 The Commission's database comprises data about the four principal rules of the current SGP: **(1) Deficit rule:** the general government deficit must be equal to or below 3% of GDP or, in case that this threshold has been exceeded, the deviation must remain small (up to 0.5 percentage points of GDP) and must be limited to a single year. **(2) Debt rule:** the general government debt-to-GDP ratio must be below 60%. In case that this threshold has been exceeded, the debt-to-GDP ratio must be reduced by 1/20 of its distance to the 60% reference value on average per year over a period of 3 years. **(3) Structural budget balance rule:** the general government structural budget balance must be equal to or higher than the medium-term objective (MTO), implying a relatively balanced budget in structural terms. The MTO is different for each country depending on its debt level. In case that the MTO has not yet been met, the structural balance must be improved by at least 0.5 percentage points of GDP per year or by its remaining distance to the MTO per year, if this distance is smaller than 0.5 percentage points of GDP. **(4) Expenditure rule:** the annual growth rate of primary government expenditure must not exceed the medium-term growth rate of potential GDP in nominal terms (10-year average) minus the margin necessary for the adjustment of the structural budget balance (in line with the corresponding rule), unless the excess is combined with revenue measures.

13 The definition of the annual expenditure target in nominal terms ensures that the target is not modified/revised at the budget execution phase to accommodate changes in inflation. If the target is expressed in real terms at the planning phase of the budget process, compliance is not affected by inflation developments and it may be relatively difficult to measure and assess its fulfilment at the execution phase (it should be noted that price deflators vary across different categories of public expenditure and may also differ from the GDP deflator). Moreover, the translation from the real ceiling to a nominal spending figure may open the door to revising the deflator in order to obtain additional spending room, thus undermining the transparency and credibility of the fiscal framework. Therefore, a real expenditure target may not be appropriate if it is used as an operational target in the short term, as it may imply significant adjustments in line with price developments and frequent in-year revisions, which may also complicate the annual budgetary execution. However, real targets may be more appropriate over a medium-term perspective, in particular by adjusting multi-annual ceilings in line with inflation surprises. Real expenditure targets are regarded as more suitable if the government does not aim at fiscal discipline but, rather, intends to keep the volume of goods and services provided by the public sector stable.

patible. Furthermore, a medium-term perspective in the management of public expenditure allows taking into account the future impact of current spending policies on economic growth rates and setting expenditure targets in line with the macroeconomic outlook, tax revenue developments and the degree of tax compliance, public debt sustainability and other policy priorities (e.g. green and digital transitions).

The recent agreement reached by the ECOFIN (see Box 12) on the reform of the fiscal rules provides for an expenditure rule which encompasses all of the above desirable features. In greater detail, **net primary expenditure**, i.e. nationally financed expenditure excluding interest payments and cyclical unemployment expenditure, net of discretionary revenue measures, is set as a single indicator for monitoring compliance with the new fiscal framework. It should also be noted that national expenditure on EU co-financed programmes is excluded, thereby creating more incentives for public investment. According to the proposed rule, the growth rate of net primary expenditure should not exceed the medium-term growth rate of potential output in nominal terms. Thus, any fiscal space would be used either to build up fiscal buffers or to reduce public debt, while any extraordinary fiscal measure on the expenditure side should be financed by a revenue-increasing measure of an equal size. Expenditure ceilings are defined on a multi-annual basis and reflect the required structural fiscal adjustment that Member States must implement in order to fulfil the fiscal sustainability criteria, as set out in their national medium-term fiscal-structural plans. In addition, a control account will be set up to monitor deviations from the agreed net primary expenditure paths. With regard to compliance and enforcement, an excessive deficit procedure will be triggered in the event that – among other things – the deviations recorded in the control account of the Member State either exceed 0.3 percentage points of GDP annually or 0.6 percentage points of GDP cumulatively over the fiscal adjustment period.

Counter-cyclicality – Effectiveness

Properly designed expenditure rules contribute to the promotion of counter-cyclical fiscal policies, while sustaining growth-enhancing expenditure targets. An expansionary fiscal stance during an adverse shock is feasible if revenue windfalls (during a positive shock) have created fiscal space. The counter-cyclicality of expenditure rules is enhanced if automatic stabilisers on the expenditure side are excluded from the operational indicator and are let free to accommodate a negative shock. Moreover, observance of the expenditure rule does not exclude the preservation of growth-friendly expenditure with a high multiplier effect (such as public investment), while leading to a greater restraint on other expenditure categories. Empirical studies have shown that when fiscal expenditure rules are in place and highly complied with, procyclicality in fiscal policy is reduced, as higher fiscal buffers can be built to support the economy in the face of negative shocks.[14]

Expenditure rules, where applied in the EU, have played a key role in the most ambitious and successful fiscal consolidation plans over the past decades. As a consequence, these rules are associated with a high degree of effectiveness in terms of fiscal discipline. As suggested by empirical studies,[15] the most successful

14 Belu-Manescu and Bova (2020), op. cit. See also Turrini, A. (2008), "Fiscal Policy and the Cycle in the Euro Area: The Role of Government Revenue and Expenditure", European Commission, *European Economy – Economic Papers*, 323, Brussels, who estimates fiscal reaction functions using strong and weak rules, on the basis of the expenditure rule index from the Commission's Fiscal Governance Database, and finds that countries with strong expenditure rules are less likely to implement procyclical policies. For further details about the relationship between compliance with fiscal rules and the cyclicality of fiscal policies, see Larch, M., J. Malzbubris and S. Santacroce (2023), "Numerical Compliance with EU Fiscal Rules: Facts and Figures from a New Database", *Intereconomics – Review of European Economic Policy*, 58(1), 32-42; and Larch, M., E. Orseau and W. Van der Wielen (2020), "Do EU Fiscal Rules Support or Hinder Counter-Cyclical Fiscal Policy?", JRC Working Paper on Taxation and Structural Reforms No. 01/2020.

15 Coenen, G., M. Mohr and R. Straub (2008), "Fiscal consolidation in the euro area: long-run benefits and short-run costs", ECB Working Paper No. 902; Attinasi, M.G. and L. Metelli (2016), "Is fiscal consolidation self-defeating? A panel-VAR analysis for the euro area countries", ECB Working Paper No. 1883; Alesina, A., O. Barbiero, C. Favero, F. Giavazzi and M. Paradisi (2015), "Austerity in 2009-13", *Economic Policy*, 30(83), 383-437; Alesina, A., C. Favero and F. Giavazzi (2015), "The Output Effects of Fiscal Consolidation Plans", *Journal of International Economics*, 96 (Supplement 1): S19-S42; Guajardo, J., D. Leigh and A. Pescatori (2014), "Expansionary Austerity? International Evidence", *Journal of the European Economic Association*, 12(4), 949-968; Alesina, A., O. Barbiero, C. Favero, F. Giavazzi and M. Paradisi (2017), "The Effects of Fiscal Consolidations: Theory and Evidence", NBER Working Paper No. 23385; and Hondroyiannis, G. and D. Papaoikonomou (2015), "When does it pay to tax? Evidence from state-dependent fiscal multipliers in the euro area", *Economic Modelling*, 48, 116-128.

fiscal adjustments are those that are largely expenditure-based; this is due to the fact that fiscal adjustments that are based on (tax) revenue increases have a stronger negative impact on GDP dynamics. In addition, an expenditure-based fiscal consolidation appears to have positive effects on business confidence and private investment, mitigating losses in national output.

Compliance

Undeniably, compliance with fiscal rules also depends on the quality of national fiscal frameworks. In other words, a properly designed expenditure rule, with the aforementioned desirable features, and the presence of independent national fiscal institutions (e.g. Fiscal Boards) will lead to a high Strength Index, which in turn is positively correlated with a high degree of compliance.[16]

In 2010-19, Greece was one of the two countries throughout the EU that were fully in line with the European "expenditure benchmark", whereas the other euro area high-debt countries saw their compliance indicators worsen considerably.[17] It should be pointed out that Greece outperformed its euro area partners in terms of meeting the expenditure target under the current European rule, thanks to major reforms in the management of public finances.[18]

Conclusion

Properly designed expenditure rules are expected to support fiscal discipline, with a view to safeguarding the sustainability of public finances in a counter-cyclical manner. At the same time, they present a number of desirable features in terms of transparency, simplicity and ease of compliance monitoring, thereby strengthening the credibility of the fiscal framework. However, expenditure rules should be matched by other types of rules, so as to ensure the overall objective of fiscal discipline. In fact, this is the goal of the recent reform of the EU's economic governance framework, which puts the lasting and sustainable reduction of debt at its core, by specifying medium-term fiscal adjustment trajectories in structural primary balance terms, which translate into an operational expenditure rule.

16 According to the guidance provided in the 2011 reform of the SGP ("Six-Pack" reform). See Beetsma, R., X. Debrun, X. Fang, Y. Kim, V. Lledó, S. Mbaye and X. Zhang (2019), "Independent fiscal councils: Recent trends and performance", *European Journal of Political Economy*, 57, 53-69.

17 For more details, see Ventouris, N. and G. Palaiodimos (2022), "Proposals for the reform of EU fiscal rules", Bank of Greece, *Economic Bulletin*, No. 55; and Bank of Greece, *Annual Report 2021*, Chapter V, Special feature "Proposals for the reform of the EU fiscal rules", 173-184.

18 In Greece, the average annual rate of reduction in primary expenditure over the period 2010-14 was around 6% (higher by 6.2 percentage points than the "expenditure benchmark" under the fiscal rule), whereas in 2015-19 the average annual growth rate of primary expenditure was close to zero (lower by 3.9 percentage points, respectively).

4 POLICY RECOMMENDATIONS

In terms of fiscal policy credibility, 2023 was a landmark year. On the one hand, budget targets were overachieved and the primary surplus rose significantly without denting economic growth. On the other hand, the Greek sovereign regained investment-grade status. These positive developments should nurture a sustained commitment to fiscal responsibility, especially given that primary surpluses will become harder to achieve over the medium term as growth is projected to slow down and the positive impact of inflation on public finances will wane.

The introduction of new fiscal rules in the EU in 2024 requires prudent medium-term fiscal planning, with constraints on the adoption of extraordinary fiscal measures. Making the expenditure rule an operational rule for monitoring compliance implies that any fiscal space will be used to build buffers and/or reduce public debt, while any extraordinary fiscal measure on the expenditure side should be financed by a revenue-increasing measure of an equal size.

Greece stands out among the EU's high-debt countries for its fiscal resilience, thanks to the structural fiscal adjustment of the previous decade, the favourable profile of public debt and the timely withdrawal of the 2020-2023 temporary expansionary fiscal support measures. It is also one of the few EU countries showing strong compliance with the expenditure rule, as arising from the European Commission's recommendations on 2024 national budgets (see Special Feature in this chapter).

Given the heightened uncertainty, medium-term fiscal policy planning should place greater emphasis on risk assessment and on building sufficient buffers over time, capable of shielding the economy in times of crisis. Such a risk-based medium-term framework should: (1) incentivise the building of buffers, even in the absence of immediate serious risk to debt sustainability; and (2) pursue more ambitious fiscal consolidation targets for countries with high public debt, provided that procyclical policies are avoided.

Moreover, the recent international experience with the devastating effects of climate change, especially in the European South, has demonstrated the need for a "rainy day" fund to finance climate change adaptation projects and emergency relief, in addition to the necessary investments to mitigate the impacts of climate change over the medium-to-long term.[25] The increased cost of addressing natural disasters should be covered either from EU funds or from additional income sources, so as to not undermine fiscal stability. At the same time, the private sector has a definite role to play in tackling climate-related risks, through the promotion of private insurance for assets, as the public sector alone cannot bear the entire cost of compensation and infrastructure restoration.

To further enhance and safeguard fiscal sustainability, priority should be given to broadening the tax base by combatting tax evasion. This would also enable better targeting of social policy and, more generally, promote tax fairness. The recent measures against tax evasion are expected to support a growth-oriented tax policy. A review of existing tax exemptions, in terms of their social necessity and targeting, would contribute in the same direction. As tax exemptions have significantly grown in number and cost in recent years, a review is warranted to ensure that they remain relevant today and effective in fulfilling their purpose (supporting vulnerable groups, promoting entrepreneurship and innovation, etc.). Such an approach, coupled with more intensive checks of how tax exemptions are used, would enhance tax fairness, and could also boost tax revenues.

Finally, fostering investment, innovation and structural reforms will help to raise productivity and potential growth, thereby making the economy and public finances more resilient. In this context, effective use of RRF funds will be crucial for the implementation of the needed reforms, as well as for closing the investment gap, in particular through higher investment in physical and human capital, clean energy, digital technologies and artificial intelligence.

5 DEVELOPMENTS IN FISCAL AGGREGATES DURING 2023

5.1 General government (ELSTAT, national accounts data)

According to national accounts data for the first nine months of 2023, the general government primary balance improved by 1.9 percentage points year-on-year to a surplus of 1.4% of GDP. This surplus came as a combined result of a 0.5 percentage point decline in revenue and a 2.4 percentage point decrease in expenditure relative to GDP (see Chart V.3).

In nominal terms, revenue grew by 5.0% year-on-year, mainly on the back of improved economic activity, more extensive use of electronic payments and enhanced tax compliance. Revenue from direct taxes (up by 23.6%) accounts for most of this increase. By contrast, revenue

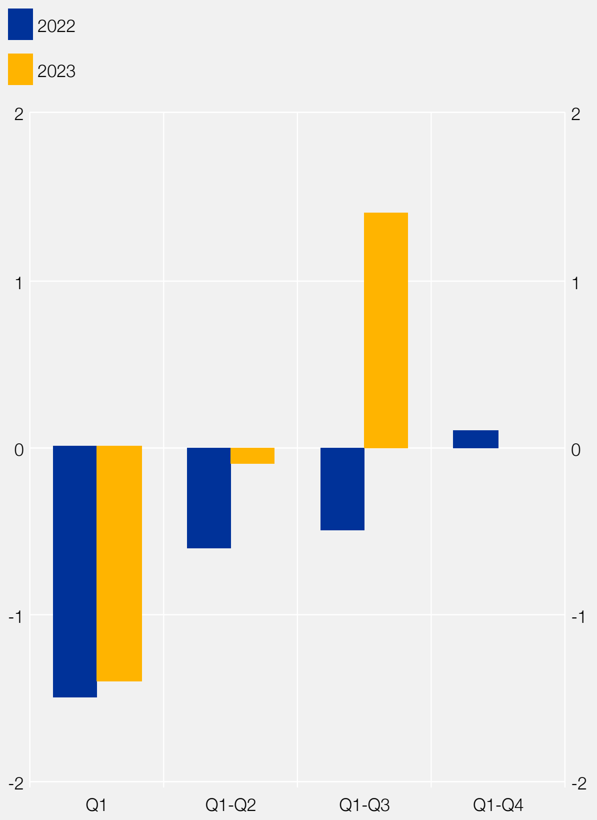
25 See Bank of Greece, *Annual Report 2022*, Box V.1.

from indirect taxes dropped, as revenue from the Energy Transition Fund fell to EUR 2.0 billion in the first nine months of 2023, from EUR 2.4 billion in the same period of 2022, whereas VAT revenue grew by 5.1%. Increases were also seen in other current revenue, due to higher receipts from fines; revenue from social security contributions, reflecting higher employment and average wages; revenue from sales; and capital revenue due to higher receipts from EU funds.

Primary expenditure fell by 0.6% compared with the first nine months of 2022, as a decrease in subsidies following the unwinding of pandemic and energy-related measures was largely offset by increases in other spending categories. Expenditures that increased include (i) social benefits, due to a 7.75% increase in pensions, the clearance of pending pension applications, the payment of the "personal difference" allowance (EUR 257 million) to pensioners and of the "market pass" (EUR 755 million); (ii) capital transfers, owing to higher Public Investment Budget and RRF expenditure, as well as recapitalisation of Attica Bank (EUR 369 million); (iii) intermediate consumption, due to higher energy and other goods and services prices; (iv) compensation of employees; and (v) other primary expenditure.

Chart V.3 Primary balance of general government on a national accounts basis

(ESA 2010, % of GDP)



Source: ELSTAT.

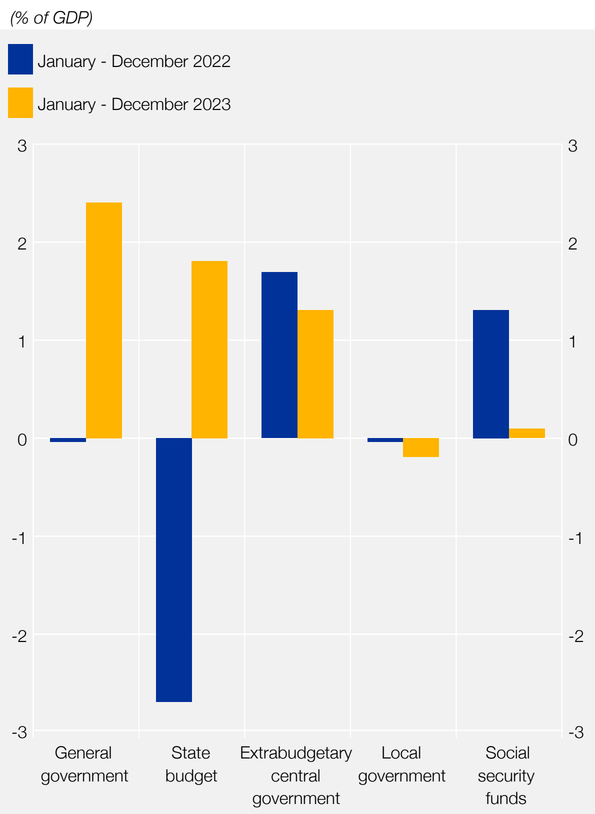
5.2 General government (State General Accounting Office data)

According to general government cash data collected by the State General Accounting Office, the general government cash balance improved from a deficit of 2.2% of GDP in 2022 to a deficit of 0.3% of GDP in 2023. The primary cash balance also improved, from a balanced position in 2022 to a surplus of 2.5% of GDP.

The drivers behind the primary balance outturn were: (i) a 4.5 percentage point-of-GDP improvement in the state budget primary balance due to higher revenue, mainly from taxes (see Section 5.3); (ii) a deterioration in the primary surplus of central government entities by 0.2 percentage points of GDP, partly as a result of the payment of the "market pass" by Information Society S.A. (EUR 777 million); (iii) a deterioration of 1.1 percentage points of GDP in the primary surplus of social security funds (SSFs), mainly attributable to higher pension expenditure and capital transfers, due to increased RRF expenditure (mostly by the Public Employment Service) and SSF participation in the capital increase of Attica Bank; and (iv) a decline of 0.2 percentage points of GDP in the primary surplus of local government organisations (see Chart V.4).

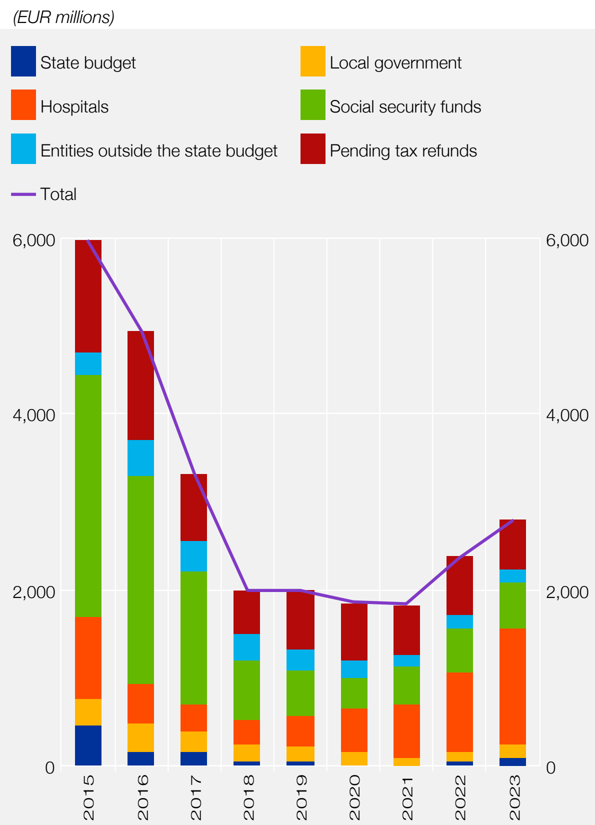
At the end of 2023, total general government arrears (including tax refunds, but excluding pending pension applications) were EUR 431 million higher than at the end of 2022 (arrears to suppliers rose by EUR 531 million and tax refunds declined by EUR 100 million). The total stock of general government arrears stood at EUR 2.8 billion, of which EUR 2.2 billion is owed to suppliers and EUR 0.6 billion relate to tax refunds. Hospitals account for the largest share (59%) of arrears to suppliers, without netting out pharmaceutical clawbacks (see Chart V.5).

Chart V.4 Primary balance of general government on a cash basis



Source: Ministry of Finance, State General Accounting Office.
Note: The primary balance of general government is after consolidation of intra-governmental transactions and may therefore differ from the sum of the primary balances of individual general government sub-sectors.

Chart V.5 General government arrears



Source: Ministry of Finance, State General Accounting Office.

5.3 State Budget (on a modified cash basis)

The state budget balance improved from a deficit of 5.6% of GDP in 2022 to a deficit of 1.7% of GDP in 2023 (see Table V.3). The state budget primary balance also improved to a surplus of 1.8% of GDP, compared with a deficit of 3.2% of GDP in 2022.

This latter improvement was attributable to a 12.5% increase in revenue (before refunds) and a 4.8% decrease in primary expenditure. Revenue growth was mainly driven by higher taxes, transfers received and other revenue. Expenditure developments were due to reduced spending on military equipment, RRF grants and transfer payments.

Against the revised target in the Introductory Report on the 2024 Budget, the primary balance overperformed by EUR 4.8 billion, mainly as a result of a EUR 3.0 billion primary expenditure restraint – in particular under-execution of expenditures on fixed assets acquisitions (due to the deferral of defence payments), on transfers and on purchases of goods and services, as well as unallocated expenditures. Total revenue came in EUR 2.1 billion higher than budgeted, driven by tax revenue overperformance and an unbudgeted EUR 1.687 billion received from the RRF in December. Net of tax refunds, revenue overperformance was lower, at EUR 1.8 billion.

Interest payments increased substantially year-on-year, by EUR 2,667 million or 52.9%. This was because this item is recorded on a gross basis, i.e. without netting interest income from swap operations that hedge against interest rate risk. Accordingly, its level is affected by the observed interest rate rises.

Table V.3 State Budget balances (State General Accounting Office – modified cash basis)

(EUR millions)

	January-December		Change (%)	Deviation from the 2023 budget targets[1]
	2022	2023	2023/2022	
1. State budget net revenue (a-b)	**59,623**	**67,005**	**12.4**	**1,810**
a. State budget revenue (I+II+III+IV)	**65,776**	**73,998**	**12.5**	**2,127**
I. Taxes	55,217	61,627	11.6	608
II. Transfers	6,357	7,530	18.5	1,300
III. Sales of goods and services	833	848	1.8	-120
IV. Other revenue	3,369	3,994	18.6	339
b. Tax refunds	**6,153**	**6,993**	**13.7**	**316**
Memo items:				
Revenue from the Public Investment Budget (PIB)[2]	3,581	3,507	-2.1	-256
Revenue from the Recovery and Resilience Facility[3]	1,718	3,405	98.2	1,687
2. State budget expenditure (I+II+III+IV+V+VI+VII)	**71,279**	**70,765**	**-0.7**	**-2,768**
State budget primary expenditure (2-VI)	**66,240**	**63,059**	**-4.8**	**-2,970**
I. Compensation of employees	13,640	14,039	2.9	-111
II. Transfers	35,086	33,400	-4.8	-470
III. Purchases of goods and services	2,145	2,145	0.0	-219
IV. Acquisitions of fixed assets	3,496	1,691	-51.6	-667
V. Other primary expenditure	848	584	-31.1	-1,883
VI. Interest payments (gross)	5,039	7,706	52.9	203
VII. Public Investment Budget expenditure	8,182	9,112	11.4	362
VIII. Recovery and Resilience Facility expenditure	2,843	2,089	-26.5	17
3. State budget surplus/deficit (1-2)	**-11,656**	**-3,760**		**4,578**
% of GDP	*-5.6*	*-1.7*		
4. State budget primary balance (3+2.V)	**-6,652**	**3,920**		**4,771**
% of GDP	*-3.2*	*1.8*		

Source: Ministry of Finance/State General Accounting Office, State Budget Execution Bulletin, December 2023.
1 Deviation from the 2023 Budget estimates as included in the Introductory Report on the 2024 Budget.
2 Revenue from the Public Investment Budget (PIB) is included in the categories of "Transfers" and "Other revenue".
3 Revenue from the Recovery and Resilience Facility is included in the category of "Transfers".

Based on available data, developments in the main revenue categories of the State Budget in 2023 relative to 2022 are as follows:

Tax revenue rose by 11.6%, driven by all main components (see Table V.4), and overshot the budget target by EUR 608 million. This overperformance was broad-based across all main categories of taxes except annual property taxes, which fell marginally short of the budgeted amount. More specifically:

- Revenue from taxes on goods and services rose by 7.6% year-on-year. The largest increase (12.2%) was seen in revenue from VAT on other goods and services, reflecting higher prices and stronger consumption on the back of buoyant tourism. The target for this item was overachieved by EUR 263 million, again on account of higher-than-budgeted revenue from VAT on other goods and services due to the overperformance of tourism receipts and the more extensive use of electronic payments.

- Revenue from annual property taxes fell by 7.5% compared with 2022, mainly on account of reduced ENFIA receipts, and was marginally short of the annual target, by EUR 48 million.

Table V.4 State Budget tax revenue

(EUR millions)

	January-December		Change (%)	Deviation from the 2023 annual targets[1]
	2022	2023	2023/2022	
Total taxes (A+B+C+D)	**55,217**	**61,627**	**11.6**	**608**
A. Taxes on goods and services	**31,584**	**33,970**	**7.6**	**263**
of which: 1. VAT (1.a + 1.b + 1.c)	21,422	23,385	9.2	154
1.a VAT on fuel	2,560	2,271	-11.3	-87
1.b VAT on tobacco	661	687	3.9	13
1.c VAT on other goods and services	18,201	20,427	12.2	228
2. Excise taxes (2.a + 2.b + 2.c)	6,983	7,018	0.5	-20
2.a Excise tax on energy	4,148	4,086	-1.5	-16
2.b Excise tax on tobacco	2,155	2,235	3.7	-2
2.c Excise tax on other goods and services	680	697	2.5	-2
B. Property taxes	**2,692**	**2,491**	**-7.5**	**-48**
of which: ENFIA	2,655	2,435	-8.3	-41
C. Income tax	**17,011**	**20,885**	**22.8**	**319**
of which: 1. Personal income tax	11,047	12,439	12.6	151
2. Corporate income tax	4,629	6,782	46.5	73
D. Other	**3,930**	**4,281**	**8.9**	**75**

Source: Ministry of Finance/State General Accounting Office, State Budget Execution Bulletin, December 2023.
1 Deviation from the 2023 annual estimates as included in the Introductory Report on the 2024 Budget.

- Revenue from income tax increased by 22.8%, owing to higher wages and pensions and the associated increase in withholding tax (in the case of personal income tax), as well as firms' improved 2022 financial results (in the case of corporate income tax). The budget target for this item was exceeded by EUR 319 million, due mainly to the overperformance of personal income tax.

- Revenue from other current taxes (included in the category "Other taxes") grew by 20.1% and exceeded the annual target by EUR 179 million, reflecting the impact of a two-month extension of the payment deadline for 2023 road duties which had not been envisaged in the budget.

- Revenue from transfers rose by 18.5% compared with the previous year, driven by higher inflows of RRF funds. It exceeded the annual target by EUR 1.3 billion, as a shortfall in Public Investment Budget revenue was more than offset by an unbudgeted EUR 1,687 million received from the RRF in December.

- Revenue from sales of goods and services, mainly administrative fees, rent income from property and infrastructure and government guarantee fees, grew by 1.8% compared with the previous year but fell EUR 120 million short of the target.

- Other revenue increased by 18.6%, due to a return of unused expenditure (mainly unused investment outlays), and exceeded the budgeted amount by EUR 339 million.

- Overall, revenue from the Public Investment Budget (PIB) declined by 2.1% in 2023 year-on-year.

- Finally, in 2023, tax refunds increased by 13.7% relative to the previous year and overshot the target by EUR 316 million, mainly due to higher VAT refunds.

Primary expenditure of the state budget fell by 4.8% in 2023 year-on-year, driven mainly by lower expenditures on fixed asset acquisitions (mainly military equipment), transfers, RRF expenditure and other primary expenditure on subsidies, following the withdrawal of pandemic and energy-related support measures. This item showed a shortfall of EUR 3.0 billion against the budgeted amount, reflecting only partial absorption of reserve appropriations related to unallocated primary expenditure and under-execution of expenditures on fixed assets acquisitions, transfers and purchases of goods and services (see Table V.3). Based on available disaggregated data, developments in the main categories of state budget primary expenditure were as follows:

- Compensation of employees rose by 2.9% year-on-year but was still EUR 111 million short of the annual target.

- Transfers paid were 4.8% lower year-on-year, as the expenditure saving from the withdrawal of most energy-related support measures more than offset the impact of the "market pass" (EUR 821 million) and a EUR 367 million grant to the Energy Transition Fund as allocation, for the period 1.10.2021-30.6.2022, of receipts from the extraordinary levy on energy producers. Transfers were under-executed by EUR 470 million.

- Purchases of goods and services remained stable.

- Expenditure on the acquisition of fixed assets fell by EUR 1.8 billion, driven by reduced spending on Ministry of National Defence procurements of military equipment, and was EUR 667 million lower than budgeted due to payment deferrals.

- PIB expenditure grew by 11.4% year-on-year, reflecting the combined effect of lower pandemic-related support (2023: EUR 133 billion, 2022: EUR 621 billion) and an increase of EUR 1.4 billion, or 18.8%, in other investment expenditure. This overall increase includes an extraordinary burden on the PIB for addressing the economic impact of natural disasters (subsidies, compensation for damages and losses, relief and infrastructure restoration). PIB expenditure overshot the budgeted amount by EUR 362 million.

- Finally, RRF-related expenditure was EUR 2,089 million, down by EUR 0.7 billion from EUR 2,843 million in 2022, but still EUR 17 million higher than the revised target.

5.4 State Budget on a cash basis

The net cash balance of the state budget improved, with its deficit declining from 6.1% of GDP in 2022 to 1.2% of GDP in 2023 (see Table V.5 and Chart V.6). It also improved

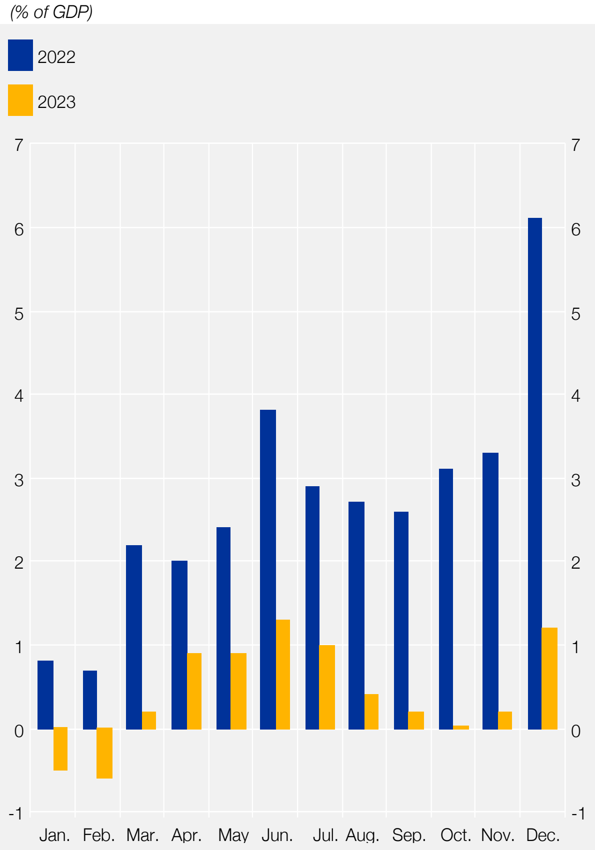
Table V.5 State budget net balance on a cash basis

(EUR millions)

	2020	2021	2022	2023
State budget[1]	**-24,138**	**-15,880**	**-12,664**	**-2,685**
% of GDP	-14.6	-8.7	-6.1	-1.2
- Ordinary budget	-19,043	-13,780	-6,950	1,781
- Public Investment Budget[2]	-5,095	-2,100	-5,714	-4,466

Source: Bank of Greece.
1 Based on changes in the State's accounts with the Bank of Greece and other credit institutions, as well as changes in the public debt management account. Excluding changes in the OPEKEPE account.
2 This also includes RRF revenue and expenditure.

Chart V.6 Central government net borrowing requirement on a cash basis (January 2022 - December 2023)



Source: Bank of Greece.
Notes: The figures reported for each month are based on cumulative data for the year up to that month. The balance of OPEKEPE (Payment and Control Agency for Guidance and Guarantee Community Aid) is not included.

in primary terms, turning from a deficit of 3.2% of GDP in 2022 to a surplus of 1.7% of GDP in 2023.

The ordinary budget improved from the previous year, as revenue increased and primary expenditure decreased for reasons detailed in the previous section.

The Public Investment Budget (PIB) also improved, as revenue from the RRF increased and the corresponding expenditure decreased.

5.5 General government debt

The Introductory Report on the 2024 Budget projects a further significant decline in the debt-to-GDP ratio, by 12.3 percentage points to 160.3%[26] in 2023, the lowest since 2010. The largest contribution (9.2 percentage points) to this reduction is expected to come from the interest rate-growth differential (snowball effect) due to the stock of debt and continued expansion in nominal GDP. Smaller contributions are expected from deficit-debt adjustments (2.0 percentage points) and a widening of the primary surplus (1.1 percentage points) mainly on account of the unwinding of temporary pandemic- and energy-related fiscal support. In nominal terms, public debt is expected to increase by EUR 0.4 billion (see Table V.6).

According to the same report, the debt-to-GDP ratio is seen to decline further in 2024, albeit at a slower pace, and reach 152.3%, as the slowdown in the GDP deflator is expected to offset both the acceleration in real GDP and the debt-reducing effect of the higher primary surplus. In nominal terms, public debt is projected to decline (by EUR 1 billion) for the first time since 2019 and for just the fifth time in the 29-year period for which ESA national accounts data are available.[27] In its Funding Strategy for 2024, the PDMA projects an even higher decline in the debt level, by EUR 3.3 billion in 2024, resulting from further early repayments and a reduction in the stock of short-term debt.

The projections of the Bank of Greece point to a general government debt ratio of 161.9% in 2023 and 153% in 2024. In the baseline scenario, assuming a commitment to the fiscal targets and effective utilisation of EU funds, the debt-to-GDP ratio is put on a steady downward path, only temporarily interrupted in 2033 for purely technical reasons (see Chart V.7). Specifically, that year will mark the end of the extended 20-year interest deferral period for EUR 96 billion of EFSF loans made to Greece between 2012 and 2014.[28] Based on applicable national accounts rules, such deferred interest is recorded under annual general government expenditure based on ESA methodology, but will only be included in public debt as from the end of the de-

26 In its most recent estimate (see footnote 10 above), the PDMA has revised this figure to 161.9%.
27 Since ESA national accounts statistics began in 1995, the debt level declined also in 2012, 2014, 2015 and 2019.
28 In November 2012, the Eurogroup agreed to defer interest payments to the EFSF for a period of 10 years. This was extended by another 10 years at the Eurogroup meeting of June 2018.

Table V.6 Decomposition of changes in the general government debt-to-GDP ratio[1]

(percentage points of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*	2024*
General government debt as % of GDP	180.3	176.7	180.5	179.5	186.4	180.6	207.0	195.0	172.6	160.3	152.3
Changes in the debt ratio	2.2	-3.6	3.8	-1.1	6.9	-5.8	26.4	-12.0	-22.3	-12.4	-8.0
- Effect of the primary balance	-0.3	2.2	-3.4	-3.9	-4.3	-3.9	6.7	4.5	-0.1	-1.1	-2.1
- Interest-growth differential (snowball effect)	6.7	4.4	5.1	0.7	0.7	-0.9	23.1	-16.3	-21.2	-9.2	-4.3
- Deficit-debt adjustment[2]	-4.2	-10.3	2.1	2.2	10.5	-1.1	-3.4	-0.2	-1.0	-2.0	-1.5

Sources: Introductory Report on the 2024 Budget and ELSTAT.
* Forecasts.
1 The formula used for the decomposition of changes in the public debt-to-GDP ratio is the following:

$$\left[\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}}\right] = \frac{PB_t}{Y_t} + \left[\frac{D_{t-1}}{Y_{t-1}} * \frac{i_t - g_t}{1 + g_t}\right] + \frac{SF_t}{Y_t}$$

where D_t = general government debt
PB_t = primary balance (deficit (+) or surplus (-))
Y_t = GDP at current prices
g_t = nominal GDP growth rate
i_t = average nominal interest rate on government debt
SF_t = deficit-debt adjustment

2 The deficit-debt adjustment includes expenditure or assumption of liabilities that do not affect the deficit but increase debt, as well as receipts (e.g. from privatisations) that do not affect the deficit but reduce debt.

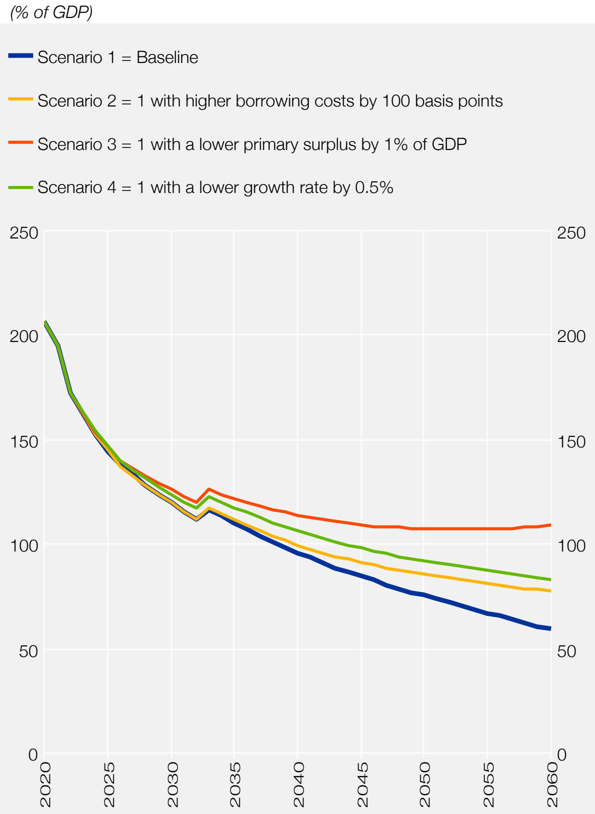
ferral period. Based on the assumptions of its baseline scenario, the Bank of Greece estimates the deferred interest to be added to debt in 2033 at EUR 27 billion or 8% of 2033 GDP. Meanwhile, as indicated by the European Commission, inclusion of deferred interest in debt in the year when it is accrued is being considered.[29] This could lead to an upward revision of past debt figures going back to 2013, avoiding a one-off burden on 2033 public debt. In any case, as noted by the European Commission, the statistical treatment of deferred interest does not affect its assessment of Greece's debt sustainability.

Charts V.7 and V.8 show the projected paths of public debt and gross financing needs (GFN), respectively, as percentages of GDP in the baseline scenario, as well as in three standardised alternative scenarios, helping to gauge the sensitivity of baseline projections to more adverse assumptions on refinancing costs, GDP growth and the primary balance. The projected evolution of the debt-to-GDP and GFN-to-GDP ratios up to the early 2030s shows little variation across the different scenarios considered, demonstrating strong debt resilience to a number of potential adverse risks over the medium term. In the longer term, however, there is increased uncertainty, as the gradual refinancing of accumulated debt to the official sector on market terms will increase the exposure of Greek government debt to interest rate risk, leaving no room for fiscal policy relaxation. Over the medium term, the likelihood of a reversal in the downward course of the debt-to-GDP ratio is estimated to be little, as is the likelihood of gross financing needs exceeding the thresholds of 15% and 20% of GDP.[30]

In light of the above, risks to public debt sustainability are estimated to be contained over the medium term, provided that fiscal targets are adhered to and EU funds are effectively utilised. This is largely due to the favourable repayment profile of official sector debt, which accounts for the bulk of total debt (see Table V.7), coupled with the past hedging swap contracts, which locked in historically low interest rates. It should be noted, though, that the current favourable

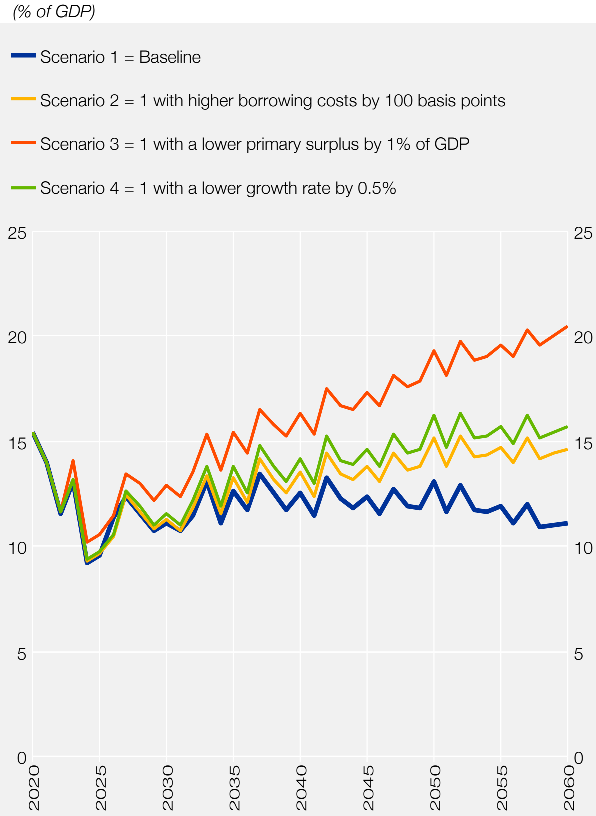
29 See footnote 26, p. 20, in European Commission, *Post-Programme Surveillance Report – Greece*, December 2023.
30 The estimates are based on stochastic simulations of 100 thousand alternative scenarios using a small-scale BVAR model. A similar approach can be found in OBR, Economics and fiscal outlook, October 2021, Box 4.2, p. 194.

Chart V.7 Public debt



Source: Bank of Greece.

Chart V.8 Gross financing needs



Source: Bank of Greece.

Table V.7 General government consolidated debt[1]

(EUR millions)

	2019	2020	2021	2022
Short-term liabilities	14,019	13,372	12,860	16,480
– securities	*11,752*	*11,122*	*10,811*	*11,089*
– loans	*2,267*	*2,250*	*2,049*	*5,391*
Medium- and long-term liabilities	310,490	321,561	334,231	332,958
– securities	*46,102*	*56,065*	*70,125*	*74,045*
– loans	*264,388*	*265,496*	*264,106*	*258,913*
Coins and deposits	6,635	6,655	6,757	7,159
Total	**331,144**	**341,588**	**353,848**	**356,597**
% of GDP	***180.6***	***207.0***	***195.0***	***172.6***
– euro-denominated debt	327,386	337,422	352,675	356,567
of which:				
to the Bank of Greece	*(1,895)*	*(1,421)*	*(950)*	*(477)*
to the Financial Support Mechanism	*(245,294)*	*(244,133)*	*(241,481)*	*(235,571)*
– non-euro-denominated debt[2]	3,758	4,166	1,173	30
of which: to the Financial Support Mechanism	*(3,716)*	*(4,128)*	*(1,139)*	*(0)*

Sources: ELSTAT and PDMA.
1 According to the Maastricht Treaty definition.
2 Valuation based on the exchange rates prevailing on 31 December of each year.

profile of the accumulated public debt will not be permanent, but merely provides an important window of opportunity for public debt to remain sustainable going forward, as the concession loans under the economic adjustment programmes gradually mature and are replaced by new borrowing on market terms. Exploiting this window of opportunity requires to safeguard fiscal credibility, while also ensuring effective use of EU funds. That, in turn, will ensure not only the maintenance of investment-grade status, but also the further gradual improvement of the country's credit rating.

6 THE BUDGET FOR 2024

According to the Introductory Report on the 2024 Budget submitted to Parliament in November 2023, the fiscal policy stance is projected to be expansionary in 2024, due to increased RRF-backed investment spending. Excluding this impact, the fiscal stance is expected to be neutral, complementing the restrictive stance of monetary policy and efforts to curb inflation.

In greater detail, a general government primary surplus of 2.1% of GDP is expected for 2024, up from a primary surplus of 1.1% of GDP in 2023. This is based on a projected economic recovery, with real GDP growing by 2.9% in 2024. Public debt as a percentage of GDP is projected to decline to 152.3% in 2024, down from 160.3% of GDP in 2023, mainly due to the debt-reducing effect of the interest rate-growth differential (snowball effect) and, to a lesser degree, the achievement of a primary surplus of 2.1% of GDP. It is worth noting that public debt is expected to fall also in nominal terms, by EUR 1 billion.

The 2024 Budget expects the primary balance to increase by 1.0 percentage point of GDP in 2024, as revenue from taxes and social security contributions increases amid stronger economic growth.

This projection incorporates measures implying a cumulative budgetary burden of EUR 2.1 billion. These include new measures, with effect from 2024, most notably: the revised public sector pay scale; a EUR 1,000 increase in the tax-free allowance for taxpayers with dependent children; a 10% reduction in the Unified Property Ownership Tax (ENFIA) for homes insured against natural disasters; introduction of VAT at a rate of 13% on short-term property rentals where the lessor is a legal or natural person who operates three or more properties; and extension of reduced VAT rates applying to certain categories of goods and services. Also, with effect from January 2024: reinstatement of seniority-based increases (for every three years of work experience) in private-sector wages; abolition of the 30% pension cut for post-retirement employment and instead introduction of a 10% tax on wage income for working pensioners; a 3.1% increase in pensions based on the average of annual GDP growth and inflation in 2023; a EUR 300 million increase in budget appropriations to finance State aid for natural disasters; introduction of a climate resilience levy on tourist accommodation and short-term property rentals. Last but not least, measures to curb tax evasion, including completion of the interconnection of cash registers with POS terminals; limits on cash usage in payments; mandatory transmission of accounting records to the Independent Authority for Public Revenue (AADE); digitalisation of tax audits; and reform of taxation of income from sole proprietorships. The latter reform is estimated to deliver revenue gains of about EUR 500 million, to be channelled into education and healthcare.

According to the Budget for 2024, absorption of EU funds available under the Recovery and Resilience Facility will reach EUR 3.5 billion, or 1.5% of GDP, with EUR 1.2 billion in grants and EUR 2.3 billion in loans. These funds are projected to add up to 1.9% of GDP and be the key driver of investment growth in 2024.

Privatisation proceeds are expected to be very high (EUR 5.8 billion), mainly in the context of concession agreements for Attica Motorway (EUR 3.3 billion) and Egnatia Motorway (EUR 1 billion).

Finally, a EUR 581 million increase in defence spending is projected year-on-year, due to increased deliveries of military equipment.

It should be noted that 2024 will mark the deactivation of the general escape clause of the Stability and Growth Pact (SGP). The budget forecast for the fiscal balance of 2024 (a deficit of 1.1% of GDP) is well below the SGP's deficit limit of 3% of GDP. Moreover, the projected decrease in the debt ratio in 2024 (8 percentage points of GDP) is greater than that required under the current SGP (5 percentage points of GDP). Finally, net nationally financed primary expenditure is projected to grow by 0.4% in 2024, which is in full compliance with the maximum growth of 2.6% recommended in July 2023 by the Council with a view to ensuring a prudent fiscal policy.

CHAPTER V SPECIAL FEATURE

THE NEW FISCAL RULES IN THE CONTEXT OF THE EU ECONOMIC GOVERNANCE REFORM

After nearly four years of consultations and negotiations among EU Member States, European organisations and other institutions,[1] on 20 December 2023 the ECOFIN reached an agreement on the review of the EU economic governance framework. The legislative package, which was agreed by the EU Council,[2] focuses on fiscal issues and is based on the European Commission's initial proposal on the new fiscal rules that was published in April 2023.[3] The package includes: (i) a new regulation on the effective coordination of economic policies and multilateral budgetary surveillance (preventive arm of the Stability and Growth Pact, SGP);[4] (ii) an amendment to the current regulation on speeding up and clarifying the implementation of the excessive deficit procedure (corrective arm of the SGP);[5] and (iii) an amendment to the EU Council Directive on requirements for budgetary frameworks of the Member States.[6] On 10 February 2024, a provisional political agreement was reached between the EU Council and the European Parliament on the proposed reform of the economic governance framework.[7]

The objective of the reform is to address shortcomings in the existing fiscal framework. More specifically, the reform seeks to ensure that the new fiscal rules are simpler, more transparent and effective, with greater national ownership and better enforcement and monitoring. The new rules of fiscal discipline take into account the need to reduce increased public debt levels, including as a result of the COVID-19 pandemic, in a realistic, gradual and sustained manner. The new economic governance framework of the EU also builds on the lessons learned from the policy response to the global financial crisis and the euro area debt crisis, whereby procyclical fiscal adjustment policies were pursued and a lack of investment was observed, which hampered a swift economic recovery.

Key points of the agreement on the new fiscal framework

While maintaining the budget deficit and public debt reference values provided for in the EU Treaties, the new fiscal rules introduce a number of novelties, setting the long-run sustainability of public debt as the primary policy objective. Namely, the deficit reference value of 3% of GDP and the public debt reference value of 60% of GDP under the current SGP are

1 For a detailed overview of the various proposals on the reform of the EU fiscal rules, see European Commission, Report on Public Finances in EMU 2021, Institutional Paper 181, July 2022, 33-44. For the results of the Commission's online public consultation, see European Commission, "Online public consultation on the review of the EU economic governance framework. Summary of responses. Final Report", Commission Staff Working Document, Brussels, 28.3.2022.

2 Council of the EU, Press Release, 21.12.2023.

3 EC proposal for a regulation: New economic governance rules fit for the future, 26.4.2023.

4 Proposal for a Regulation of the European Parliament and of the Council on the effective coordination of economic policies and multilateral budgetary surveillance and repealing Council Regulation (EC) No 1466/97 – Mandate for negotiations with the European Parliament (Brussels, 20.12.2023).

5 Proposal for a Council Regulation amending Regulation (EC) No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure – Agreement in principle with a view to consulting the European Parliament (Brussels, 20.12.2023).

6 Proposal for a Council Regulation amending Regulation (EC) No 85/97 on speeding up and clarifying the implementation of the excessive deficit procedure – Agreement in principle with a view to consulting the European Parliament (Brussels, 20.12.2023). This directive sets out the details about Member States' compliance with the fiscal rules.

7 Council of the EU, Press Release, 10.2.2024; European Parliament, Press Release, 10.2.2024; European Commission, Press Release, 10.2.2024. The provisional political agreement on the preventive arm of the economic governance framework is subject to approval by the Council of the EU in the Committee of Permanent Representatives and by the European Parliament Committee on Economic and Monetary Affairs before going through a formal vote in both the Council and the Parliament. Once adopted, the text will be published in the Official Journal of the EU and will enter into force the following day. The regulation on the corrective arm and the aforementioned directive only require the European Parliament to be consulted.

preserved. A main novelty under the new framework is the suspension of horizontal numerical rules with the adoption of a differentiated approach towards each Member State to take account of heterogeneity in fiscal positions, public debt and economic challenges, as well as of sustainability risks (risk-based approach). Against this backdrop, multi-annual cross-country fiscal trajectories will be defined for each Member State with a view to ensuring the long-term sustainability of public debt in a durable way.

Medium-term fiscal-structural plans become a key component of economic policy design, aiming to reduce deficits and debt ratios and to promote investment and reforms (see the chart). Each Member State will prepare a medium-term plan spanning over four or five years, committing to a fiscal trajectory as well as public investments and reforms that together ensure sustained and gradual debt reduction and sustainable economic growth. Furthermore, national medium-term plans will also include actions to address any macroeconomic imbalances in line with the European Commission's recommendations (Macroeconomic Imbalance Procedure, MIP).

The fiscal adjustment period is set at four years, which may be extended to a maximum of seven years, if Member States commit to implementing certain reforms and investments that improve economies' growth potential and adjustment to the current conditions, in line with the common priorities of the EU.[8] Such priorities include achieving a fair green and digital transition, ensuring energy security and strengthening social and economic resilience, as well as defence capabilities. A Member State may also request to revise its plan before the end of the adjustment period, either in the event of a new government or if there are objective circumstances preventing the implementation of the original plan. The integration of fiscal, reform and investment objectives into a single medium-term plan will help to create a coherent and streamlined process. This provides Member States with greater leeway in preparing their fiscal-structural plans and strengthens the national ownership of fiscal adjustment measures. At the same time, the dialogue between EU Member States and institutions is enhanced, increasing transparency and accountability for decisions on fiscal targets. Each Member State will present an annual progress report[9] in the context of the European Semester, whereby the implementation of the medium-term national plans will be monitored.

Fiscal adjustment is defined as an improvement in the structural primary budget balance. Member States with a public debt above 60% of GDP or a government deficit above 3% of GDP will receive from the Commission –after an optional pre-dialogue with it– a differentiated and risk-based "reference trajectory",[10] which will determine their fiscal adjustment needs measured in structural primary balance terms and will be expressed as an operational expenditure rule. For Member States with a government deficit below the 3% of GDP reference value and public debt below 60% of GDP, the Commission will provide (at the request of the Member State) "technical information" regarding the structural primary balance necessary to ensure that the headline deficit is maintained below 3% of GDP without any additional policy measures over a 10-year period after the end of the national medium-term fiscal-structural plan.

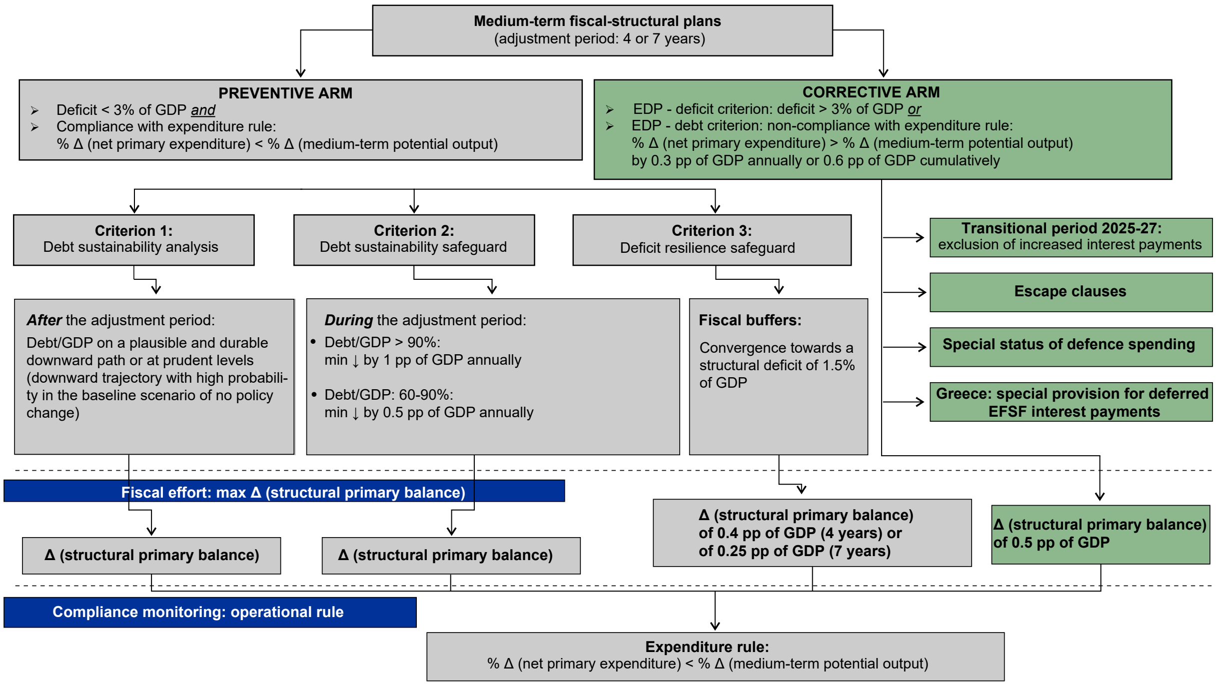
Compliance is monitored using a single operational expenditure rule. The expenditure rule (see Box 11), which sets a limit on the growth rate of net primary expenditure,[11] will serve as an

8 Reforms and investment commitments of the national Recovery and Resilience Plans (RRPs) in the context of NGEU will be taken into account for an extension of the adjustment period in the first round of the plans.

9 Annual progress reports will replace the stability programmes submitted by Member States every three years as well as the national reform agendas, which outline policy actions and economic reforms under way.

10 Previously called "technical trajectory".

11 Net primary expenditure means *nationally* financed expenditure excluding interest expenditure and cyclical unemployment expenditure, net of discretionary revenue measures. It should also be noted that the exclusion of national expenditure on EU co-financed programmes is envisaged, incentivising public investment and facilitating transition to a new growth model that addresses the new challenges. According to the proposed expenditure rule, the growth rate of net primary expenditure should not exceed the medium-term growth rate of potential output in nominal terms.



indicator for monitoring compliance with the new fiscal framework. Besides, it signals the efforts to streamline the surveillance process, reduce procyclicality in fiscal policies and enhance the effectiveness and transparency of fiscal rules. At the same time, a **control account** will be set up for each Member State to record deviations from the agreed net expenditure path.

The objective of fiscal adjustment is to ensure long-term public debt sustainability and sustained government deficits below the 3% of GDP reference value. At the end of the adjustment period, the public debt-to-GDP ratio must be on a plausibly and durably downward path or stay at prudent levels below 60% in the baseline scenario of no fiscal policy change that is considered in the Commission's debt sustainability analysis. When defining the fiscal adjustment path in structural primary balance terms, fiscal risk assessment is also introduced, according to which debt should be put on a downward course with high probability (stochastic analysis). In practice, this means that the fiscal effort should be such that, after the adjustment period, debt continues to be reduced at a satisfactory pace and its downward course is not endangered in either the baseline scenario or a series of adverse alternative scenarios.

Moreover, two additional criteria (safeguards) are introduced to ensure a decrease in the debt-to-GDP ratio during the adjustment period, as well as deficit resilience with the creation of fiscal buffers. Such safeguards actually determine the minimum fiscal adjustment that leads to compliance with the new fiscal framework and ensure the front-loaded nature of the fiscal effort, as well as adherence to fiscal limits even in adverse economic circumstances.[12] More specifically:

According to the **debt sustainability safeguard**: (i) countries with public debt above 90% of GDP should reduce their debt by at least 1 percentage point of GDP on average per year during the adjustment period, while (ii) countries with public debt between 60% and 90% of GDP should reduce their debt by at least 0.5 percentage points of GDP, respectively. This safeguard was introduced to ensure that debt levels gradually decrease during the adjustment period as well,

12 Member States will make the maximum fiscal effort needed to fulfil all of the criteria at once (Criterion 1: Debt sustainability analysis; Criterion 2: Debt sustainability safeguard; Criterion 3: Deficit resilience safeguard) (see the chart).

given that the expenditure rule refers to primary expenditure and an increase in interest expenditure could in theory lead to a temporary rise in the debt-to-GDP ratio, without breaching the operational compliance rule and without jeopardising the achievement of the fiscal target (in structural primary balance terms). This helps to improve predictability in the outcome of the framework and to reinforce equal treatment across Member States that must undergo a fiscal adjustment. At the same time, a new reference value is introduced for public debt, in addition to the 60% of GDP reference value which is included in the current SGP.

The **deficit resilience safeguard** provides a safety margin below the Treaty deficit reference value of 3% of GDP. This safeguard mainly applies to countries with low sustainability risk, whose debt is diminishing at a satisfactory pace (or is below 60% of GDP) and whose government deficit is below 3% of GDP. Such countries should undertake a fiscal adjustment effort with a view to converging towards a structural deficit of 1.5% of GDP. The annual improvement in the structural primary balance to achieve the required margin is set at 0.4 percentage points of GDP for countries implementing a four-year adjustment plan and at 0.25 percentage points of GDP for countries implementing a seven-year plan. The aim of this safeguard is to make the new framework more resilient to uncertain developments of macro-fiscal variables, through the build-up of fiscal buffers for adverse economic circumstances, thereby facilitating the conduct of counter-cyclical policies.

Excessive deficit procedure

An excessive deficit procedure (EDP) is initiated on the basis of the following two criteria: (i) the **deficit criterion**, where the government deficit is higher than the 3% of GDP reference value; and (ii) **the debt criterion**, in case of breach of the expenditure rule, i.e. when deviations exceed a specific limit (either 0.3 percentage points of GDP annually or 0.6 percentage points of GDP cumulatively according to the EU Council), for countries with a debt ratio above 60% of GDP. **Fiscal adjustment** under the EDP remains unchanged relative to the previous framework, with a minimum annual structural improvement of at least 0.5% of GDP as a benchmark. The **fine** in the event of non-compliance will amount to up to 0.05% of GDP and will be accumulated every six months until effective action is taken.[13]

In general, all relevant factors affecting a Member State's compliance with the deficit and/or debt criteria will be assessed, including the degree of public debt challenges in line with the most recent update of the Debt Sustainability Monitor, the medium-term economic outlook, the size of the deviation from the net expenditure path, progress in the implementation of reforms and investments and, if applicable, increased defence spending. More specifically, defence spending is to be granted special status, so that, if a Member State has higher investment in defence relative to the EU average or is considerably increasing its government investment in defence, such spending is not taken into account during the EDP assessment.

The agreement foresees a generous transitional period for full activation of the EDP. For a transitional period of three years (2025-2027) it was decided to exclude increased interest expenditure[14] when assessing the adjustment effort within the EDP.

The Council also clarified the conditions on escape clauses. The possibility to deviate from the projections of the fiscal adjustment plans is expressly acknowledged, either in the event of a severe economic downturn in the euro area or the EU as a whole ("general escape clause") or in the event of exceptional circumstances that are outside the control of national governments and have a major impact on their public finances ("country-specific clause").

13 The amount of the fine may not exceed a cumulative of 0.5% of GDP.

14 The exclusion of increased interest expenditure will reduce fiscal adjustment needs, applying mainly to countries that are faced with a considerable increase in interest expenditure as a result of monetary policy tightening, as well as countries with a high share of variable-rate debt or countries that had issued inflation-linked bonds.

Assessment

The revision of the fiscal rules is a major reform which changes the way fiscal policy is designed to reflect the post-pandemic reality of high public debt ratios and rising government deficits. The new fiscal rules clearly provide greater flexibility and lay down lower and more realistic adjustment requirements relative to the current framework. Ensuring public debt sustainability in the face of adverse shocks lies at the heart of the new rules. Horizontal numerical rules, implying unrealistic levels of fiscal adjustment that in turn would lead to ineffective procyclical policies, are abandoned.[15] By contrast, a fiscal discipline approach that rather rests on sustainability rules (rules-based approach) is adopted. In determining the fiscal effort account is now taken of the specific economic and structural characteristics of each country, while realistic fiscal targets tailored to each Member State's economic conditions are defined (country-specific fiscal consolidation). Therefore, the required annual pace of reduction in public debt is comparatively milder, while the adjustment period is extended, thereby enhancing the credibility and effectiveness of the new framework. At the same time, the long transitional period for full EDP activation enables Member States to make the most of the time until end-2027 and to utilise the available NGEU resources, with a view to mitigating the impact on economic growth rates from the necessary improvements in their budgetary positions.[16]

Drafting national medium-term fiscal-structural plans strengthens national governments' ownership of the new fiscal framework and helps to protect public investment. Although the exclusion of investment expenditure is not specifically foreseen, the possibility of extending the adjustment period, subject to credible investment and reform plans, acts as a deterrent to the standard practice of cutting public investment in order to meet the fiscal targets, also given the pressing needs for the green and digital transitions in the years ahead.[17] Besides, since the new framework gives priority to public debt reduction as a policy objective, the exclusion of investment expenditure financed by new borrowing is not allowed. In addition, excluding various expenditure categories, which are complex to classify in any event, would hamper the simplification and credibility of the fiscal framework. Nevertheless, the proposed expenditure rule provides for the exclusion of national spending on EU co-financed programmes, thereby creating more incentives for public investment. Finally, the experience gained from the implementation of national recovery and resilience plans in the context of the NGEU will greatly contribute to preparing credible medium-term national structural-fiscal plans.

The monitoring of compliance with the new rules is significantly streamlined. The application of an operational expenditure rule for monitoring compliance with the new fiscal framework increases transparency and simplifies fiscal surveillance. In parallel, expenditure rules reduce procyclicality in fiscal policies, promoting more effective strategies for the consolidation of public finances, while limiting heavy reliance on non-measurable variables (such as the output gap).[18] Furthermore, the automatic triggering of the EDP and the independent assessment of compliance with the new rules by the European Fiscal Board, with a strengthened role and in a permanent capacity, enhance the credibility of the new framework and shield it against political interference. The role of national independent fiscal institutions (IFIs) mainly focuses on the following tasks: (i) endorsement of budgetary forecasts; (ii) as-

15 The requirement under the existing debt rule, which provides that the debt-to-GDP ratio must be reduced annually by 1/20 of its distance from the 60% of GDP reference value, is actually abolished.

16 In practice, with the December 2023 agreement, which excludes increased interest expenditure from the EDP until 2027 and provides the possibility of extending the adjustment period in medium-term national plans, an effort is made to postpone the required fiscal adjustment (which for some countries is significant), shifting the burden on future governments.

17 The past practice of cutting public investment, weighing heavily on economic growth, was a preferred policy option by governments that were unwilling to adopt structural fiscal measures to meet the fiscal targets.

18 For an analysis of expenditure rules, see Box 11.

sessment of debt sustainability analyses and policy impacts; and (iii) ex-post assessment of fiscal plans.[19]

On the other hand, the transition to a framework that is tailored to the economic circumstances of each country inevitably complicates the formulation of the final fiscal target. First of all, the public debt sustainability models employed by the European Commission, the assumptions concerning the various economic variables and the different scenarios considered, as well as the introduction of stochastic processes in weighting sustainability risks make analysis even more complex. In addition, the multiple criteria which are taken into account in the final determination of the required fiscal effort in structural primary balance terms and the conversion of such adjustment needs into an ultimate expenditure rule undoubtedly add to the complexity of the new framework, possibly leading to lengthy technical negotiations on the final targets. Transparency in methodology will increase the credibility of the new rules and reduce uncertainty. However, it appears that the suspension of horizontal numerical rules and the transition to a framework that takes account of cross-country heterogeneity will automatically result in more elaborate methodological approaches.

Although control over government spending assumes a central role in determining the stance of fiscal consolidation, EU countries will be confronted with strong pressures to increase spending in the coming years. The experience from various programmes that countries have implemented in order to correct their fiscal imbalances has shown that the most successful fiscal adjustments are largely spending-based. At the same time however, there are several structural factors in the current economic environment which warrant a considerable increase in public spending by national governments. Such a critical factor is adverse demographic trends. The worsening of the old-age to working-population dependency ratio will be exerting strong pressures to increase expenditure on pensions and health care, while the tax base of the active population will be shrinking. Furthermore, the need to tackle climate change in a timely manner, hence the EU's ambitious environmental goals for a green transition, the intention to further strengthen the strategic autonomy of the EU in a changing geopolitical context and increased borrowing costs compared with the past ten years will require higher government spending. Against this backdrop, it is imperative to implement structural policies and reforms in all of the above areas with a view to safeguarding fiscal sustainability.

Decisions regarding the review of the economic governance framework do not specifically provide for the establishment of a central fiscal capacity. Despite the fact that the new fiscal rules will apply to the EU-27 as a whole, it would be useful to include a special provision on a more effective coordination of fiscal policies at the euro area level (20 countries), so that the recommendations issued and the policies designed also take into consideration the overall fiscal position of the euro area. A better coordinated fiscal policy improves interaction with the ECB's monetary policy, ultimately leading to more efficient macroeconomic stabilisation policies. The lack of a special provision on the establishment of a central fiscal capacity is a missed opportunity for deeper fiscal integration and higher resilience to negative shocks in the euro area.

The implications for Greece

The agreement contains a special provision on Greece's deferred interest payments on part of the EFSF loan. Specifically, it is ensured that the inclusion of deferred interest on official sector loans in government debt, which is scheduled for 2033, will not be taken into account in the calculation of Greek public debt dynamics in the context of the new fiscal rules. In this way, the temporary reversal in the downward path of the debt ratio, which is anticipated in 2033 due to the aforemen-

19 Moreover, the new framework seeks to ensure that national IFIs are more operationally independent and have better access to additional resources and information, as there are large differences in their role and responsibilities across Member States. For further details about the capacity of national IFIs to play an enhanced role in the EU's new economic governance framework, see Network of EU IFIs, Note on IFIs capacity, 17.10.2022.

tioned inclusion of deferred interest, will not be taken into consideration in the application of the debt sustainability safeguard and, thus, no need for further fiscal adjustment should be expected.[20]

All in all, Greece stands out among high-indebted EU countries as a notable example of fiscal resilience, thanks to the structural fiscal adjustment achieved over the past ten years, the favourable profile of its public debt and the timely withdrawal of the expansionary emergency support measures adopted in 2020-23. According to the Commission's latest debt sustainability analysis across EU Member States, Greece is projected to achieve the largest reduction in the debt-to-GDP ratio over the next decade. This is primarily due to the debt-reducing contribution of the "snowball effect" and secondarily to primary surpluses and Greece's favourable fiscal position.[21] The resilience of Greek public debt sustainability is evidenced by the slim probability of a reversal in debt's downward path, as suggested by stochastic analysis both by the Bank of Greece and by the European Commission.[22] This means that the downward trajectory of public debt is not impaired, even in the adverse scenarios of the debt sustainability analysis. In addition, Greece is one of the few EU countries that exhibit strong compliance with the current expenditure rule, in line with the Commission's recommendations on 2024 national budgets.[23] On the basis of preliminary Bank of Greece estimates, a cyclically adjusted primary surplus of 2% of GDP fulfils both the debt sustainability safeguard and the deficit resilience safeguard, without requiring additional fiscal adjustment to comply with the new rules.[24]

Conclusions

The reform of the EU's economic governance framework, which was a result of a lengthy consultation and negotiation process, is undeniably a positive development, addressing several weaknesses and shortcomings in the previous framework. Similar steps forward had also been made with past reforms of the SGP in 2011-13[25] and in 2015.[26] The changes that were eventually accepted may be less ambitious than initially expected, but in any event the fiscal framework of the EU is gradually adjusting to changing circumstances. After all, the effectiveness of the new framework will depend on its robust application.

20 In 2033, when deferred interest payments on the largest part of EFSF loans are set to become due, the debt-to-GDP ratio is projected to rise, as the stock of deferred interest will start to be paid (about 8% of GDP in 2033 or EUR 27 billion).

21 European Commission, Debt Sustainability Monitor 2023, Institutional Paper 271, March 2024.

22 In particular, there is a slim probability (12%) that Greek public debt four years ahead (2027) exceeds its 2022 level, i.e. the starting point for the analysis. In other words, Greek debt is on a stable downward path with a high (above 70%) probability.

23 European Commission, Communication on the 2024 Draft Budgetary Plans: Overall Assessment. The recommendation regarding the growth rate of net primary expenditure rests on the assumption that the primary balance improves by 0.5 percentage points of GDP annually towards the medium-term budgetary objective (MTO) of each country. Overall, only seven Member States are considered to be in line with the expenditure rule and with the Commission's recommendations in their 2024 draft budgetary plans.

24 However, according to some other estimates, a slight further fiscal adjustment of 0.29 percentage points of GDP per annum for four years (or of 0.21 percentage points of GDP for seven years) in structural primary balance terms will be needed to meet the deficit resilience safeguard (see Bruegel, First glance: Assessing the Ecofin compromise on fiscal rules reform, 21.12.2023).

25 Referring to a set of regulations, directives and international treaties known as "Six-Pack", "Fiscal Compact", "Two-Pack" (see Regulation (EU) 472/2013, Regulation (EU) 473/2013, Regulation (EU) 877/2013) and European Semester.

26 This reform provided a reinterpretation of the way in which the European Commission would take into account public investment, structural reforms and cyclicality in assessing Member States' fiscal positions (for details, see Communication from the Commission to the European Parliament, the Council, the European Central Bank, the Economic and Social Committee, the Committee of the Regions and the European Investment Bank, "Making the best use of the flexibility within the existing rules of the Stability and Growth Pact", Strasbourg, 13.1.2015).

ANNEX TO CHAPTER V
FISCAL POLICY MEASURES

The fiscal policy measures legislated since April 2023[1] were mostly aimed to support disposable income and broaden the tax base by combatting tax evasion. These included: measures to ensure a more comprehensive sharing of information between businesses and AADE (Independent Authority of Public Revenue) regarding online transactions, e-commerce and electronic platforms; changes to the taxation of self-employed workers and sole proprietors by introducing a minimum imputed income, adjusted annually on a number of conditions; reform and modernisation of the regulatory framework for occupational pension funds; wage and pension provisions, while only some of the 2022 targeted income support measures were kept in place with a view to providing energy and inflation compensation, along with a focus on fiscal sustainability and continuation of structural reforms; and measures to compensate for losses and damages from the natural disasters that hit parts of Greece and provide relevant social relief.

In more detail:

Under **Law 5042/2023** of April, retroactive payments to members of the Army, Navy and Air Force Share Funds, following the abolition of restrictions on dividend and financial support payments, are taxed separately at the source at a withholding tax rate of 20%.

Law 5043/2023 of April provided for an 8% increase in the monthly amounts of thirteen disability benefits, effective from 1 May 2023.

Law 5045/2023 of July introduced provisions on pensions, wages and taxation, in particular: (a) increases in special-category pensions; (b) increases, from 2024 onwards, in the salaries of government employees (including law enforcement personnel) through adjustments of base wages (EUR 70 up, across the board), family allowances (EUR 20-EUR 50 up per month) and managers' allowances (30% up); (c) retroactive pay scale adjustment for the teaching and research staff of tertiary education institutions; (d) a EUR 1,000 increase, from 2024 onwards, in the tax-free allowance for taxpayers with dependent children; (e) exemption of former EKAS (Social Solidarity Benefit for Pensioners) beneficiaries from any pharmaceutical co-payment; (f) an extension of the "market pass", subsidising part of households' grocery costs; (g) introduction of a "youth pass" (EUR 150 per year) subsidising young adults aged 18-19 for travel, and cultural activities and tourism; (h) a 10% reduction in ENFIA (Unified Property Ownership Tax) for homes insured against earthquake, fire and flood; (i) imposition of a 3% cap on rent increases for properties leased to government and its agencies; and (j) a broader mandate of the Hellenic Fiscal Council, including evaluation of macroeconomic and fiscal projections, targets and outcomes, macro-fiscal analyses, as well as budgetary impact assessment of actions envisaged in political parties' agendas, at request of the parties themselves.

With the same law, a supplementary budget of EUR 700 million was adopted to meet extraordinary expenditure of the Ministry of Health, public transport operators and government organisations, as well as the cost of the successive elections of May and June 2023.

Law 5047/2023 of September introduced provisions on the administrative cooperation in the field of taxation as well as on combating tax evasion in digital transactions. More specifically:

1 The fiscal policy measures legislated up to March 2023 are described in the *Annual Report 2022*, pp. 147-153.

(a) the exchange of information and cooperation between the tax authorities of EU Member States is broadened in scope; (b) all digital platform operators are required to share information with AADE within specific deadlines, otherwise they will face sanctions; and (c) legislation on POS terminals is updated: connection and information sharing with AADE becomes mandatory, and sanctions are envisaged for non-compliance.

Under **Law 5053/2023**, also passed in September, a second supplementary budget of EUR 600 million was adopted, of which EUR 450 million were added to the national public investment programme and EUR 150 million to the ordinary budget for emergency assistance to Thessaly flood victims. A number of subsequent Joint Ministerial Decisions specified the use of the supplementary budget funds for support measures as follows: (a) emergency relief assistance of up to EUR 6,600 for damages to household equipment and simple repair works[2]; (b) emergency housing aid of up to EUR 10,000 for damages to buildings, followed by subsidisation of natural and legal persons for 80% of the cost of building repair or reconstruction[3]; (c) rent/temporary accommodation subsidies for people displaced from their homes in an amount of EUR 300-EUR 500 per month for up to two years for homeowners and six months for tenants[4]; (d) suspension of employment contracts with partial wage replacement for workers in affected businesses; (e) three-month extension of the payment of the minimum guaranteed income[5] and housing allowance to vulnerable groups; (f) emergency aid of up to EUR 4,000 to affected businesses and entities, followed by compensation of 70% of the estimated damage to the assets of the business, such as machinery, materials and goods;[6] and (g) compensation to farmers, including 70% of the estimated loss to agricultural assets (machinery, land, materials and goods) and compensation through the Hellenic Agricultural Insurance Organisation (ELGA) for loss of production.

With **Law 5057/2023** of October, VAT on agricultural machinery (i.e. vehicles and machines mainly or exclusively intended for land and animal farming or forestry) was lowered from 24% to 13%. Moreover, a super-reduced VAT rate (4%) was envisaged for contract-based professional services exclusively aimed to remove accessibility barriers in public buildings (whether government-owned or private).

Law 5062/2023 of November established a new system for the selection and appraisal of managements at government agencies, requiring higher qualifications and skills for each position.

Under **Law 5066/2023**, also passed in November: (a) multinational groups (and, where relevant, certain standalone undertakings operating in the country) are required to publicly disclose income tax information; (b) companies limited by shares, namely sociétés anonymes, limited liability companies, limited partnerships and private companies (outside the financial sector) are required to submit their annual financial statements to the Bank of Greece in a timely manner, with a view to ensuring their unhindered access to bank financing from credit institutions legally established in the country; and (c) provisions are introduced on the protection of electricity consumers (including eligibility for special tariffs).

Under **Law 5072/2023** of December, one-off income support, exceptionally for December 2023 (in the form of a social solidarity allowance) was provided to vulnerable groups as follows:

- OPEKA child allowance beneficiaries: an additional amount 1.5 times the regular monthly entitlement.

2 Joint Ministerial Decision No. 33862/2019 (Government Gazette B 1699/6.5.2019), as amended by Joint Ministerial Decision No. 31/2023 (Government Gazette B 5072/11.8.2023).
3 Joint Ministerial Decision No. 17176/2023 (Government Gazette B 5405/11.9.2023).
4 Joint Ministerial Decision No. 21402/2023 (Government Gazette B 5844/6.10.2023).
5 Joint Ministerial Decision No. 85154/2023 (Government Gazette B 5693/28.9.2023).
6 Joint Ministerial Decision No. 21945/2023 (Government Gazette B 5893/9.10.2023).

- OPEKA or e-EFKA disability allowance beneficiaries (a population of 225,000): an additional EUR 200.
- Minimum guaranteed income beneficiaries (a population of 210,000): an additional 50% of the regular monthly entitlement.
- Pensioners for whom the so-called "personal difference" is zero or less than EUR 10 and whose combined main pension entitlements are up to EUR 700 (a population of around 1 million): an additional EUR 150.

Law 5073/2023 of December reformed the taxation of income from self-employment and sole proprietorships. In particular, a minimum imputed income was introduced. For fiscal year 2024 (income earned in 2023), this was set at EUR 10,920, which may reach up to EUR 50,000, based on certain criteria. It is subject to annual adjustment, with imputed income incremented by 10% of the annual payroll costs up to a maximum of EUR 15,000; and 5% of any positive difference between the taxpayer's turnover and the average for the relevant sector or activity in the preceding financial year). Imputed income is scaled according to firm age, being lower in the first five years of activity and stepped up every three years thereafter. Also, a 50% lower imputed income applies to firms active in villages with a population of up to 500 or on islands with a population of up to 3,100, as well as to taxpayers with disability at 80% or more. Income from agricultural business activity is not included in the scope of income imputation. It should be noted that imputed income determination is a rebuttable presumption; it can be challenged by the taxpayer concerned, who may also request a tax inspection. Under the same law, the fixed business levy is cut by 50%, effective from fiscal year 2024.

With other provisions of the same law:

- A climate resilience levy is charged on hotels, similar establishments, short-term property leases and tourist furnished residences, replacing the accommodation tax.
- Short-term property rentals are subject to a VAT regime at a rate of 13% where the lessor is a legal entity or a natural person who operates three or more properties.
- A maximum number of two properties is introduced as a criterion for income from short-term property leases to be treated as property income rather than business income.
- A personal income tax deduction is envisaged for proven expenses aimed at energy, functional and aesthetic upgrading of buildings that are not included in a building upgrade programme. Tax deduction is divided into equal annual instalments over a five-year period, capped at EUR 16,000.
- The capital concentration tax rate is reduced from 0.5% to 0.2%.
- The temporary low VAT regime becomes permanent for various goods and services (e.g. defibrillators, zoo and cinema tickets, dance schools, gyms), while for other goods (e.g. coffee and beverages) and services (e.g. taxis) it is extended.
- The uploading of revenues and expenditures on the MyData platform becomes mandatory for businesses by the end of 2024; also, the connection of cash registers with POS must have been completed in the first months of 2024.
- The use of cash in real estate transactions is prohibited, under penalty of invalidity; only bank payment instruments will be accepted.
- The fine for using cash in transactions above EUR 500 is increased to double the amount of the transaction.
- The majority of social benefits and allowances are paid through debit cards.
- Wholesale fuel suppliers (oil companies) are required to terminate cooperation with any retail outlets that engage in smuggling or otherwise fail to comply with legislation.

Law 5078/2023 passed in December introduced a new framework for Institutions for Occupational Retirement Provision (IORPs), providing for the following:

- Taxation of IORP pension products according to years of participation in the scheme.
- Taxation of contributions (currently tax-exempt) above a certain threshold, based on a scale.
- Simplification of procedures for setting up an IORP.
- Establishment of model articles of association.
- Encouragement of multi-employer IORPs across different sectors of activity and occupations, in order to enable smaller firms to join the scheme (for their employees).
- Establishment of good governance rules with a view to maximising performance and bolstering members' and beneficiaries' trust.
- Greater transparency of IORP activities and better information to members and beneficiaries.
- Stronger IORP supervision, entrusted to the Bank of Greece as from 1 January 2025, in order to ensure organisational and operational adequacy, increase members' confidence in the institution and centralise supervision in a single authority in line with EU standards.
- Conversion, within five years, of the existing Mutual Aid Funds into IORPs.

Moreover, the same law addressed the following pension-related matters:

Post-retirement employment: the 30% pension cut is abolished as from 1.1.2024, and a fee to e-EFKA generating no additional pension entitlement is introduced instead (10% of pensionable earnings for retired employees and 50% of the chosen main pension insurance class for non-employees).

Pension contribution arrears at retirement: the maximum amount of arrears is increased from EUR 20,000 to EUR 30,000 (from EUR 6,000 to EUR 10,000 for the former Organisation for Agricultural Insurance (OGA)).

Award of supplementary pensions: unification of rules for a speedier award.

Maternity allowance: for the first time, it is also awarded to sole proprietors, self-employed workers and farmers.

An active Social Security Number (AMKA) is required for access to free healthcare.

A prepaid card is introduced for the payment of social benefits and allowances, as in the case of the minimum guaranteed income. Beneficiaries will have to use at least 50% of the amount in electronic payments and purchases.

Extension by one year, until 31.12.2024, of optional insurance in the Hellenic Auxiliary Pensions Defined Contributions Fund (TEKA) for employees born on or after 1.1.1987.

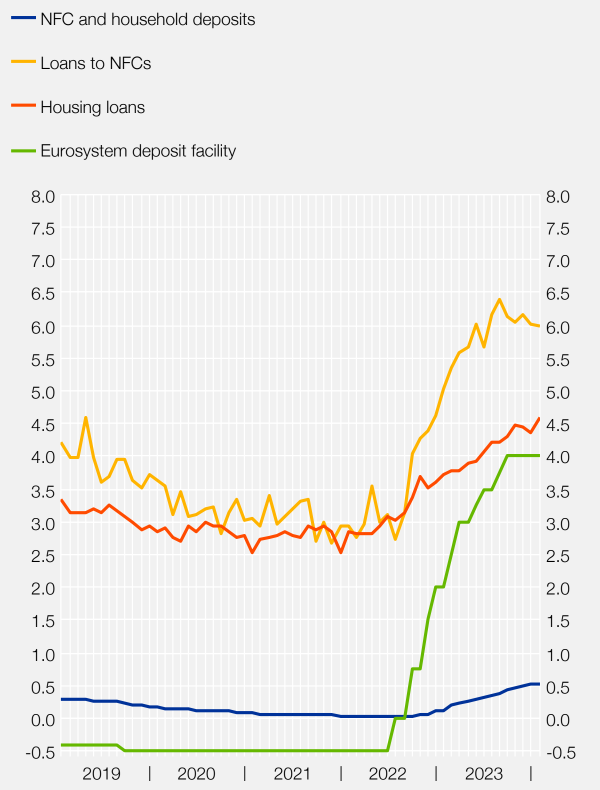
Law 5092/2024 of March increased the birth allowance for each child born in Greece as follows: (a) EUR 2,400 for the first-born child, (b) EUR 2,700 for the second child, (c) EUR 3,000 for the third child, and (d) EUR 3,500 for the fourth and each subsequent child.

VI MONEY, CREDIT AND BANKS

Bank interest rates rose further in 2023, in line with the tightening of the single monetary policy stance. The pass-through of ECB policy rate increases varied across loan categories and was generally incomplete (see Chart VI.1). Bank lending activity (reflected in gross credit flows) remained stronger than before 2022. The net flow of bank credit (new loans minus principal payments on existing loans) to non-financial corporations was also positive in 2023, for the seventh year in a row. A shift of funds away from overnight deposits and towards time deposits was observed after the rise in time deposit rates. The total stock of private non-financial sector deposits continued to grow in nominal terms. Bank profitability improved over the January-September 2023 period, and banks' resilience indicators strengthened in December 2023, compared with one year earlier. Specifically, profits grew year-on-year, supported by higher interest rates and lower funding costs, as a result of the large shares of retail deposits in banks' total liabilities as well as the broadly muted increases in deposit rates. Moreover, liquidity ratios rose, despite reduced Eurosystem funding (through TLTROs), as also did capital adequacy ratios, and the NPL ratio declined further. It should be stressed that Greece's sovereign credit rating upgrade to investment grade in 2023 prompted credit rating agencies to revise their outlook on Greek banks from stable to positive, although the outlook on European banks is more or less neutral or negative.

Chart VI.1 Greek banks' average deposit and lending rates and the Eurosystem's deposit facility rate (January 2019 - January 2024)

(annual percentage changes)



Sources: Bank of Greece and ECB.

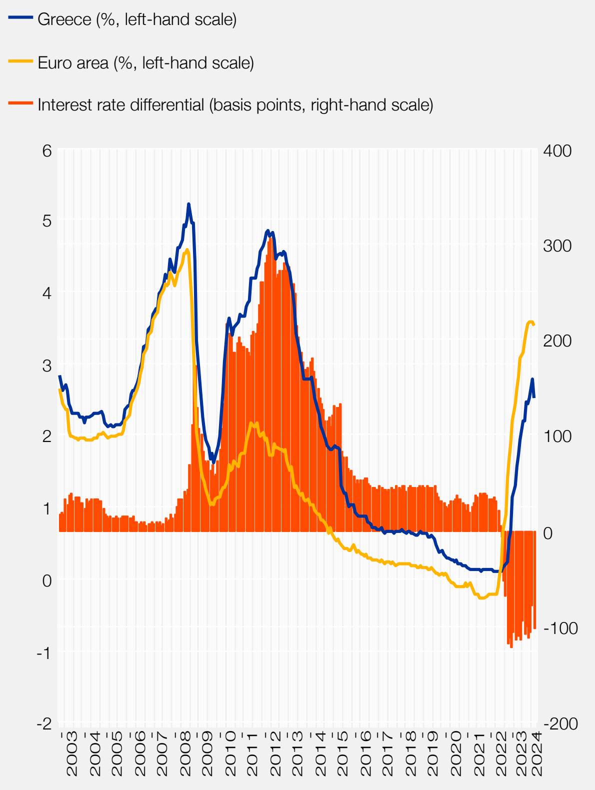
1 OVERVIEW OF DEVELOPMENTS AND PROSPECTS[1]

Faced by satisfactory liquidity conditions, credit institutions incorporated to a very limited degree the ECB's policy rate increases into time deposits. Compared with the euro area, increases in deposit rates were smaller in Greece.

The cost of borrowing for non-financial corporations (NFCs) increased overall in 2023, as key ECB interest rate hikes continued to be passed through. Given that interest rates on most loans to NFCs are linked to a benchmark rate (e.g. the 3-month Euribor), increases in such lending rates were broad-based and sizeable, albeit falling short of the increase in key ECB interest rates.

1 The cut-off date for information and data used in this chapter is 15.3.2024.

Chart VI.2 Interest rate on time deposits of up to one year and interest rate differential between Greece and the euro area (January 2003 - January 2024)



Sources: ECB and Bank of Greece.

Borrowing terms and conditions for NFCs were in reality more favourable than what is captured by bank interest rate statistics, owing to the supply of low-interest loans through the financial instruments of the European Investment Bank (EIB) Group and the Hellenic Development Bank (HDB), as well as loans under the Recovery and Resilience Facility (RRF) (see Box VI.1). Boxes VI.2 and VI.3 sum up, respectively, Greek SMEs' perceptions of financing conditions in 2023 (SAFE) and Greek banks' perceptions of developments in business loan supply and demand (Bank Lending Survey), compared with their euro area counterparts.

The disbursements of business loans related to financial instruments in 2023 represented a significant share of total new loans with a fixed maturity to NFCs during the reviewed period. The respective disbursements of loans to small and medium-sized enterprises (SMEs) accounted for an even higher share, i.e. about one-fourth of new loans with a fixed maturity to SMEs. The disbursements of business loans granted under the RRF represented approximately an additional one-tenth of total new loans with a fixed maturity to NFCs.

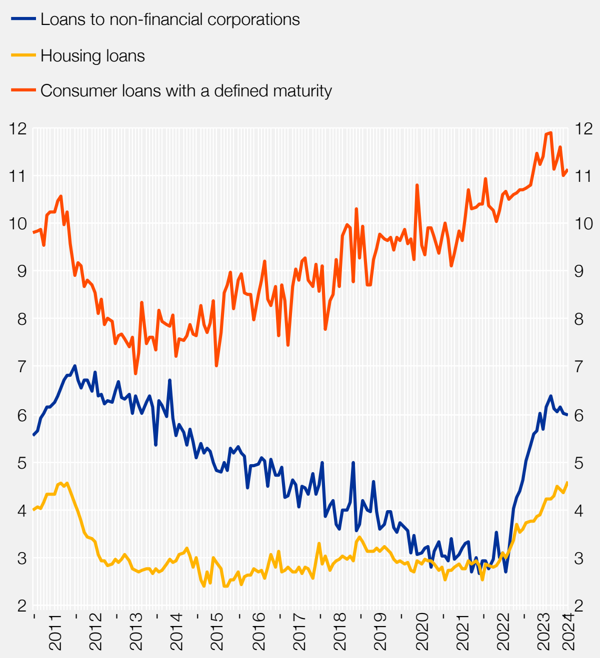
With regard to households, increases in lending rates were more limited in 2023 relative to firms, primarily because a higher share of such interest rates is determined by banks' pricing policies rather than automatically on the basis of benchmark rates. Besides, lending rates for households had already started to rise long before the tightening of the single monetary policy.

In real terms, bank lending rates turned positive in 2023, although their levels are relatively low compared with the past. Compared with the euro area average, the rise in nominal lending rates in Greece was milder for both NFCs and households.

Annual growth in bank lending to NFCs slowed in 2023. The average monthly gross flow of bank loans with a fixed maturity declined, but remained higher compared with its pre-pandemic levels. Conversely, the average monthly outstanding amount of bank loans without a defined maturity (i.e. credit lines and other lending facilities) increased relative to 2022.

Chart VI.3 Interest rate on new business, housing and consumer loans (January 2011 - January 2024)

(annual percentage changes)



Source: Bank of Greece.

Developments in new bank loans to NFCs in 2023 were influenced by credit to large firms. The average monthly gross flow of loans (with a fixed maturity) to large firms declined, whereas the respective flow to SMEs increased slightly year-on-year.

In 2023, households' bank deposits grew somewhat less than in 2022, while the increase in firms' bank deposits was much weaker year-on-year. The slowdown in the growth rate of private sector deposits is attributed to overnight deposits. On the other hand, the annual rate of change in time deposits returned to positive territory after 3.5 years.

As soon as policy rates begin to fall, bank interest rates will follow suit at some point and will start declining. If GDP growth remains at its present levels (and, *a fortiori*, if it accelerates), demand for bank credit is also set to rise. Greece's rating upgrade to investment grade along with other contributing factors will have a positive effect on the supply of bank loans. The supply of bank credit should continue to be underpinned by public support schemes, such as those under the RRF, the EIB Group and the HDF.

Over the January-December 2023 period, the fundamentals of Greek banking groups improved. In greater detail, liquidity ratios remained elevated, the NPL ratio decreased, and capital adequacy ratios rose relative to end-2022. Banks' profitability increased over the first nine months of 2023, reflecting a significant rise in net interest income, amid rising key ECB interest rates and lower cost of credit risk. This more than offset a drop in income from financial operations, which is due to base effects from windfall profits in 2022.

The credit outlook on Greek banks appears to be positive, supported by Greece's upgrade to investment grade and the resilience of the Greek economy, as well as by developments in banks' key aggregates, such as the improved quality of their loan portfolio (with a reduction in the NPL ratio) and the strengthening of their capital adequacy, profitability and liquidity. A further improvement in banks' performance is expected to be assisted by the containment of their funding costs amid continued bank bond issuance, which also helps sustain bank profitability (see Box VI.4).

2 BANK INTEREST RATES

Bank deposit rates increased in 2023 for time deposits and remained marginally positive for overnight deposits (current, sight and savings accounts). Faced with satisfactory liquidity conditions, domestic credit institutions incorporated only in part the increases in the ECB's key interest rates into time deposits, which are used for saving or investment purposes and can be more easily substituted. Against this backdrop, the weighted average interest rate on time deposits by households and NFCs stood at 1.8% in 2023 on average, compared with an average of 0.2% in 2022. In real terms, this interest rate turned less negative (2023: -2.4%; 2022: -9.1%), mainly reflecting a sharp decline in inflation.

Compared with the euro area, increases in bank interest rates were more modest in Greece. As a result, for the first time since 2003, when harmonised interest rate time series across euro area countries started to be recorded, the interest rate on time deposits in Greece is, from mid-2022 onwards, below the respective euro area rate. By way of illustration, for the most important, in volume terms, time deposit category, i.e. deposits with an agreed maturity of up to one year, the interest rate in Greece during 2023 was around 1 percentage point lower than the respective euro area average (see Chart VI.2).

The cost of borrowing for NFCs rose overall in 2023 (see Chart VI.3), as the ECB policy rate hikes continued to be passed through to bank lending rates. Given that interest rates on most loans to NFCs are variable, linked to a benchmark rate (e.g. the 3-month Euribor), increases were broad-based and sizeable, although they still fall short of the increase in key ECB interest rates (June 2022-December 2023: 450 basis points). Thus, the weighted average interest rate on business loans stood at 5.8% in 2023 on average, compared with an average of 3.5% in 2022.

In greater detail, the weighted average interest rate on business loans with a fixed maturity rose by 1.5-2.5 percentage points across almost all categories to stand at 5.8% in 2023 on average, against an average of 3.4% in 2022. The weighted average interest rate on loans to SMEs (accounting for 28% of the gross flow of business loans with a fixed maturity in 2023) also rose to the same level (5.8%), up by 2.1 percentage points relative to its 2022 average. Finally, the weighted average interest rate on business loans without a defined maturity increased by 2.3 percentage points to 6.5% (credit lines: 6.4%; bank overdrafts: 7.1%).

Regarding the size classification of loans with a fixed maturity, notable interest rate increases were recorded across all categories. Specifically, the weighted average interest rate stood in 2023 on average at: (i) 6.2% on loans of up to EUR 250,000 (2022: 5.1%); (ii) 5.8% on loans between EUR 250,000 and EUR 1 million (2022: 3.9%); and (iii) 5.7% on loans of over EUR 1 million (2022: 3.2%). The share of new loans of a larger amount, i.e. over EUR 1 million, was slightly lower compared with 2022 (87% of the annual gross flow of business loans with a fixed maturity over the reviewed period, against 91% in 2022).

It should not be overlooked that borrowing terms and conditions for NFCs were in reality more favourable than what is captured by bank lending rate statistics, owing to the supply of low-interest loans through the financial instruments of the EIB Group and the HDB, as well as loans granted under the RRF (see Box VI.1).[2] Business loan disbursements related to financial instruments amounted in 2023 to EUR 2.0 billion (2022: EUR 4.2 billion), representing 11% of total new loans with a fixed maturity to NFCs over the reviewed period (2022: 18%).[3] Furthermore, business loan disbursements related to the RRF amounted in 2023 to EUR 1.45 billion[4] (2022: EUR 0.36 billion) and accounted for 8% of total new loans with a fixed maturity to NFCs.

Turning to households, increases in bank lending rates were more limited relative to firms (see Chart VI.3), primarily because a higher share of such interest rates are fixed, determined according to banks' pricing policies rather than linked to a benchmark rate (e.g. Euribor). Moreover, lending rates for households had started to rise before the tightening of the single monetary policy, since the second half of 2022. More specifically, interest rates had been following an upward trend already since early 2021 for housing loans and since mid-2013 for consumer loans; in fact, the weighted average interest rate on consumer loans currently stands at a historically high level.

In greater detail, the weighted average interest rate on housing loans in 2023 came to 4.1%, up by 96 basis points compared with its 2022 average (which was higher by 132 basis points than its 2021 average).[5] The respective rate on consumer loans with a defined maturity increased to 11.3%, up by 78 basis points relative to its 2022 average. Consumer loans accounted for about 50% of the gross flow of new loans with a defined maturity to households over the re-

2 It should be noted that fiduciary loans, i.e. publicly funded low-cost business loans for which credit risk is assumed by the State, are not taken into account in bank interest rate statistics.
3 The respective SME loan disbursements amounted to EUR 1.4 billion (2022: EUR 2.9 billion) and accounted for 26% of new loans with a fixed maturity to SMEs (2022: 58%).
4 Including disbursements of business loans granted by domestic and foreign banks and co-funded by public and bank resources. Excluding equity financing.
5 As in the case of business loans, the interest rate on housing loans overestimates the end lending rate for house purchase, as the latter does not include the interest-free loans financed by public resources through the HDB's "My Home" programme.

viewed period, the same as in 2022. Finally, the weighted average interest rate on loans without a defined maturity, comprising, in order of size of outstanding balances, credit cards, open-end loans and bank overdrafts, increased by 47 basis points to 14.9%.

In real terms, bank lending rates in 2023 turned positive, but remained relatively low. The average bank lending rate for NFCs stood at 1.6% in 2023, against -5.5% in 2022 (and 4.9% on average over the 2011-2020 period). Similarly, the average bank lending rate for households stood at 1.9%, against -4.1% in 2022 (2011-2020: 4.9%).

Compared with the euro area average, the rise in nominal lending rates in Greece during 2023 was milder for either sector (NFCs and households). The restrictive stance of the single monetary policy has an upward effect on the cost of individual funding sources for Greek credit institutions and subsequently on bank lending rates. Yet, a series of favourable factors helped contain increases in bank lending rates relative to increases in policy rates and money market rates. First and foremost, liquidity conditions for Greek banks have improved, as evidenced by a years-long rise in the ratio of customer deposits (including general government deposits) to loans. The structure of Greek banks' liabilities in favour of cheaper funding sources, and the greater relative importance of less costly retail deposits as a source of funding in particular, enabled lending rates to converge towards lower levels. Over the past few years, this development was also driven by the progress achieved in the clean-up of banks' balance sheets from non-performing exposures – with considerable improvements in asset quality across all three categories of loan portfolios, given the decline in non-performing exposures both as a stock and as a ratio –, an enhanced institutional framework for the protection of creditors' rights and the deployment of alternative funding sources. Last but not least, the critical importance of Greece's sovereign credit rating upgrade to investment grade should not be overlooked, as this widens the scope of available funding sources for Greek banks and reduces their funding costs. As a result, the differential in the weighted average cost of bank borrowing between Greece and the euro area narrowed in 2023, on average, to 118 basis points for loans to NFCs (2022: 147 basis points) and to just 46 basis points for housing loans to households (2022: 104 basis points) (see Chart VI.4).

Chart VI.4 Differential in the cost of borrowing for non-financial corporations and for households (for house purchase) between Greece and the euro area (2004 - 2023)

(percentage points, annual averages)

Sources: ECB and Bank of Greece.

In the light of the above, when key interest rates begin to fall, as inflation will be converging to the 2% medium-term target, the conditions for a decline in domestic bank interest rates will be favourable. Positive contributions are expected from: (i) the ongoing improvements in the labour market and subsequently in the creditworthiness of prospective borrowers; (ii) developments in the real estate market, i.e. higher collateral value; and (iii) the relatively recent upgrade to investment grade. Finally, the terms and conditions as well as the availability of business loans should continue to be greatly supported by the low-interest loans granted under the RRF and the new co-funding and guarantee programmes of the HDB and the EIB Group.

Box VI.1

THE CONTRIBUTION OF FINANCIAL INSTRUMENTS AND LOANS OF THE RECOVERY AND RESILIENCE FACILITY TO THE EXTERNAL FINANCING OF DOMESTIC NFCs

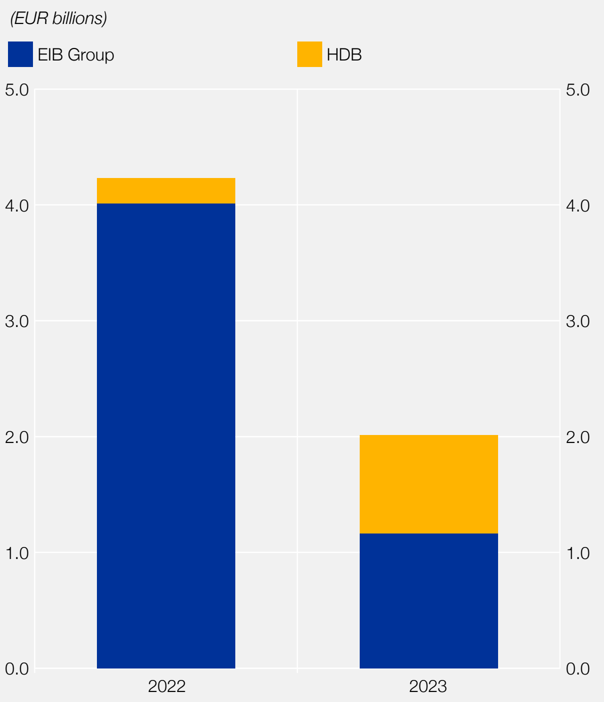
In 2023, credit to domestic non-financial corporations (NFCs) and sole proprietors rose in volumes while lending cost declined due to loans related to financial instruments (FIs) and the Recovery and Resilience Facility (RRF). Micro, small and medium-sized enterprises have particularly benefited, as their access to low-cost financing in general becomes more difficult compared to large firms as monetary policy is tightened, leading to higher bank lending rates.

Developments in 2023

a) Financial instruments

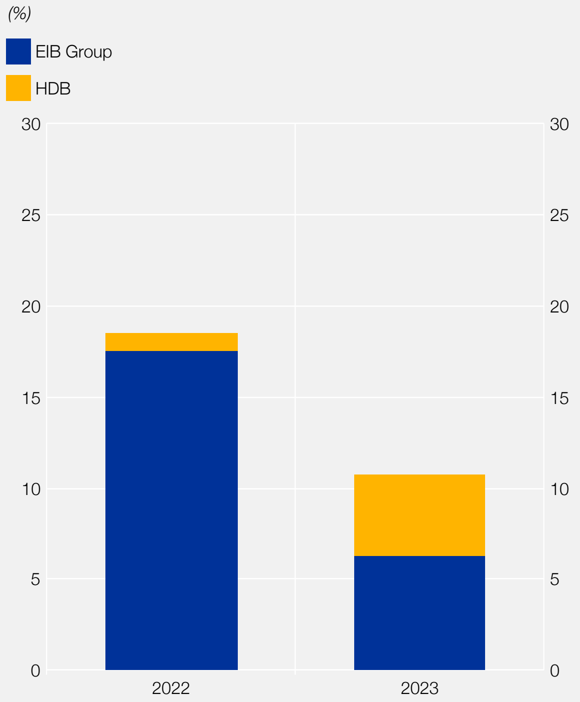
In 2023, NFCs and sole proprietors received EUR 2 billion of bank loans (2022: EUR 4.2 billion) which were related to FIs offered by the European Investment Bank Group (EIB Group)[1] and the Hellenic Development Bank (HDB) (see Chart A). More than two-thirds[2] of the amount was directed to sole proprietors and micro, small and medium-sized enterprises, which reflects the long-standing focus of European and national policy on supporting small and medium-sized enterprises. In fact, all the funds made available through the HDB programmes were entirely targeted at small and medium-sized enterprises, while in the co-financing schemes more than 75% of the beneficiaries qualified as micro-enterprises.[3]

Chart A Disbursements of bank loans to non-financial corporations and sole proprietors related to financial instruments



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

Chart B Share of financial instruments in new bank loans to non-financial corporations



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

1 The EIB Group consists of the European Investment Bank (EIB) and the European Investment Fund (EIF).
2 EUR 1.4 billion out of a total of EUR 2 billion.
3 75% of the beneficiaries employed up to 10 staff and 81% had a turnover of up to EUR 2 million.

The share of FIs in the total bank financing of NFCs and sole proprietors fell to 11% in 2023, down from 18% in 2022 (see Chart B). This development is mainly driven by a shift in demand from many enterprises towards loans under the Recovery and Resilience Facility. Taking into account the RRF loans, disbursements of bank loans supported by national and European funds accounted for 19% of total bank lending in 2023, about the same as in 2022.

Among categories of FIs, the largest share in terms of disbursement value (57%) corresponded to co-financing schemes (2022: 15%) and the remainder (43%) to guarantees (2022: 85%). The rise in the cost of borrowing that took place in 2023 increased the importance of co-financing schemes, which are linked to favourable pricing terms. Generally, in the co-financing schemes, the State finances part of the loan at an extremely low or even zero interest rate, thus the weighted average interest rate on business loans is significantly lowered, while in some cases the enterprise is exempt from levy under Law 128/1975.[4]

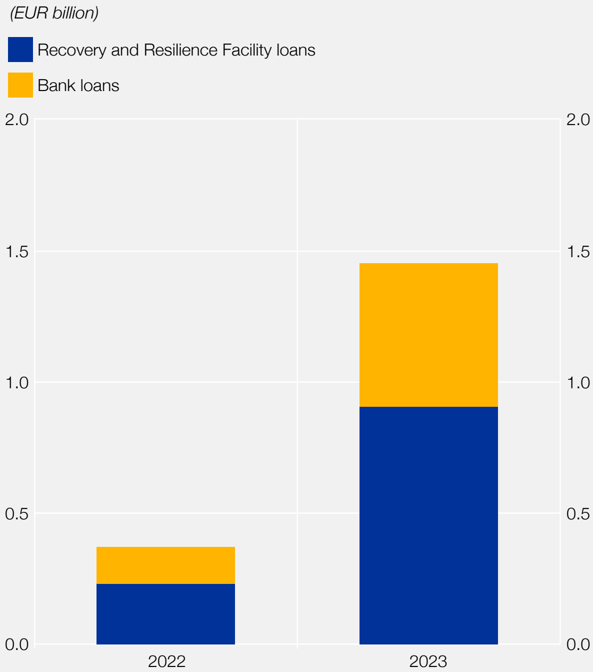
In the period under review, the most important programmes in terms of value of disbursements were: a) "Liquidity Co-Financing Loans" of the Hellenic Development Bank and (ii) "Global Loans" of the European Investment Bank, which together accounted for 51% of the total.

b) Recovery and Resilience Facility

As a complement to financial instruments, domestic NFCs were supported last year by low-interest loans granted under the Recovery and Resilience Facility (RRF). Overall, in 2023, EUR 1.45 billion of business loans were disbursed under the programme's loan segment[5] (2022: EUR 0.36 billion, see Chart C), of which around EUR 0.9 billion were RRF funds and the rest bank funds. The bulk of disbursements, above 90%, were channelled through six domestic commercial banks.

Overall, 271 loan agreements amounting to EUR 8 billion had been signed between June 2022 (first loan agreement) and 25 January 2024.[6] Around half of the loan agreements[7] (EUR 1.2 billion) targeted small and medium-sized enterprises. Data suggest that banks contribution to total financing was above the minimum defined by the programme,[8] a favourable development, as it implies higher leverage of public funds. The weighted average interest rate on RRF loans stood at 2.1%, i.e. about 360 basis points lower than the corresponding average rate of common bank business loans in 2023.[9] The very low lending rates increased lending demand, as indicated by the number of applications.[10]

Chart C Disbursements of bank loans through the Recovery and Resilience Facility



Sources: Ministry of Economy and Finance, Hellenic Bank Association and Bank of Greece.
Note: Equity financing is not included.

4 Under this law, a levy of 0.6% per annum in favour of the State is charged on the nominal interest rates on bank loans to NFCs.
5 This includes disbursements of business loans by domestic and foreign banks financed by public and bank resources. Equity financing is not included.
6 EUR 4.5 billion of public resources (RRF loans) and EUR 3.5 billion bank resources (bank loans). Source: Special Recovery Fund Coordination Service.
7 128 out of 271. Source: Recovery and Resilience Facility Coordination Agency.
8 According to the programme's characteristics, the co-financing scheme for the total investment expenditure is defined as follows: maximum 50% public financing (RRF loans), minimum of 30% bank loans (co-financing loans) and a minimum of 20% investor's own contribution.
9 The 2023 average interest rate on business loans with an agreed maturity amounted to: a) 5.7% for all businesses, b) 5.8% for small and medium-sized enterprises and c) 6.3% for sole proprietors.
10 By 25 January 2024, 640 loan applications had been submitted, amounting to EUR 17.1 billion (EUR 9.4 billion RRF loans, EUR 7.8 billion bank loans). Source: Recovery and Resilience Facility Coordination Agency.

Outlook

Business financing is expected to continue to be supported in the coming years:

- By the low-interest loans under the Recovery and Resilience Facility. Following the European Commission's approval of the revised National Recovery and Resilience Plan "Greece 2.0",[11] the total European funds for the loan component of the Facility were increased by EUR 5 billion to EUR 17.7 billion. So far, receipts from EU have reached EUR 7.3 billion and EUR 4 billion have been transferred to co-operating banks for granting business credit.
- By the availability of new financing programmes developed in the context of the implementation of the NSRF 2021-2027 and the Development Law (Law 4887/2022). In particular, it is expected that Funds will be set up to provide: (a) loan guarantees; (b) co-financing loans with zero interest rate on the part of the loan financed by the State; (c) grants with interest subsidies and/or capital rebates; and (d) co-investments, e.g. investments in venture capital. In order to achieve optimal utilisation of public funds, a linkage between the achievement of policy objectives and types of schemes is introduced. A prominent example is the "Innovation Fund" of the Hellenic Development Bank, through which companies benefit from lower collateral requirements (due to the provision of guarantees by the HDB) and, if they fulfil ESG (environmental, social and governance) and innovation criteria, they receive additional funds in the form of capital rebates. At the same time, the types of financing to be supported by resources from the National Strategic Reference Framework (NSRF) are being expanded by the inclusion of new tools such as leasing, microfinancing and quasi equity. Expanding the types of financing is significant, as it allows for better utilisation of public funds in terms of leverage, absorption and recycling, i.e. it creates the conditions for increasing the multiplier of public funds, resulting in greater benefit for the real economy.

11 See the announcement of the Ministry of Economy and Finance, 21.9.2023.

3 BANK CREDIT

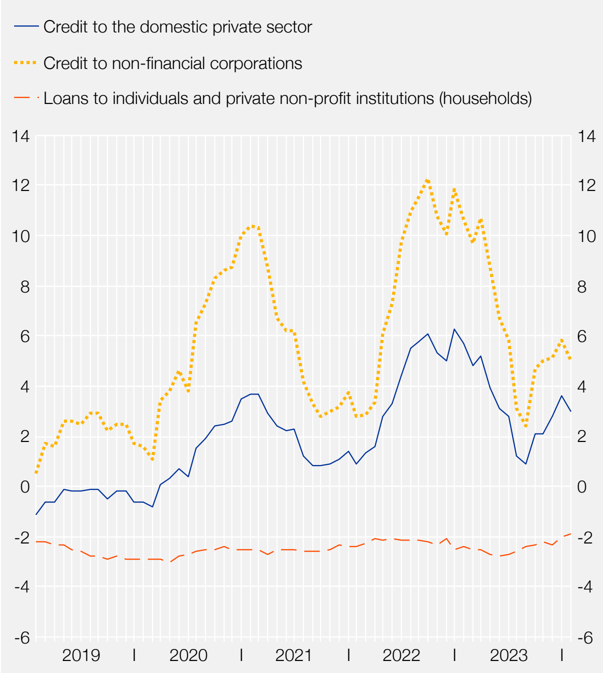
Annual bank credit expansion to the private sector slowed overall in 2023, after a significant acceleration in 2022 (see Chart VI.5). This reflects a weaker increase in loans to NFCs and a stronger decline in housing loans to households. The annual growth rate of outstanding bank credit to general government in 2023 slowed further to 3.7% on average, much lower than in 2022 (17.0%).

Developments in new bank loans to NFCs in 2023 mainly reflect a slowdown in credit to large firms. The average monthly gross flow of loans (with a fixed maturity) to large firms declined to EUR 1 billion in 2023, corresponding to two-thirds of the 2022 flow (EUR 1.5 billion). By contrast, the respective flow to SMEs (EUR 396 million) increased slightly year-on-year, by 4.6% (see Chart VI.6). The provision of new loans to SMEs was backed by the financial instruments of the EIB Group and the HDB's loan support schemes.

Specifically, lower bank credit growth to firms in 2023 mirrors, among other things, weaker GDP growth and a marked rise in average interest

Chart VI.5 Bank credit to the private sector (January 2019 - January 2024)

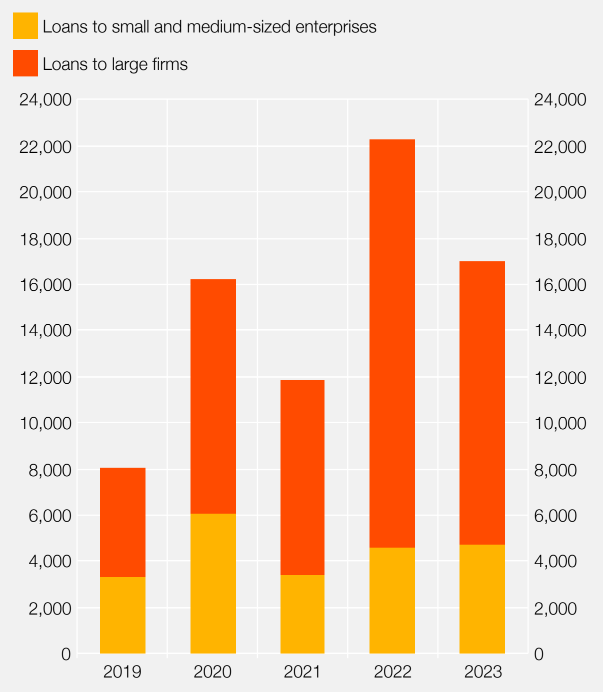
(annual rate of change %)



Source: Bank of Greece.

Chart VI.6 Bank loans with a defined maturity to NFCs (2019 - 2023)

(annual cumulative gross flows,[1] EUR millions)



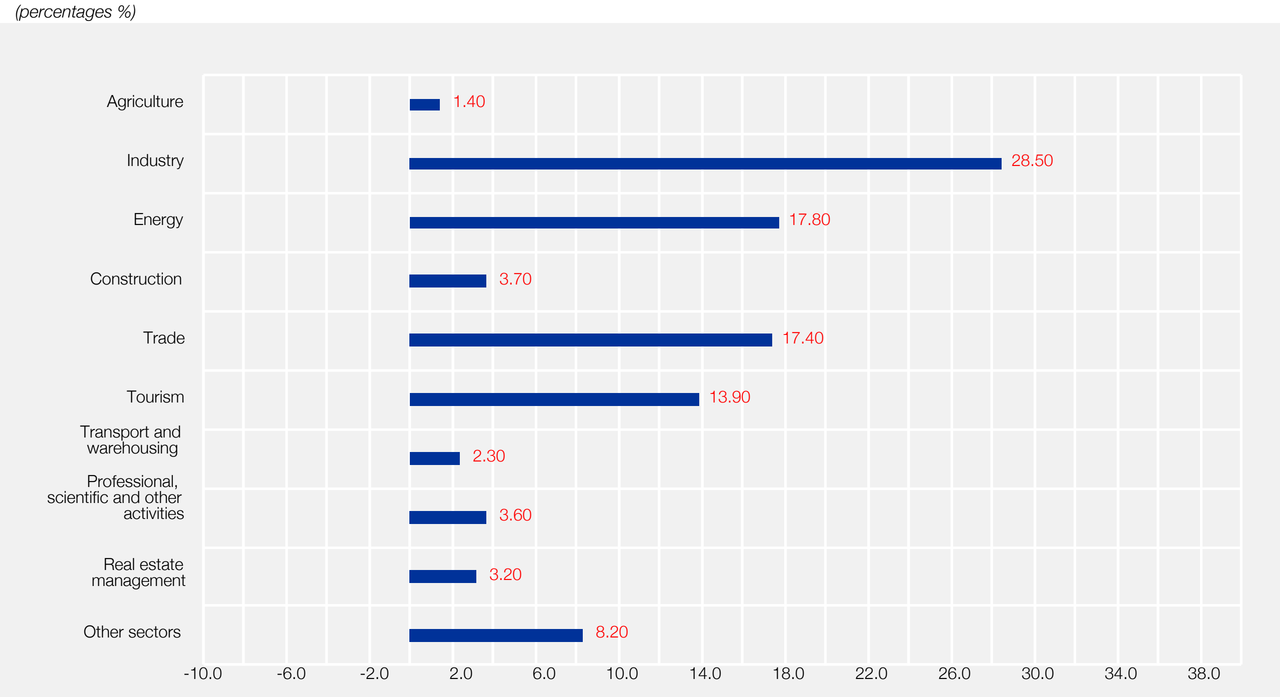
Source: Bank of Greece.
1 Gross flow equals the amounts agreed in new bank loan contracts, as captured by interest rate statistics. Under Bank of Greece Governor's Act 2672/5.5.2014, effective since June 2014, forbearances are not included in the amounts of new loans.

rates on loans to NFCs, which dampened demand for bank loans. On the supply side, banks' overall liquidity was sufficient so as to support the provision of new business credit. Banks managed to attract sizeable deposit inflows in 2023, while raising funds on the foreign interbank market and through bond issuance. On the other hand, outstanding Eurosystem funding decreased.

Moreover, in 2023 the provision of new bank loans via the financial instruments of the EIB Group and the HDB, albeit more muted than in 2022, contributed to a pick-up in outstanding credit to NFCs (see Box VI.1). The loans granted using those instruments accounted for 2.4% of outstanding credit to business and sole proprietors in December 2023. In addition, in 2023 commercial banks started disbursing more business loans from the RRF loan component. Disbursements of banks' co-funding loans, i.e. only with banking leverage (excluding the RRF loans financed by public resources and the loans granted by the European development banks – i.e. the EIB Group and the European Bank for Reconstruction and Development – that do not affect bank credit growth), amounted to EUR 0.6 billion in 2023.

Chart VI.7 Shares of individual sectors in the cumulative gross flow of total bank credit to NFCs in 2023

(percentages %)



Sources: Bank of Greece and AnaCredit database.
Note: Total gross flow of bank credit to NFCs in 2023 amounted to EUR 9 billion.

It should be noted that, if the RRF loans and the loans granted by the European development banks are also taken into account, total loan disbursements under the RRF programme amounted to EUR 1.45 billion in 2023, as already mentioned in Section 2 on bank interest rates. Furthermore, new agreements (as opposed to disbursements) on co-funding loans by banks alone (which are included in credit aggregates) continued to rise in the year under review, reaching EUR 3 billion between the launch of the programme and December 2023 (while total RRF loans by all entities involved came to EUR 8 billion). This means that the respective disbursements should also keep increasing in 2024, taking into account that the dynamics of new agreements on co-funding bank loans continue unabated this year.

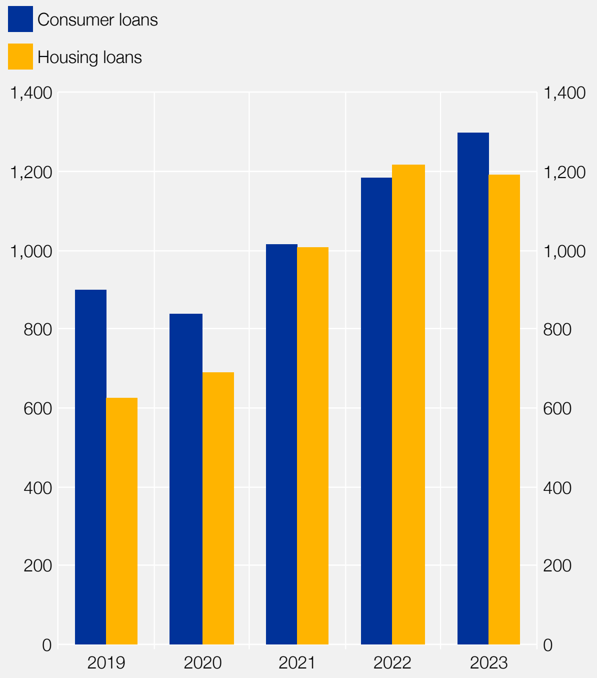
Chart VI.7 shows the percentage contributions of each economic sector to the total gross flow of loans to NFCs in 2023 (according to the Bank of Greece's AnaCredit database). The largest contributions to the total flow of business loans were made by the sectors of manufacturing, energy and trade. More specifically, new loans to manufacturing in 2023 amounted to EUR 2.6 billion, i.e. 28.5% of the total net flow of loans to NFCs (amounting to EUR 9 billion). The respective flow of loans to the energy sector stood at EUR 1.6 billion, the same as for trade (energy: 17.8% of total flow; trade: 17.4%). In December 2021, the aforementioned sectors had the highest shares in total outstanding bank loans to NFCs: manufacturing: 21.5%, trade: 18.6%, and energy: 15.7%, with tourism accounting for the fourth highest share: 13.8%.

Regarding loans to households, the average annual growth rate of consumer credit accelerated to 2.0% in 2023, compared with 0.7% in 2022, but the average annual rate of decline in housing loans became stronger, standing at -3.7% in 2023, against -3.1% in 2022. The average gross flow of consumers loans with a defined maturity increased on average in 2023 (to EUR 108 million from EUR 98 million in 2022) and the respective flow of housing loans remained almost unchanged in 2023 (EUR 99 million; 2022: EUR 101 million), but was still well above the average level seen in the past few years (2018-21 average: EUR 61 million) (see Chart VI.8). The average level of this flow would have been even higher, if part of the public resources channelled through the programme "My Home" had been taken into account. The path of consumer credit was consistent with the upward path of private consumption during the previous year. Higher interest rates on housing loans in 2023 weighed on household demand for new loans, as households were able to substitute in full or complement their housing loans with own savings. On the other hand, the faster growth rate of residential property prices was fuelled mainly by increased FDI inflows and, to a much lesser extent, by the stabilisation of the gross flow of housing credit.

Turning to the outlook for bank credit to the private sector, credit growth in 2024 will initially continue to be adversely affected by past increases in bank lending rates. In the course of the year, with key interest rates kept unchanged or lowered, credit growth should pick up, but only gradually, given

Chart VI.8 Bank loans with a defined maturity to households (2019 - 2023)

(annual cumulative gross flows,[1] EUR millions)



Source: Bank of Greece.
1 Gross flow equals the amounts agreed in new bank loan contracts, as captured by interest rate statistics. Under Bank of Greece Governor's Act 2672/5.5.2014, effective since June 2014, forbearances are not included in the amounts of new loans.

the estimated time lags.[6] If economic activity in 2024 remains close to its 2023 level and, *a fortiori*, if it picks up, demand for bank credit from firms and households is also set to remain strong or even rise further. Annual growth in bank credit to NFCs is expected to display similar rates on average relative to 2023, thanks to the support of banks' co-funding loans generated by the financial instruments under the Multiannual Financial Framework (MFF) 2021-2027 and the RRF programme. The more favourable investment environment following the Greek economy's upgrade to investment grade and the recent boost to the RRF loan component with an additional EUR 5 billion (for RePowerEU purposes) should help in this direction, facilitating the advancement and financing of investment projects, some of which are undertaken by large firms over a long-term horizon.

6 See Box 4 "The impact of higher lending rates on bank credit in Greece", *Monetary Policy 2022-2023. Executive Summary and Boxes*, June 2023.

Box VI.2

FINANCING CONDITIONS FOR SMEs: INSIGHTS FROM THE SAFE SURVEY

The results of the latest round of the Survey on the Access to Finance of Enterprises (SAFE) show that in April-September 2023 Greece reported an increase in the availability of bank loans. This increase, combined with the relative deceleration in enterprises' external financing needs, contributed to a decline in the overall external financing gap indicator, which fell below the European average. Reflecting the increase in ECB interest rates, the survey recorded the highest historical net percentage of small- and medium-sized enterprises (SMEs) in Greece and the euro area reporting an increase in bank lending rates. At the same time, both in Greece and the euro area, the main challenges for most small- and medium-sized enterprises in the sample were finding skilled labour and managing increased production or labour costs.

External financing gap and financing obstacles

For the second consecutive survey round, the improvement in the availability of bank credit, coupled with the reduction in firms' external financing needs, contributed to a decline in the external financing gap indicator in Greece, to levels similar to the euro area average (Greece: 6%, euro area: 7%; see Chart A). At the same time, firms in Greece reported that the overall financing obstacles indicator reached the lowest level recorded since the launch of the survey (15%), while it declined slightly in the euro area (8%) (see Chart B).

Availability of external financing to SMEs

In the most recent survey round, SMEs in Greece continued to report a positive net percentage[1] (7%) in terms of the evolution of availability of bank loans (see Chart C), as well as credit lines or overdrafts (12%). By contrast, for the third consecutive round, euro area enterprises reported a reduction in the availability of bank loans (-11%) (see Chart C), as well as credit lines (-9%). With regard to their access to other non-bank sources of external financing, after a temporary deterioration over the October 2021-March 2022 period, SMEs in Greece signalled increases in the availability of leasing or hire-purchase[2] (2%) and trade credit (9%) for the third consecutive round. By contrast, in the most recent survey round, euro area enterprises reported a decline in the availability of leasing or hire-purchase (-3%) and trade credit (-2%).

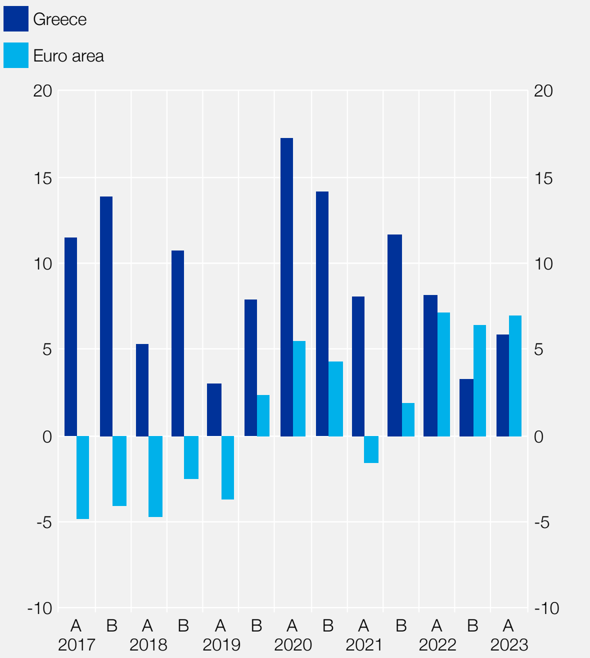
With respect to factors affecting the availability of external financing, firms in Greece continued to report a positive impact from banks' willingness to provide credit (23%), while in the euro area firms reported a negative impact for the third consecutive round of the survey (-2%). In Greece, the overall impact of the factors determining firms'

1 The results refer to net percentages of respondents, which are defined as the percentage of enterprises reporting that, during the past six months, a given factor (e.g. availability of bank loans) increased minus the percentage of those reporting that it declined.

2 In the survey, leasing or hire-purchase is treated as a financing source which enables firms to obtain the use of a fixed asset (for example, cars or machinery) in exchange for regular payments, but without immediate ownership of the asset.

Chart A Change in the SMEs overall external financing gap indicator in Greece and the euro area

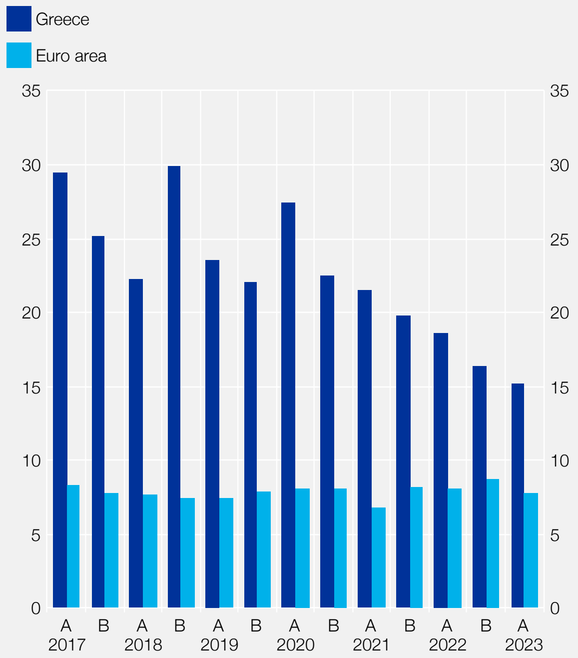
(in the corresponding six months,[1] net percentage of respondents[2])



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 overall external financing gap indicator is calculated as the weighted average of financing gaps (needs minus availability) for each of the five sources of external financing: a) fixed-maturity bank loans, b) credit lines or bank overdrafts, c) trade credit, d) equity, and e) debt securities.

Chart B Change in the SMEs overall financing obstacles indicator in Greece and the euro area

(in the corresponding six months,[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 overall financing obstacles indicator is calculated as the sum of the percentages of firms reporting loan applications which were rejected or for which only a limited amount was granted, as well as the percentage of firms which refused to take the loan due to high borrowing costs and those that did noy apply at all for fear of being rejected by the bank.

solvency[3] was increasingly positive, while in the euro area firms reported a positive but significantly weaker impact. By contrast, firms continued to report a negative impact due to the general economic outlook[4] in Greece (-15%) and much more so in the euro area (-40%). In addition, unlike successive previous findings after the April-September 2020 period indicating the supportive role of fiscal measures[5] during the pandemic, for the third consecutive round firms reported that the public financing support did not help improve the availability of external financing (Greece: -9%, euro area: -16%).

SMEs' external financing needs

Compared with the findings in the period immediately after the outbreak of the COVID-19 pandemic, firms continued to report significantly weaker increases in their needs (i.e. demand) for bank loans (Greece: 13%, euro area: 1% – see Chart D) and for credit lines (Greece: 21%, euro area: 9%), as well as for trade credit (Greece: 22%, euro area: 10%) and leasing or hire-purchase (Greece: 13%, euro area: 11%).

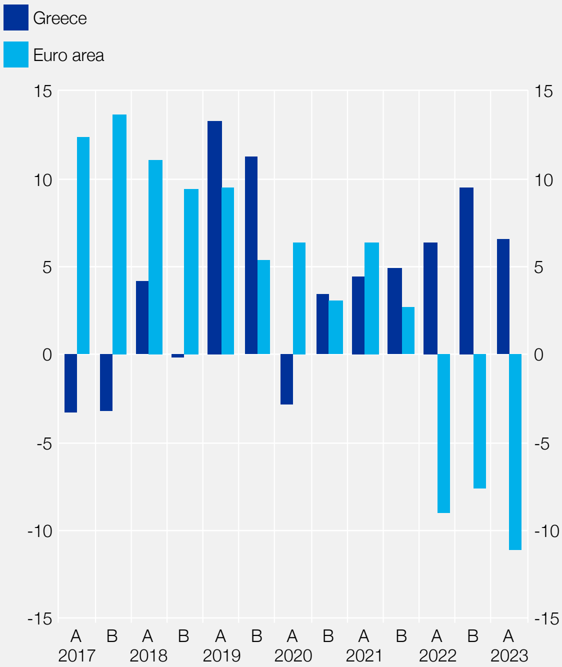
Outcome of bank loan applications

In the period under review, the decline observed after the first phases of the pandemic in the percentage of firms that applied for bank loans continued (Greece: 19%, euro area: 21%); the percentage of SMEs that were

3 The percentage for "firm's solvency" is a sum of the net percentages of three factors: (a) firm's credit history; (b) firm's own capital; and (c) firm-specific outlook.
4 The number of enterprises reporting that macroeconomic developments did not affect the availability of external financing during the period under review was higher than those reporting a positive impact on availability.
5 SMEs' access to fiscal support measures includes, inter alia, public co-financing or guarantee schemes for bank loans.

Chart C Change in the availability of bank loans to SMEs in Greece and the euro area

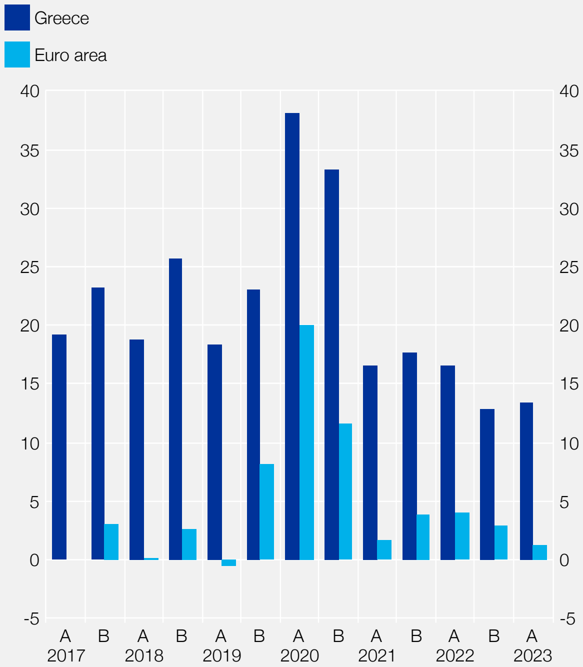
(in the corresponding six months,[1] net percentage of respondents[2])



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 credit increased minus the percentage of firms reporting that it decreased.

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

(in the corresponding six months,[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 firms' needs for bank loans increased minus the percentage of firms reporting that they decreased.

discouraged from applying for fear of rejection remained low (Greece: 10%, euro area: 5%), while the percentage of SMEs that did not apply because of sufficient internal funds rose (Greece: 40%, euro area: 46%). As regards the outcome of bank loan applications, the percentage of applications that were fully or mostly granted decreased slightly both in Greece (59%) and the euro area (72%). At the same time, the rejection rate fell in Greece (10%) and the euro area (6%) close to its historically lowest levels since the launch of the survey in 2009.

Bank financing terms and conditions

As regards bank financing terms and conditions, the most recent survey round recorded the historically highest net percentage of SMEs, both in Greece and the euro area, reporting an increase in interest rates on bank loans[6] (Greece: 84%, euro area: 82%). At the same time, for other costs of financing (i.e. charges, fees and commissions), the net percentage of enterprises reporting increases in Greece (64%) came close to its historical highest level, while a new historical high net percentage of enterprises was recorded in the euro area (61%).

Main challenges for SMEs

In the most recent survey round, most SMEs of the sample reported that their main concerns were the lack of skilled staff or experienced managers (Greece: 33%, euro area: 31%) and the increase in production or labour costs (Greece: 19%, euro area: 18%); the next major problem for firms in Greece was access to finance (12%) while in the euro area it was finding customers (17%).

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

Conclusions

SMEs in Greece reported an increase in the availability of bank loans, supported by banks' increasing willingness to provide credit, although, according to firms, the general economic outlook had a negative impact (albeit not as much as in the euro area). By contrast, in the euro area the availability of bank loans declined, mainly on account of banks' reduced willingness to provide credit, but also due to a significant deterioration in the economic environment. At the same time, for the first time since the launch of the survey and for two consecutive rounds, the external financing gap indicator declined in Greece to levels lower than the European average. In addition, firms in Greece reported that the overall financing obstacles indicator reached the lowest level recorded since the launch of the survey in 2009, mainly reflecting a decrease in the percentage of firms that reported either that their application was rejected or partially granted, as well as those that did not apply for fear of rejection. By contrast, financing terms and conditions deteriorated significantly, as a historically high percentage of firms reported increases in interest rates on bank loans as well as in other costs of financing (i.e. charges, fees and commissions) both in Greece and the euro area.

Box VI.3

THE BANK LENDING SURVEY[1]

The latest rounds of the Bank Lending Survey, which look at developments in 2023, provide mixed evidence of loan demand in Greece, with corporate loan demand remaining broadly unchanged, while a decline in both housing and consumer loan demand was reported for most quarters. In the same period, negative developments were reported in the euro area in the demand across all loan categories. On the supply side, banks in Greece reported that credit standards remained broadly unchanged,[2] but overall terms and conditions[3] on loans to enterprises eased somewhat. By contrast, in the euro area, banks mostly reported a tightening in credit standards, as well as in terms and conditions across all loan categories.

Loan demand

Credit institutions in Greece report that firms' demand for loans was relatively volatile in the first half of 2023, but remained stable in the second half of the year (see Chart A). Regarding the determinants of demand for loans to enterprises in Greece, banks reported a slight positive effect from the increase in firms' needs for financing fixed investment, but at the same time some negative effect originating from higher overall interest rates, reduced demand for financing inventory and working capital, as well as their improved ability to finance their activities internally. Euro area banks reported successively small decreases in demand for loans to enterprises throughout all quarters of 2023 (see Chart A), mainly stemming from the increase in the overall level of interest rates and the decrease in firms' needs to finance fixed investment and, to a lesser extent, their improved ability to finance their activities internally and fewer needs to finance mergers/acquisitions and restructuring.

Banks reported mixed changes in households' demand for loans. Specifically, demand for housing loans declined in Greece, with the exception of the increase observed in the second quarter, driven mainly by an increase in the general level of interest rates and deteriorating household savings. In the euro area, demand for housing loans declined in all quarters of 2023, driven mainly by the higher general level of interest rates, as well as by deteriorating consumer confidence and housing market prospects. With the exception of stability in the fourth quarter of 2023, credit institutions in Greece reported successively small increases in demand for consumer

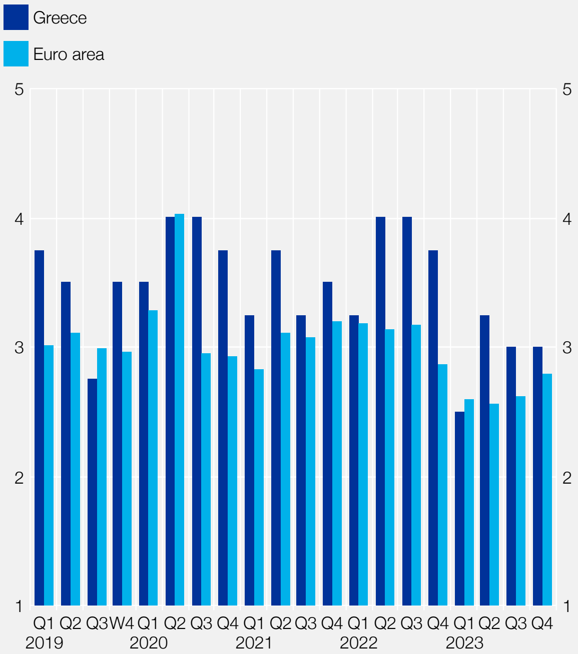
1 The Bank Lending Survey (BLS) is conducted by the Eurosystem on a quarterly basis, using a sample of about 150 banks across the euro area, including the four Greek systemic banks.

2 The survey defines credit standards as the internal guidelines or 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 margin by which lending rates exceed bank financing costs, the level of commissions or other non-interest payments, usual maturity and amount of loans, other loan clauses etc.

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

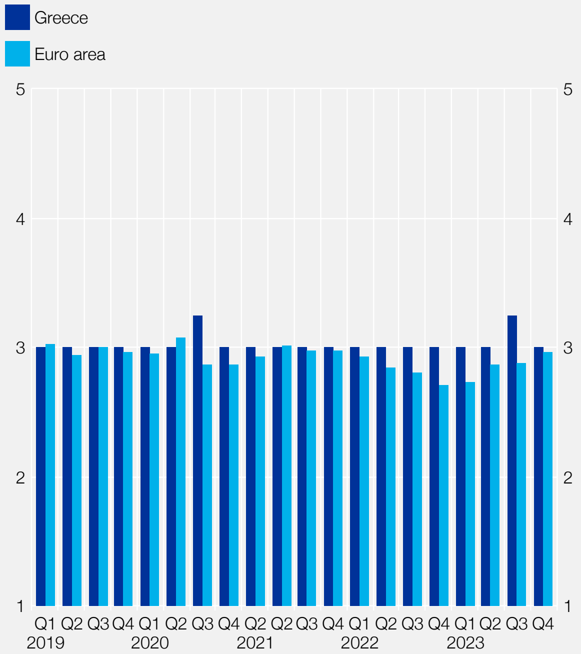
(in the corresponding calendar quarter; average[2])



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".

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

(in the corresponding quarters; average[2])



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

credit and other loans, supported at the beginning of the year by increased spending on durable consumer goods and later by improved consumer confidence. In the euro area, demand for housing loans declined slightly throughout all quarters of 2023, driven mainly by the higher general level of interest rates, as well as by deteriorating consumer confidence.

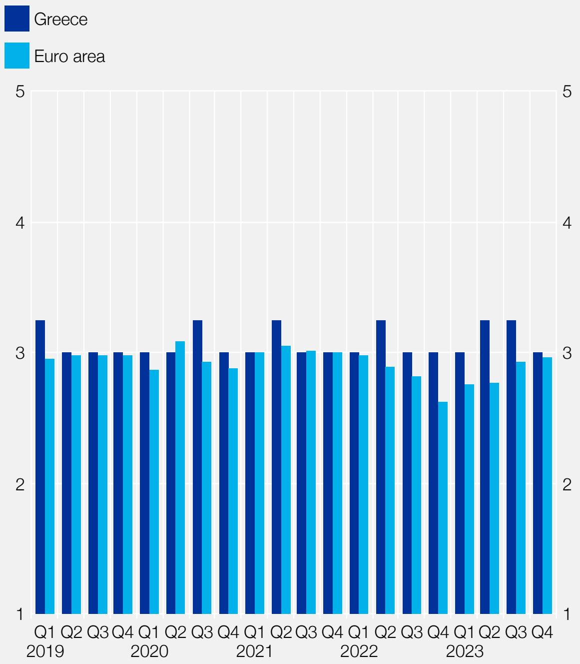
Loan supply

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 loans to enterprises (see Chart B). In any event, in all quarters of 2023 banks in Greece reported that pressure from competition contributed somewhat to the easing in credit standards for loans to enterprises. In the euro area, credit standards for loans to enterprises recorded a small but durable tightening in 2023 (see Chart B), mainly due to the deteriorating overall expectations regarding economic activity, and industry- or firm-specific outlook in particular, as well as to banks' lower risk tolerance. As regards housing loans, credit standards in the euro area tightened somewhat, reflecting an overall deterioration in the economic outlook, as well as in borrower's creditworthiness and housing market prospects, and also the contribution of banks' lower risk tolerance. Similarly, with regard to consumer credit, in the euro area credit standards tightened somewhat throughout the year, mainly driven by the deterioration in the economic outlook and in consumers' creditworthiness, as well as banks' lower risk tolerance.

As regards terms and conditions on loans to enterprises in Greece, the sample reported a relative easing in the second and third quarters (see Chart C), mainly due to the narrowing of margins on average- and high-risk loans. As for loans to households, banks in Greece reported that terms and conditions on consumer loans remained broadly unchanged, except for some easing in the first quarter owing to a respective decrease in non-interest charges. They also reported that terms and conditions on housing loans were relatively volatile in the first half of

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

(in the corresponding quarters; average[2])



Source: ECB/Bank of Greece, Bank Lending Survey.
1 Banks' perceived changes in credit standards in 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".

2023, mainly due to the relative volatility of the interest rate margin on average-risk loans, but remained unchanged in the second half of the year. In the euro area, credit institutions reported a small tightening of the terms and conditions on loans to enterprises throughout 2023 (see Chart C), mostly reflected on the widening of interest rate margins on average- and high-risk loans. They also reported a tightening in the terms and conditions on consumer loans and most housing loans, for which terms and conditions remained unchanged in the fourth quarter of 2023.

Credit institutions in Greece reported that the share of rejected applications for loans to firms remained unchanged in all quarters of 2023. As regards loans to households in Greece, the share of rejected applications decreased slightly, except for some increase in the second quarter, while it remained unchanged for consumer credit and other loans, except for a small decrease in the first quarter. In the euro area, the share of rejected applications for all loan categories increased slightly during all survey rounds in 2023.

Survey results on ad hoc questions

In response to ad hoc questions regarding their funding sources, in 2023 banks in Greece reported mostly improved access to medium-to-long-term debt financing, as well as short- and long-term deposits. At the same time, euro area credit institutions reported mostly improved access to long-term deposits, but also a deterioration in short-term deposits and the issuance of medium-to-long-term debt financing in the first half of the year.

In addition, credit institutions in Greece and the euro area as a whole reported that the evolution of the NPL ratio did not affect credit standards or terms and conditions across all loan categories.

As regards TLTRO III funding, banks in Greece reported that their participation had improved their profitability and their ability to meet regulatory and supervisory requirements, but had a slight negative effect on their liquidity and terms and conditions on loans.[4] Credit institutions in Greece reported a neutral impact of TLTRO III on lending volumes, credit standards and terms and conditions on loans. In the euro area, banks reported that in 2023 their TLTRO III funding had a small negative effect on their funding terms and conditions, as well as on their ability to improve their profitability and liquidity, but had favourably affected their ability to meet regulatory or supervisory requirements.

Banks' responses in Greece and the euro area as a whole reflect the positive effect of the ECB's key interest rate decisions on bank profitability, as they reported improved net interest income due to widened interest rate margins.

Credit institutions in Greece reported that the APP had a neutral impact on lending volumes, as well as on credit standards and terms and conditions on loans, except for some favourable effect on loans to enterprises volumes during the second and third quarters of 2023. In the euro area, banks mostly reported that the APP led to some

4 As of late 2022, the conditions for the provision of liquidity to banks by the Eurosystem through TLTRO III were tightened, and three additional dates were given for early repayment by banks of liquidity raised through TLTRO III to ensure that these operations were consistent with tightened monetary policy stance. For these reasons, substantial amounts were repaid to the Eurosystem for financing through TLTRO III operations in the course of 2023.

deterioration in lending volumes and, at the same time, some tightening in credit standards and terms and conditions on all categories of loans.[5]

Banks in Greece reported in 2023 that the APP brought about an overall small decrease in their assets, but also boosted their profitability and capital position, while they also reported a neutral impact on their liquidity and funding conditions. In the euro area, banks reported a deterioration in their assets, liquidity and funding conditions, but also an improvement in their profitability and capital position.

Credit institutions in Greece and the euro area as a whole reported that changes in excess liquidity held by banks with the Eurosystem had a neutral impact on their funding terms and conditions and lending volumes.

Lastly, as regards the new ad hoc question gauging the impact of climate change on bank credit in the past twelve months, credit institutions in Greece and the euro area as a whole reported increased demand for loans by "green firms" (firms that do not contribute or contribute little to climate change), as well as "firms in transition" (firms that contribute to climate change, but are making considerable progress in the transition).

Conclusions

In 2023 Greek banks did not report any substantial change in credit standards, but some easing in corporate and consumer loan terms and conditions. By contrast, in the euro area, banks mostly reported a tightening in credit standards, as well as in terms and conditions across all loan categories.

In terms of demand for loans, credit institutions in Greece reported that demand for loans to enterprises remained broadly unchanged, while they also reported a decrease in demand for housing loans and a slight increase for consumer and other loans. Over the same period, negative developments were reported in demand for all categories of loans in the euro area.

Answering ad hoc questions, credit institutions in Greece mostly reported an improvement in their access to retail and wholesale funding, and the fact that their participation in TLTRO III operations and the APP supported the improvement in their profitability. At the same time, in the euro area, banks mostly reported a deterioration in their access to retail and wholesale funding, and that their participation in TLTRO III operations had a slight negative impact on their ability to improve their profitability, while the APP had a favourable impact on their profitability. In addition, credit institutions in Greece and in the euro area as a whole reported an increase in demand for loans to "green firms" and "firms in transition".

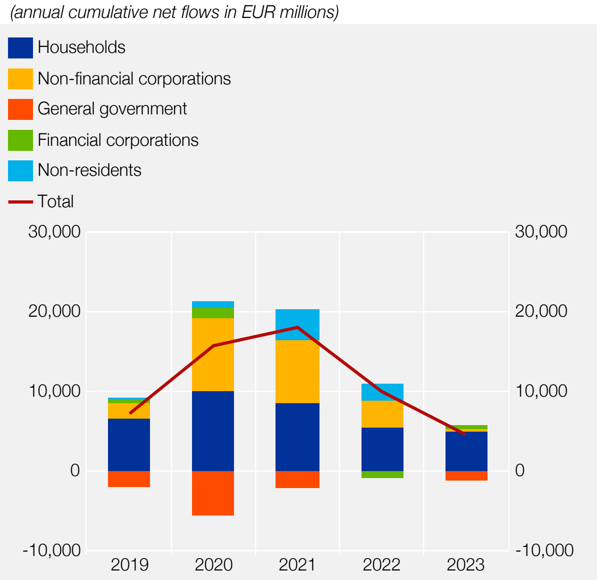
5 Net purchases of securities under the APP ceased in mid-2022, while from March 2023 onwards, reinvestments of the principal payments from maturing securities purchased by the Eurosystem under the APP were gradually reduced to zero in July 2023.

4 BANK DEPOSITS

Private sector deposits continued to grow in 2023, yet at a declining pace. In greater detail, bank deposits by the domestic private sector grew by a cumulative EUR 5.8 billion, compared with an increase of EUR 8 billion in 2022, as the roughly equal annual increase in household deposits was accompanied by a marginal annual increase in business deposits (see Chart VI.9). Outstanding private deposits came to EUR 194.8 billion at the end of 2023, i.e. the highest level seen since mid-2011. The ratio of private deposits to GDP declined somewhat, but remained elevated (December 2023: 88.4%, against 91.3% in December 2022), especially compared with pre-pandemic levels (December 2019: 78.1%).

Over the reviewed period, households' deposits grew by EUR 5 billion, compared with an increase of EUR 5.4 billion in 2022, while their annual growth rate moderated (2023 average: 3.6%, against 4.4% in 2022) to stand at 3.5% in December 2023 (see Chart VI.10). Nevertheless,

Chart VI.9 Annual flows of deposits with domestic banks (2019 - 2023)



Source: Bank of Greece.

taking inflation developments into account, in 2023 the annual growth rate of households' deposits in real terms suggested a largely smaller contraction relative to 2022 (2023 average: -0.6%, against -4.9% in 2022), as positive growth rates in real terms were observed in November 2023 and in June-September 2023.

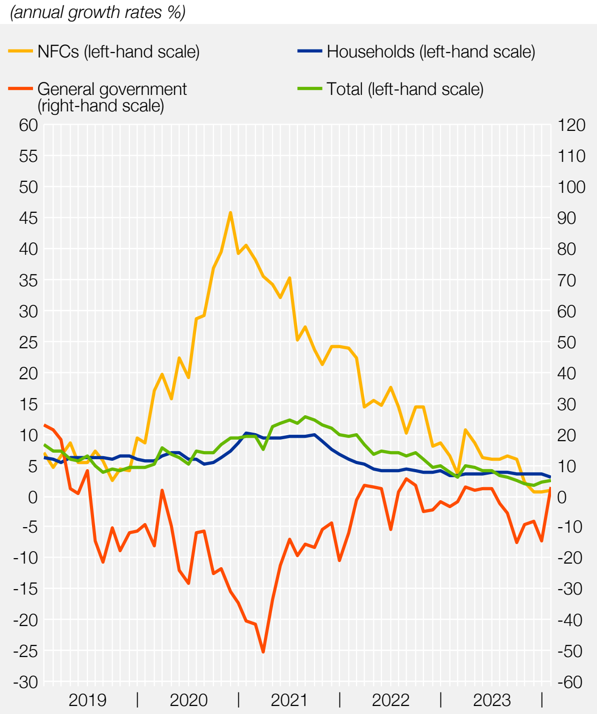
The slowdown in the growth rate of households' (nominal) deposits was driven by a weakening in real disposable income growth over the first nine months of 2023 (compared with the respective percentage change in 2022) and households' increased consumer spending given high inflation. The opportunity cost of bank deposits was very high in 2023, prompting households to place their cash in alternative investments, such as Greek Treasury bills and mutual fund shares/units, which offered considerably higher remuneration. Furthermore, in 2023 the real (weighted average) interest rate on households' total deposits remained negative, thus discouraging saving.

Deposits by firms grew by a mere EUR 0.3 billion in 2023, against an increase of EUR 3.5 billion in 2022. The annual growth rate of deposits by firms continued to decline overall (2023: 5.3%, against 14.9% in 2022) to stand at 0.7% in December 2023 (see Chart VI.10), also reflecting a slowdown in credit growth to NFCs over the period under review.

The share of NFC deposits in total deposits by the domestic private sector was unchanged relative to 2022 (2023: 22%), but higher relative to 2019, the last year before the pandemic-related strong monetary and credit growth (2019 average: 15%), while the respective share for households increased slightly (2023: 76%, against 75% in 2022), albeit remaining below its 2019 level (82%). The corresponding share of deposits by insurance undertakings and other (non-banking) financial institutions shrank modestly (2023: 2%, against 3% in 2022).

A breakdown of deposits based on their degree of liquidity shows that over the reviewed period the slowdown in private deposit growth (2023: 3.2%, against 6.3% in 2022) was due to overnight deposits. By contrast, annual growth in (time) deposits with an agreed maturity returned to positive territory in February 2023, after 3.5 years, and picked up thereafter, mainly reflecting developments in households' outstanding time deposits (2023: 32%, against -24.2% in 2022; see Chart VI.11). Annual growth in time deposits by NFCs remained positive and exceptionally high throughout 2023 (2023: 84.8%, against 9.3% in 2022), im-

Chart VI.10 Deposits with domestic banks (January 2019 - January 2024)

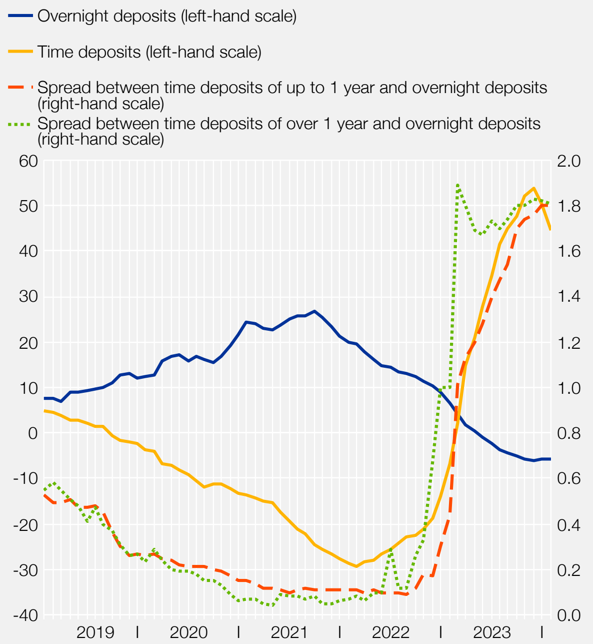


Source: Bank of Greece.

plying in fact that outstanding balances of time deposits more than doubled from June to September 2023 (compared with the respective outstanding balances of 2022). These changes are indicative of an ongoing shift of firms' and households' funds to time deposit accounts, owing to the relatively higher remuneration they offer due to the stronger pass-through of policy rate hikes to bank deposit rates (see Chart VI.11).[7] Rising time deposits with Greek banks strongly attest to depositors' confidence in the domestic banking system after the recent turbulence in foreign banking systems especially over the first months of 2023.

Chart VI.11 Household deposits based on their liquidity and interest rate spread between time and overnight deposits (January 2019 - January 2024)

(annual growth rates % and spreads in percentage points)



Source: Bank of Greece.

Still, the bulk of banks' deposit base continues to consist of liquid assets held in overnight accounts (74% of private sector deposits). In 2023, outstanding balances of overnight deposits shrank by 8% for NFCs and by 5.7% for households, while time deposits increased by 36.6% and 52.1%, respectively.

General government deposits with commercial banks in 2023 decreased by EUR 0.6 billion, although general government deposits with the Bank of Greece grew by EUR 2.2 billion between December 2022 and December 2023, mainly reflecting the issuance of Greek government bonds and an inflow of RRF funds. Deposits with commercial banks by social security funds and regional and local authorities, which together with central government make up the general government sector, decreased by EUR 0.6 billion in 2023. Turning to the other sectors, their contribution to banks' deposit base was positive overall, mainly as a result of an increase of EUR 0.4 billion in deposits by insurance undertakings and other financial institutions, while deposits by non-residents remained virtually unchanged.

Sustained robust growth rates of economic activity, as well as of bank credit to businesses, are expected to contribute to a further rise in bank deposits. A greater pass-through of policy rate hikes to domestic deposit rates in the near term, coupled with an anticipated decline in inflation, will also provide further incentives to the private sector for saving, thereby supporting demand for interest-bearing deposits. On the other hand, higher-for-longer interest rates, aimed at further containing inflation, are expected to dent demand for bank loans, with negative repercussions for bank deposits. Of course, policy rates will start declining at some point. As this will occur in tandem with inflation stabilising at low levels and with stronger economic activity and credit growth, the stock of deposits is set to follow an upward path.

5 DEVELOPMENTS IN THE BANKING SECTOR

Greece's sovereign credit rating upgrade to investment grade in 2023 supports the outlook for Greek banks, favourably affecting the cost of market-based funding. Moreover, it is expected

7 It should be noted for instance that the interest rate spread between time deposits with an agreed maturity (of up to one year) and overnight deposits by households in 2023 widened by 150 basis points, compared with an increase of 19 basis points in 2022, while for time deposits with an agreed maturity of over one year this spread widened further in 2023 by 82 basis points, against 94 basis points in 2022.

Table VI.1 Financial results of Greek banks

(amounts in EUR millions)

	Jan.-Sep. 2022	Jan.-Sep. 2023	Change (%)
Operating income	**7,539**	**8,194**	**8.7**
Net interest income	3,988	6,335	58.9
– Interest income	5,297	10,411	96.5
– Interest payments	-1,310	-4,076	211.3
Net non-interest income	3,551	1,858	-47.7
– Net fee and commission income	1,250	1,338	7.1
– Trading income	1,621	154	-90.5
– Other income	681	366	-46.2
Operating expenses	**-2,817**	**-2,917**	**3.6**
Staff costs	-1,342	-1,374	2.4
Administrative costs	-1,036	-1,077	4.0
Depreciation	-439	-466	6.1
Net income (operating income – operating expenses)	**4,722**	**5,276**	**11.7**
Loan-loss provisions	-1,328	-1,180	-11.1
Other impairment losses[1]	-213	-170	-20.3
Non-recurring profits/losses	189	-15	-107.8
Profits/losses before tax	**3,371**	**3,912**	**16.1**
Taxes	-792	-875	10.4
Profits/losses from discontinued operations	298	-28	-
Profits/losses after tax	**2,877**	**3,009**	**4.6**

Source: Bank of Greece.
1 Impairment of securities and of tangible and intangible assets.

to lead to further upgrades in Greek banks' credit ratings; the big three credit rating agencies (S&P, Moody's and Fitch) have already changed the credit outlook on the Greek banking system to positive. As a matter of fact, this has come despite the overall adverse developments in the credit outlook on other European banking systems, which are assigned either a neutral or a negative outlook.[8] The positive outlook on Greek banks is supported by Greece's upgrade to investment grade and the robust performance of the Greek economy, as well as by developments in banks' key aggregates, such as the improved quality of their loan portfolio and the strengthening of their capital adequacy, profitability and liquidity.

In greater detail, over the January-September 2023 period, the profitability of Greek banks increased, due to significantly higher net interest income and lower loan-loss provisions (see Table VI.1). This development was consistent with similar trends in the banking sector of the euro area as a whole. Specifically, euro area significant banks, on aggregate, saw their net profitability and return on equity (ROE) grow substantially year-on-year, mainly on the back of increased net interest income. Regarding the remaining items of Greek banks' profit and loss accounts, net fee and commission income as well as operating expenses increased. Finally, trading income remained in positive territory but was quite reduced compared with one year earlier.

On a consolidated basis, the capital adequacy ratios of euro area significant banks remained broadly unchanged in September 2023 compared with December 2022, while those of Greek banks rose in December 2023 relative to end-2022.[9] The quality of loan portfolios for euro area significant banks as a whole and for Greek banks has improved. More specifically, the NPL ratio at the euro area level remained close to historically high levels in September 2023, while Stage 2 loans as a percentage of total loans declined slightly over the same period.[10]

8 See for instance Moody's Investor Service (4.12.2023), "Banks – Global: 2024 Outlook – Negative as tight financial conditions and economic slowdown sting"; S&P Global Ratings (14.12.2023), "Various Positive Rating Actions On Greek Banks On Resilience To Economic Cycles And Improving Foreign Funding Prospects"; S&P Global Ratings (30.1.2024), "Banking Industry Country Risk Assessment Update: January 2024"; and Fitch Ratings (1.2.2024), "Credit Outlook Greece 2024".

9 Data from ECB, Supervisory Banking Statistics: (a) Common Equity Tier 1 ratio (CET1): 15.6% in September 2023, against 15.4% in December 2022; (b) Total Capital Ratio (TCR): 19.7% against 19.4%, respectively. Data from Greek banks: (a) CET1: 15.5% in December 2023, against 14.5% in December 2022; (b) TCR: 18.7% against 17.5%, respectively.

10 Data from ECB, Supervisory Banking Statistics: (a) NPL ratio: 2.3% in September 2023, almost unchanged relative to December 2022; (b) Stage 2 loans/total loans: 9.3% in September 2023, against 9.6% in December 2022. The NPL ratio for Greek banks on a solo basis stood at 6.6% (for the four core banks: 4.4%) in December 2023, against 8.7% (6.4%) in December 2022, while the stock of NPLs came to EUR 9.9 (6.1) billion, against EUR 13.2 (9.2) billion, respectively. NPL structure in December 2023 for the Greek banking system as a whole: 68% business loans, 23% housing loans and 9% consumer loans. Moreover, there is roughly equal distribution of denounced loans, loans unlikely to pay and loans more than 90 days past due which have not yet been denounced.

Similarly, the NPL ratio of Greek banks on a solo basis decreased further in December 2023 compared with December 2022 (see Table VI.2). The share of Stage 2 loans in total loans on a solo basis declined to 9.3% in December 2023 from 10.7% in December 2022. It should be noted that loans below 90 days past due as a percentage of total loans increased somewhat to 3.6% in December 2023 from 3.2% in December 2022.

With regard to banks' liquidity, the Liquidity Coverage Ratio (LCR) of euro area banks declined slightly in September 2023 compared with end-2022, while the Net Stable Funding Ratio (NSFR) remained unchanged.[11] Greek banks' LCRs and NSFRs rose between December 2023 and December 2022, remaining higher than the respective euro area ratios. At the same time, Greek banks maintain adequate liquidity, despite a further reduction in Eurosystem funding (TLTRO III). Moreover, the loan-to-deposit ratio is substantially lower for Greek banks (62.2%) than for euro area banks (104.4%).

The benign domestic environment, i.e. the resilience of the Greek economy and Greece's upgrade to investment grade, enables banks to effectively address challenges (see Box VI.4). For instance, as Greece's sovereign credit rating upgrades and banks' improved credit outlook have lowered borrowing costs from capital markets, it is easier for banks to meet the minimum requirement for own funds and eligible liabilities (MREL).[12]

Table VI.2 Key indicators of loan portfolio quality

(percentages %; on-balance-sheet items on a solo basis)

		Dec. 2021	Dec. 2022	Dec. 2023
Non-performing to total loans (NPL ratio)		**12.8**	**8.7**	**6.6**
NPL ratio, by portfolio				
Corporate loans		*13.0*	*7.6*	*6.0*
	Large firms	7.1	3.4	2.6
	Small and medium-sized enterprises	21.0	11.6	9.6
	Sole proprietors and micro enterprises	30.7	27.8	23.6
	Shipping	6.2	2.5	0.4
Housing loans		10.4	10.5	7.9
Consumer loans		19.5	18.1	12.1
Breakdown of NPLs by default category or bucket				
Past due	**> 90 days**	4.6	3.6	4.1
	91-180 days			
	181-360 days	4.7	4.0	3.9
	> 1 year	21.6	25.5	17.5
Unlikely to pay		**35.5**	**30.6**	**32.5**
Denounced loans		**33.5**	**36.2**	**42.0**
Other indicators				
Forborne loans (share in total loans)		**10.6**	**7.5**	**5.7**
Performing loans[1]		6.4	4.8	3.6
Non-performing loans[2]		39.1	36.2	35.4
Loans subject to legal protection		0.5	0.3	0.2
NPL coverage ratio		42.1	46.8	46.0
Default rate		0.6	0.4	0.4
Cure rate		3.3	4.0	5.8

Source: Bank of Greece.
Note: Figures refer to on-balance-sheet loans (before provisions) and advances of Greek commercial and cooperative banks (on a solo basis).
1 Forborne performing loans to total performing loans.
2 Forborne non-performing loans to total non-performing loans.

11 The LCR focuses on the adequate coverage of banks' short-term liquidity needs (30 days), whereas the NSFR focuses on the adequate coverage of longer-term liabilities (1 year). LCR: euro area: 158.8% in September 2023, against 161.3% in December 2022; Greece: 220.7% in December 2023, against 197.4% in December 2022. NSFR (for the respective time periods): euro area: unchanged at 125.8%; Greece: 135.2% against 132.9%.

12 Specifically, the January 2023-March 2024 period saw the issuance of eight senior bonds totalling EUR 3.6 billion with a weighted average coupon of 6.2% and a weighted average maturity of 5.7 years. In addition, five subordinated debt securities amounting to EUR 2.2 billion were issued, with a weighted average coupon of 7.8% and a weighted average maturity of 10.5 years. On the basis of end-September 2023 data from the Single Resolution Board, there is still around EUR 6.6 billion to be covered by similar bond issues or other types of eligible liabilities until the end of 2025. Ever since, bonds worth EUR 3.8 billion have been issued and one bond worth EUR 500 million has been recalled.

Box VI.4

DETERMINANTS OF GREEK BANKS' FUNDING COSTS

The financial sector serves as an intermediary between economic agents with a surplus of funds and those in need of external financing to carry out their activities. Financial institutions, such as banks, obtain short-term funding from the interbank market and customer deposits and long-term funding from capital markets. Financial institutions then transform short-term funds into long-term lending to the economy. Consequently, the role of financial intermediation is both to finance the deficit agents of the economy and to transform short-term funds into long-term investments, with implications for the real economy.[1]

In the banking intermediation process, banks' cost of raising funds from depositors and investors are a crucial determinant of the cost of financing the economy, as it is an input for determining banks' lending rates. Banks' funding costs are affected, inter alia, by changes in monetary policy rates and have an impact on the financing costs of the economy through the bank lending channel.[2] Therefore, any changes in banks' funding costs affect the rate of credit growth to the real economy, while also affecting the profitability of the banking sector and thus the stability of the financial system. This box examines the different sources of funding for Greek banks as components of their total funding costs, during the period of monetary policy tightening by the European Central Bank (ECB) in 2022-2023. It also studies the extent to which changes in bank funding costs are passed through to lending rates to non-financial corporations (NFCs), compared to the European average.

Banks' funding sources

Banks raise funds from deposits (of NFCs and households) and financial markets for financing their lending activities. These funds represent the largest item on the liability side, with retail funding being the most stable and often the cheapest component.[3] Unlike investors, the private sector (NFCs and households) holds deposits with banks not only to earn a return on their surplus funds, but also for managing other needs, such as for transaction purposes. Capital markets constitute a significant source of bank wholesale funding, which has recently gained importance particularly due to banks' need to meet regulatory compliance targets (e.g. MREL). As the cost of wholesale funding is more sensitive to economic and financial conditions, it is more volatile than that of retail funding and is likely to increase significantly in periods of heightened economic uncertainty and credit risk.

The composition of Greek banks' liabilities

The impact of the pass-through of policy rate hikes on banks' funding costs depends, inter alia, on the composition of banks' liabilities and on the interest rate on each funding source. The Greek banking system as a whole follows the traditional business model, hence relying mainly on private sector deposits to finance banks' lending activities. In particular, as shown in Chart A.1, NFC and household deposits constitute the largest and most stable source of liquidity for Greek banks, accounting for around 80% (± 5%) of their total funding, i.e. well above that of European banks as a percentage of total funding (around 55-60%, see Chart A.2).[4]

1 In particular, Diamond (see Diamond, D. (1984), "Financial intermediation and delegated monitoring", *Review of Economic Studies*, 51, 393-414) shows that, by financing long-term business plans, banks assume a risk that depositors are unwilling to take, as they have the necessary tools and expertise to analyse the risks associated with lending to the economy. Financial intermediation has proved to have a significant impact on the real economy. Bernanke was the first to show that (see Bernanke, B. (1983), "Nonmonetary effects of the financial crisis in the propagation of the Great Depression", *American Economic Review*, 73, 257-276) the financial crisis of 1930-33 reduced the effectiveness of bank financial intermediation, leading to a significant decline in aggregate demand in the US economy, while after the global financial crisis of 2008-09 the literature on the financial impact on the real economy has grown significantly (see, inter alia, Borio, C. (2014), "Financial cycle and the macroeconomy: what have we learnt?", *Journal of Banking and Finance* 45, 182-198, and Christiano, L.J., R. Motto and M. Rostagno (2014), "Risk shocks", *American Economic Review*, 104(1), 27-65).

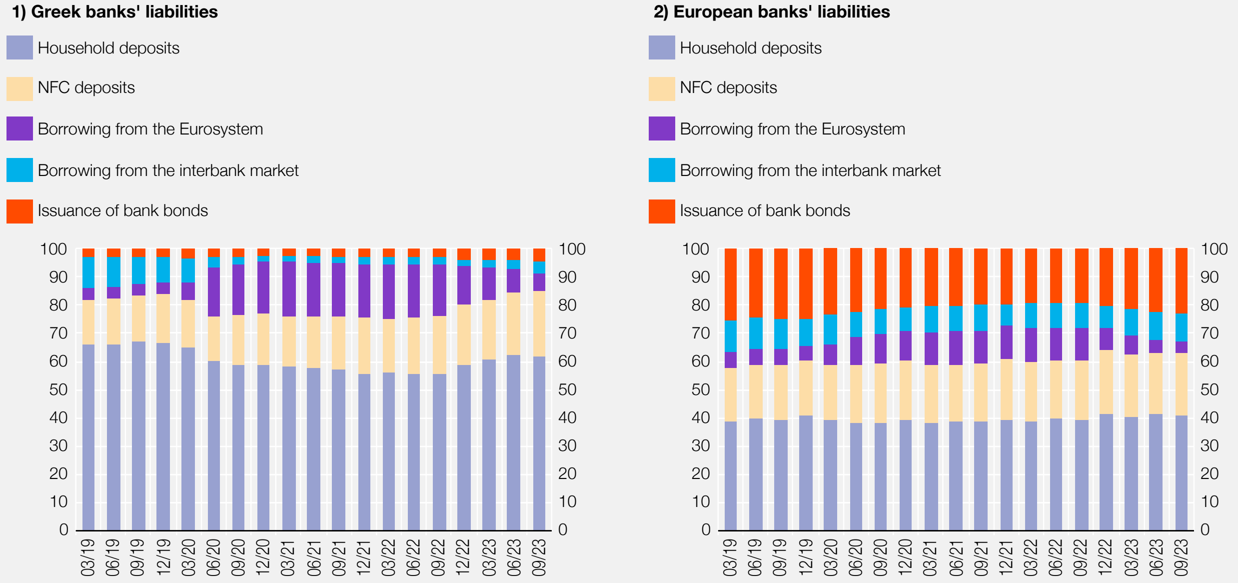
2 See for example: Gerlach, J.R., N. Mora and P. Uysal (2018), "Bank funding costs in a rising interest rate environment", *Journal of Banking and Finance*, 87, 164-186.

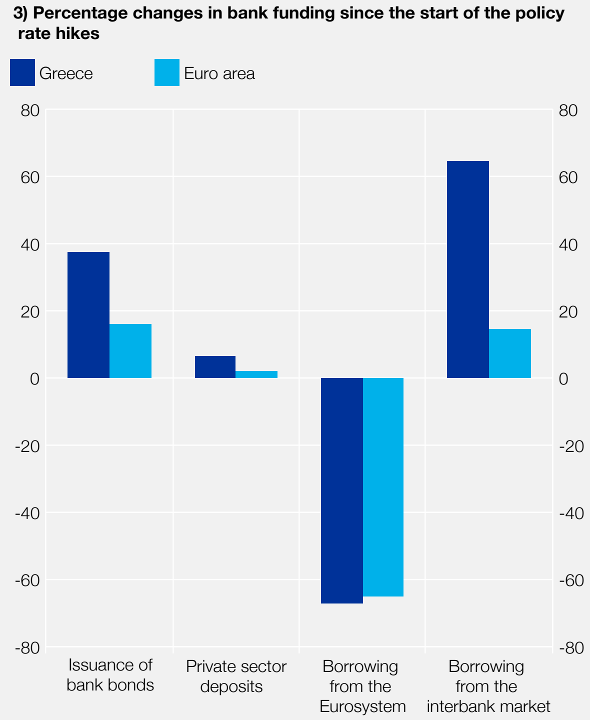
3 See, for example: "Article: Recent developments in the composition and cost of bank funding in the euro area", ECB, *Economic Bulletin*, Issue 1/2016, and Beau, E., J. Hill, T. Hussain and D. Nixon (2014), "Bank funding costs: what are they, what determines them and why do they matter?", Bank of England, *Quarterly Bulletin* 2014 Q4. According to the literature, wholesale funding allows banks to expand their assets more quickly and to control the risk of their activities more effectively, but it also increases the volatility of overall funding costs as it is more sensitive to market conditions. See, for example Ivashina, V. and D. Scharfstein (2009), "Bank lending during the financial crisis of 2008", *Journal of Financial Economics*, 97, 319-338, Huang, R. and L. Ratnovski (2011), "The dark side of bank wholesale funding", *Journal of Financial Intermediation*, 20, 248-26, and Calomiris, C. (1999), "Building an incentive-compatible safety net", *Journal of Banking and Finance*, 23, 1499-1519.

4 Data refer to euro area systemic banks supervised by the Single Supervisory Mechanism (Supervisory Banking Statistics for significant institutions).

Chart A Funding sources of Greek and European banks

(percentages %)





Sources: ECB and Bank of Greece.
Note: In panels (1) and (2), the vertical bars show the individual share of each funding component in the total funding of Greek and European banks, respectively, in percentage points.
Panel (3) depicts the percentage changes of the funding components for the period June 2022-September 2023.

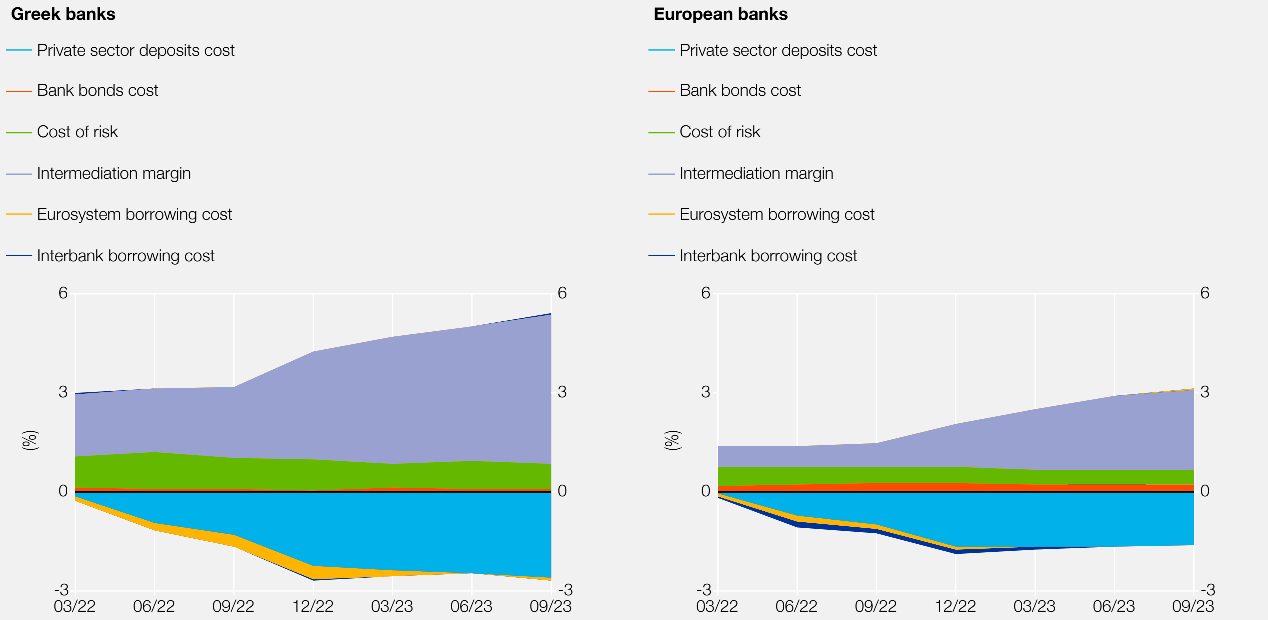
During the pandemic, however, customer deposits decreased as a share of total liabilities, owing to the increased liquidity raised from the Eurosystem, mainly through accessing the targeted longer-term refinancing operations (TLTROs) (see Chart A.1). As this liquidity gradually declines towards pre-pandemic levels and interbank market funding has not recovered, private sector deposits are at historical highs (around 84% of banks' total liabilities), compressing the shares of other funding sources. It is worth noting that bank bond issuance has become the second most important source of funding for Greek banks after retail deposits, having increased by 100% since 2019 and by 38% since the ECB started raising policy rates in July 2022 (see Chart A.3). Yet, the level of funding flows from capital markets to Greek banks is significantly below that to European banks (see Chart A.2).

The impact of higher policy rates on banks' funding costs

The greater reliance of Greek banks on private sector deposits vis-à-vis European banks, together with the weak pass-through of ECB policy rates to euro area deposit rates,[5] is associated with comparatively milder increases in Greek banks' funding costs. For the purposes of this empirical analysis, a simple model was employed

5 See the relevant results in the recent study by 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.

Chart B Cost determinants of bank lending rates to non-financial corporations (NFCs)



Sources: ECB, Bank of Greece, LSEG and Bank of Greece calculations.
Note: The chart shows the bank lending rate to NFCs as a cumulative effect of bank funding cost components. The lending rate is the composite bank lending rate calculated by the ECB as the weighted average of the interest rates on short-term and long-term loans to NFCs. The cost determinants take into account the interest rates on private sector deposits, the Eurosystem and interbank borrowing rate as well as the bank bond issuance rate, expressed as spreads vis-à-vis the benchmark rate (the 3-year overnight index swap), weighted by their respective importance in banks' funding mix. The residual, after also deducting the cost of risk, up to the nominal lending rate is used as a proxy of the bank intermediation margin.

for disentangling the individual components of banks' funding costs, while also examining their contribution to the NFC lending rate.[6]

The results from studying the funding costs of banks, both Greek and European, suggest that the pass-through of the monetary policy tightening to deposit rates is weak (see Chart B). In fact, in the Greek banking system, the transmission of policy rate increases to deposit rates is comparatively weaker, highlighting the heterogeneity in deposit shares and deposit rates, as presented above. Consequently, there appears to be a notable increase in the bank intermediation margin over the same period, which is proxied by the residual of the lending rate after deducting the components determining the funding costs and credit risk. Thus, while lower deposit rates and higher profit margins contributed almost equally to higher lending rates in euro area banks during the ECB's policy rate hike cycle, in Greek banks the individual contributions were around 1/4 and 3/4 respectively.

The relatively larger share of bank intermediation margins in the pricing of NFC loans in the Greek banking system has sustained the rise in nominal lending rates in absolute terms. Compared to euro area banks, however, the rise in lending rates was smaller (see Chart C). In particular, the interest rate spread on Greek NFC loans vis-à-vis European NFC loans has decreased by around 20% since the start of lending rate hikes in early 2022. As a result, it is estimated that the cost of bank lending to Greek NFCs is around 90 basis

6 This approach has also been followed by the ECB in recent presentations (see e.g. the speech by Executive Board member Philip R. Lane, "Inflation and monetary policy in the euro area", 28 November 2023). According to this approach, the cost of bank funding is the weighted average of individual sources of funding (private sector deposits, issuance of bank bonds, borrowing from the interbank market and the Eurosystem), with weights defined by the share of each source in the total cost. The cost of risk is added to this cost, with the residual up to the nominal lending rate being used as a proxy of the intermediation margin.

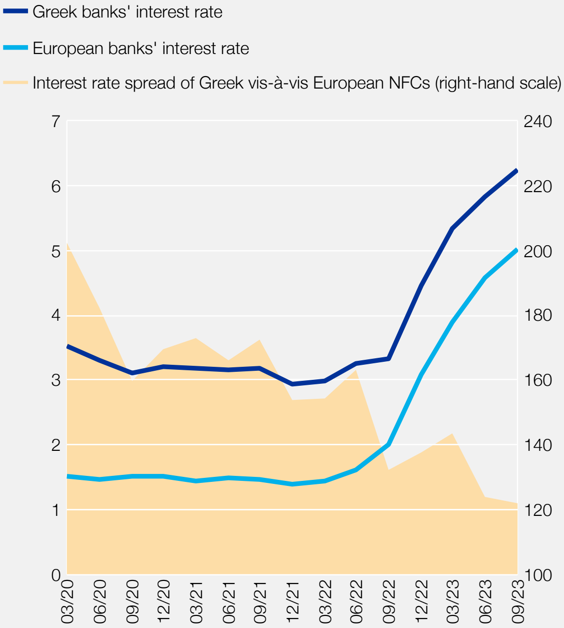
points lower than the level it would have been had the cost of Greek bank deposits followed the path of the costs of European bank deposits over the same period.[7] This leads to a convergence of bank lending rates to NFCs, reflecting the relatively lower funding costs of Greek banks, but also the improvement in the domestic economic environment. This convergence presumably has improved the competitiveness of Greek NFCs.

Conclusions

Since the start of the ECB interest rate hike cycle in July 2022, Greek banks have contained the full pass-through of policy rate increases to the cost of lending to NFCs, thus significantly reducing the Greek NFC lending rate spread vis-à-vis European NFCs. This outcome is attributed to their comparatively lower funding costs, which comes as a result of higher shares of retail deposits in their total liabilities and the overall compression of deposit rates in the euro area. However, the normalisation of monetary policy conditions may weaken the benefit of the high reliance of Greek banks on private sector deposits. An increase in time deposit balances and other banks' liabilities may also increase banks' funding costs.

Chart C Bank lending rate to non-financial corporations

(interest rates in % and interest rate spread in basis points)



Sources: ECB and Bank of Greece calculations.
Note: The lending rate is the composite bank lending rate calculated by the ECB as the weighted average of short-term and long-term lending rates to NFCs.

7 The estimate was based on a sensitivity analysis on the cost of funding from deposits, ceteris paribus. In particular, the interest rate on lending to NFCs was calculated based on the assumption that Greek banks have a share of deposits in total liabilities weighted by the deposit rate of European banks. The estimate decreases to approximately 40 basis points if the sensitivity analysis retains the shares of deposits in the liabilities of Greek banks.

Box VI.5

NEW LAW ON CREDIT SERVICERS AND CREDIT PURCHASERS

Law 5072/2023 transposes into Greek law the provisions of Directive (EU) 2021/2167 on credit servicers and credit purchasers. These are the Credit Servicing Firms (CSFs), as regulated by Law 4354/2015, the relevant provisions of which are replaced in their entirety.

The new law further specifies the authorisation framework for CSFs, providing for more specific conditions and establishing the procedure for the authorisation of CSFs by the Bank of Greece. The new law requires by 29 June 2024 the re-authorisation of all CSFs which had been granted an authorisation under the previous regime, and if it is found that any companies are unable to comply with the new rules, the Bank of Greece may take supervisory measures or even withdraw their authorisation. The new law places great emphasis on the assessment of the members of the Board of Directors and the persons directing the business of CSFs, while qualifying shareholders are assessed both at the time of authorisation and during operation in the event of acquisition or increase of a qualifying holding. In addition, specific provisions are laid down for CSFs in case they receive and hold funds from borrowers, as well as the obligation to have in place procedures to record and handle complaints. In addition, the new law further specifies both the contractual relationship between a credit servicer and a credit purchaser and the conditions for outsourcing part of the credit servicing activities by a credit servicer.

The Bank of Greece remains the competent authority for the authorisation of CSFs while its supervisory role is further strengthened, as the new law introduces stricter requirements for corporate governance and the internal control system. To this end, Executive Committee Act 225/1/30.1.2024 outlining the terms and conditions for authorising these companies was issued, to be followed by a new decision from the Bank of Greece regarding the supervision of CSFs.

The new CSF authorisation framework is now aligned with that applicable to credit servicers in the other Member States of the European Union (EU), thus promoting the cross-border credit servicing activity. The new law sets out the procedure by which authorised credit servicers in the EU can perform cross-border activities freely (with or without establishment in Greece) and lays down provisions for the supervision of such servicers and the cooperation between competent authorities.

With a view to further strengthening borrower protection, the new law sets forth general principles of conduct of CSFs and credit purchasers in their communication with borrowers and introduces requirements to inform borrowers after the transfer of their loans and before the first collection of their debt, as well as upon their request, assigning the relevant responsibilities to the Ministry of Economy and Finance. CSFs are also required to have an electronic system of personalised information, through which borrowers receive direct information about their debt, and the minimum content of such information is defined.

Finally, the new law establishes a stronger framework for administrative sanctions and remedial measures that the Bank of Greece can apply to CSFs, credit purchasers and institutions transferring their loans in cases of breaches of the legislation and Bank of Greece's decisions.

VII OVERVIEW OF THE PRIVATE INSURANCE MARKET

In 2023, the concentration trend in the private insurance industry continued, and mergers of large insurers at an operational level are at an advanced stage. In 2023, as in the past few years, current events were directly linked to the challenges faced by insurers related to both climate change (natural disasters) and the broader macroeconomic environment (inflation, interest rates).

For example, the impact of storm Daniel had a marked footprint in non-life insurance, with the loss ratio for the whole market standing at 56% in the first nine months of 2023, compared with 48% and 42% in the respective periods of 2022 and 2021. Also notable was a 6% increase in the assets of supervised insurance undertakings compared with 30 September 2022, mainly owing to an increase in investments linked to insurance whose investment risk is borne by policyholders.

As regards the macroeconomic environment, the effects of high inflation, coupled with rising interest rates, require insurance undertakings to monitor their technical provisions more closely and to strengthen their risk management framework.

1 KEY MARKET AGGREGATES[1]

On 30 September 2023, 36 insurance undertakings,[2] which are classified on the basis of their authorisation and insurance business, were active in the Greek private insurance market as follows:

- 2 life insurance undertakings;
- 20 non-life insurance undertakings; and
- 14 undertakings (composites) pursuing both life and non-life insurance business (including life insurance undertakings underwriting only non-life business of the "Accidents" and "Sickness" classes).[3]

Of the 36 insurance undertakings listed above, 33 operate and are supervised in accordance with the European Directive "Solvency II", which is applicable in all EU countries since 1 January 2016, while 3 undertakings are, due to their size, exempt from a number of requirements relating to all three main pillars of Solvency II.[4] Of the 33 insurance undertakings subject to the provisions of Solvency II, 12[5] belong to insurance groups with their parent undertaking in other Mem-

1 The cut-off date for information and data used in this chapter is 31.1.2024.
2 Excluding the mutual insurance cooperatives referred to in the first subparagraph of Article 7(1) of Law 4364/2016.
3 The number of insurance undertakings writing both life and non-life insurance is now 14, due to the merger of NN Hellas and NN Hellas II (formerly MetLife Life Insurance S.A.) as from 29.12.2022 and the merger of Allianz Hellas Single Member Insurance S.A. (member of the Allianz S.E. group) and European Reliance General Insurance S.A. as from 1.6.2023.
4 The Bank of Greece, on the basis of the principle of proportionality, has allowed 3 insurance undertakings that meet the required size and business criteria to be exempted from certain Solvency II provisions on solvency requirements, the system of governance and public disclosure.
5 The number of insurance undertakings belonging to groups based abroad now totals 12, due to the merger of NN Hellas and NN Hellas II (formerly MetLife Life Insurance S.A.) as from 29.12.2022, the merger of Allianz Hellas Single Member Insurance S.A. (member of the Allianz S.E. group) and European Reliance General Insurance S.A. as from 1.6.2023, and the acquisition of Horizon General Insurance Co. S.A. by Interamerican Insurance Company S.A. as from 24.1.2023.

Table VII.1 Gross written premiums and claims incurred

(amounts in EUR billions)

	Life insurance		Non-life insurance	
	Jan.-Sept. 2022	Jan.-Sept. 2023	Jan.-Sept. 2022	Jan.-Sept. 2023
Gross written premiums	1.8	1.8	1.6	1.8
Claims incurred	1.3	1.3	0.6	0.8

Source: Bank of Greece.

ber States, 5 insurance groups are under the supervision of the Bank of Greece and the remaining 16 are not part of an EU-based group. In addition, with reference date 31.12.2022, 5 insurance undertakings based in Greece operate in other EU countries under the freedom to provide services.

In addition, according to the latest available data from the European Insurance and Occupational Pensions Authority (EIOPA), as at 31 December 2022, 229 insurance undertakings with their head office in another EU Member State are active in Greece, either under the freedom of establishment (branch) or the freedom to provide services, the financial supervision of which is the responsibility of the competent supervisory authorities of their home countries. The annual gross written premiums of these undertakings at the end of 2022 amounted to EUR 288 million for branches and EUR 1,084 million for business conducted under the freedom to provide services, corresponding to 5% and 18% of the total Greek insurance market. With regard to the motor third-party liability insurance market, in the first nine months of 2023, the market share of insurance undertakings based in another Member State which are writing insurance business in Greece, either under the freedom to provide services or the freedom of establishment, rose, in terms of number of vehicles, to 21% (up from 20% on 31 December 2022).

The financial data presented below relate only to the 33 undertakings operating in the domestic insurance market that are subject to supervision by the Bank of Greece under Solvency II.

The domestic insurance market is characterised by significant concentration, in particular with regard to life insurance undertakings and undertakings pursuing both life and non-life insurance business, as the five largest hold 86% of the relevant market in terms of technical provisions, while the five largest non-life insurance undertakings have a share of 55% in terms of gross written premiums.

Gross written premiums in life insurance in the period January-September 2023 stood at EUR 1.8 billion, marginally higher than in the same period a year earlier. Of this amount, EUR 0.7 billion is linked to investments, down by 7%, and account for 40% of total gross written premiums of life insurance business, compared with 44% in the same period of 2022. At the same time, gross written premiums in insurance with a profit share fell by 12%, and increased by 32% in other life insurance business. The premiums for non-life insurance business in the same period amounted to EUR 1.8 billion, up by 8% compared with the same period a year earlier. Of this amount, the lines of business with the largest market shares are motor third-party liability insurance (31%), fire insurance (20%) and hospital expenses insurance (17%), with year-on-year premium changes of +1%, +11% and +10%, respectively. Over the same period (January-September 2023), claims incurred amounted to EUR 1.3 billion for life insurance, unchanged from the same period a year earlier, and to EUR 0.8 billion for non-life insurance, up by 26% (see Table VII.1).

In non-life insurance, the loss ratio on 30.9.2023 stood at 56% of premiums earned in the same period (compared with 48% on 30.9.2022), while the cost ratio (administration expenses and commissions) stood at 47%, compared with 46% on 30.9.2022.

The total assets of insurance undertakings supervised by the Bank of Greece stood at EUR 19.6 billion on 30.9.2023, up by 6% compared with 30.9.2022. Of total assets, EUR 6.9 billion (36%) were held in government bonds and EUR 2.7 billion (14%) in corporate bonds. Turning to the credit rating of these assets, 96% of government bonds and 86% of corporate bonds were BB- and above. In addition, an amount of EUR 4.3 billion (22%) concerned investments whose investment risk is borne by policyholders (see Table VII.2).

Total liabilities of insurance undertakings amounted to EUR 15.7 billion on 30.9.2023, compared with EUR 14.7 billion a year earlier, with total technical provisions standing at EUR 14.4 billion on 30.9.2023, of which EUR 10.9 billion related to life insurance and EUR 3.4 billion to non-life insurance. Of the life technical provisions, 36% refer to investment-linked life insurance (compared with 33% on 30.9.2022) (see Table VII.3).

The equity of the insurance market stood at EUR 3.8 billion on 30.9.2023, almost unchanged from 30.9.2022. The total Solvency Capital Requirement (SCR)[6] amounted to EUR 2.0 billion and total eligible own funds were EUR 3.8 billion. As regards the quality of the eligible own funds of the insurance market, 92% of these own funds rank in the highest quality class (Tier 1). Despite the challenges of the macroeconomic environment and volatile financial market conditions, all insurers remain solvent, with SCR ratios significantly above 100%. The Minimum Capital Requirement (MCR)[7] for the entire insurance market amounted to EUR 0.7 billion and the corresponding total eligible own funds to EUR 3.5 billion.

Table VII.2 Structure of assets of insurance undertakings

(amounts in EUR billions)

	30.9.2022	30.9.2023
Government bonds	7.1	6.9
Corporate bonds	2.7	2.7
Undertakings for collective investment	1.3	1.5
Deposits, cash and cash equivalents	1.0	0.7
Assets held against index-linked insurance or investment-linked insurance plans	3.7	4.3
Other assets	2.8	3.3
Total assets	**18.5**	**19.6**

Source: Bank of Greece.

Table VII.3 Structure of liabilities of insurance undertakings

(amounts in EUR billions)

	30.9.2022	30.9.2023
Technical provisions – life insurance	7.0	6.9
Technical provisions – index-linked insurance or investment-linked insurance plans	3.4	4.0
Technical provisions – non-life insurance	3.0	3.4
Other liabilities	1.3	1.4
Total liabilities	**14.7**	**15.7**

Source: Bank of Greece.

2 REGULATORY DEVELOPMENTS

At the end of 2023, the negotiations of the EU institutions on the planned review of Solvency II were concluded. The Council and the European Parliament reached a provisional political agreement and the revised text is about to be adopted.

The revised directive strengthens:

- the principle of proportionality by introducing clear provisions describing its application;
- the supervision of groups;
- macro-prudential supervision by introducing corresponding supervisory tools; and
- cooperation between national supervisory authorities in cases of insurance undertakings with cross-border activity.

6 The Solvency Capital Requirement shows the capital that an insurance undertaking must have in order to be able to absorb losses at a confidence level of 99.5% over a one-year horizon.

7 The Minimum Capital Requirement reflects the capital an insurance undertaking must have in order to be able to absorb losses at a one-year confidence level of 85% and represents a level of capital below which policy holders' interests would be seriously jeopardised if the undertaking were allowed to continue to operate.

In parallel, the European institutions' discussions on the introduction of an EU harmonised recovery and resolution framework for (re)insurance undertakings were also completed. The Council and the European Parliament reached a provisional political agreement and a new directive is expected to be adopted. The main objectives of the framework are to protect policyholders and preserve financial stability at Union level.

The most important points provided for in the new directive are:

- the obligation of insurance undertakings to draw up recovery plans;
- the obligation of supervisory authorities to draw up plans for resolving insurance undertakings; and
- the introduction of a number of supervisory tools, with a view to enhancing the ability of supervisors to intervene by taking resolution measures.

VIII MACROPRUDENTIAL POLICY

The ultimate objective of the macroprudential policy of the Bank of Greece is to contribute to safeguarding the stability of the financial system as a whole, by strengthening its resilience and reducing the build-up of systemic risks.

In this context, during 2023 the Bank of Greece: (a) set the countercyclical capital buffer (CCyB) rate for Greece at 0% for the second, third and fourth quarters of 2023 and for the first quarter of 2024; (b) identified Other Systemically Important Institutions (O-SIIs) in Greece for 2023; and (c) set the O-SII buffer rate for 2024 at 1.25% for Eurobank Ergasias Services and Holdings S.A. on a consolidated basis, and at 1% for the following O-SIIs: National Bank of Greece S.A. (on a solo and a consolidated basis), Piraeus Financial Holdings S.A. (on a consolidated basis) and Piraeus Bank S.A. (on a solo basis), Eurobank S.A. (on a solo basis), Alpha Services and Holdings S.A. (on a consolidated basis) and Alpha Bank S.A. (on a solo basis).

Moreover, in 2024 the Bank of Greece adopted for the first time macroprudential borrower-based measures (BBMs) for loans and other credit to natural persons secured by residential real estate, which will come into force in January 2025, and maintained the countercyclical capital buffer rate at 0% for the second quarter of 2024.

1 SETTING THE COUNTERCYCLICAL CAPITAL BUFFER RATE[1]

The countercyclical capital buffer (CCyB) aims to address the procyclicality of credit growth and leverage, ensuring an appropriate level of credit growth and leverage in both the upward and the downward phase of the business cycle. The CCyB rate ranges between 0% and 2.5%, calibrated in steps of 0.25 percentage points or multiples of 0.25 percentage points.[2] The CCyB consists of Common Equity Tier 1 (CET1) capital and is expressed as a percentage of the total risk exposure amount of credit institutions and investment firms that are exposed to credit risk.[3] In an economic upturn, setting the CCyB rate at a level above 0% contributes to building up a capital buffer in excess of the minimum requirements applicable in the context of microprudential supervision. This prevents and mitigates excessive credit growth and leverage. Conversely, in an economic downturn, reducing the CCyB rate releases part of the accumulated capital buffer and can therefore encourage the extension of credit to the real economy, thereby mitigating the impact of the recession.

Under Law 4261/2014 (Article 127),[4] the Bank of Greece assesses on a quarterly basis the intensity of cyclical systemic risk and the appropriateness of the CCyB rate for Greece, and sets or adjusts the CCyB rate, if necessary. This rate was set for the first time in the first quarter of 2016 and has remained at 0% ever since.

The appropriateness of the CCyB rate is assessed by taking into account, among other things, the level of the "standardised credit-to-GDP gap", as defined in Recommendation ESRB/2014/1.

1 The cut-off date for information and data used in this chapter is 31 March 2024.
2 For the purposes of Article 130(2) of Law 4261/2014, the designated authority may set the CCyB rate in excess of 2.5% of the total risk exposure amount, where justified on the basis of the considerations set out in Article 127(3) of Law 4261/2014.
3 The total risk exposure amount is calculated in accordance with Article 92(3) of Regulation (EU) No 575/2013.
4 As currently in force, after being amended by Article 44 of Law 4799/2021, which transposed the provisions of Article 136 of Directive 2013/36/EU as amended by Directive (EU) 2019/878.

In greater detail, the ratio of short-term and long-term debt securities and loans (i.e. credit), as reported in the financial liabilities of the private non-financial sector, to the sum of the figures of the last four quarterly observations of GDP is calculated (in nominal terms, non-seasonally adjusted). Subsequently, the long-term trend of the credit-to-GDP ratio is calculated by applying the Hodrick-Prescott filter. The “standardised credit-to-GDP gap” is the difference between the credit-to-GDP ratio and its long-term trend. A high positive value of the “standardised credit-to-GDP gap” indicates excessive credit growth relative to GDP growth, which poses increased risks to the financial system, thus requiring the setting of the countercyclical buffer rate at a level above 0%.

In addition to the “standardised credit-to-GDP gap”, the Bank of Greece also examines a number of additional indicators to monitor the build-up of cyclical systemic risk.[5] These indicators can be grouped into six categories:

1) Credit developments, where the growth of credit to the domestic private sector and the ratio of outstanding credit to the domestic private sector to GDP at current prices, the growth of loans to households and growth of credit to NFCs are monitored.

2) Private sector indebtedness, where the ratio of outstanding credit to non-financial corporations to GDP, the households’ debt-to-income ratio and debt-service-to-income ratio at origination (DSTI-O) for loans secured by residential real estate are monitored.

3) Potential overvaluation of property prices, where price developments in residential and commercial (offices and retail spaces) real estate are monitored.

4) The strength of bank balance sheets, where the net interest margin, the growth of risk-weighted assets, the leverage ratio and the loan-to-deposit ratio are monitored.

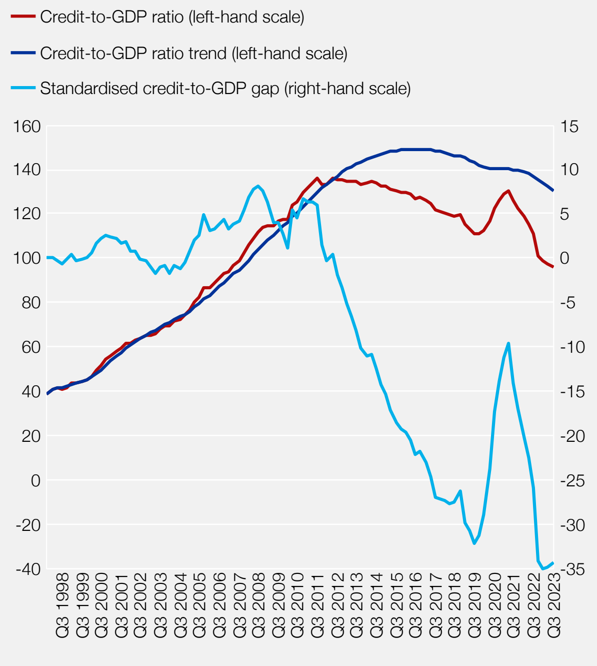
5) External imbalances, as reflected in the evolution of the current account balance-to-GDP ratio.

6) Risk pricing, where the ATHEX Composite Share Price Index and the FTSE/ATHEX bank index are monitored.

In Greece, the “standardised credit-to-GDP gap” has remained in negative territory since 2012. In the third quarter of 2023 it stood at -34.3 percentage points, compared with -34.9 in the previous quarter (see Chart VIII.1), mostly due to the rise in nominal GDP. It should be pointed out that the latest available data on the financial liabilities of the private non-financial sector prior to setting the CCyB rate for Q2 2024 refer to Q3 2023. For this level of the “standardised credit-to-GDP gap”, the benchmark buffer rate[6] (buffer

Chart VIII.1 Standardised credit-to-GDP gap (Q3 1998 - Q3 2023)

(non-seasonally adjusted GDP, Hodrick-Prescott one-sided filter)



Sources: ELSTAT, Bank of Greece and Bank of Greece calculations.

5 For detailed definitions, see Bank of Greece Executive Committee Act No. 202/1/16.6.2021 (in Greek).
6 The Bank of Greece uses the benchmark buffer rate defined in recommendation B, paragraph 3(a) of Recommendation ESRB/2014/1, calculated according to the provisions of Part II of the Annex to that Recommendation, which is used as a “buffer guide”.

guide), as defined in recommendation B, paragraph 3(a) of Recommendation ESRB/2014/1, is zero.

The analysis of additional indicators points to emerging cyclical systemic risks in certain areas, such as residential real estate prices and the current account. Overall, however, it confirms the view of an absence of excessive credit growth and leverage. Therefore, the Bank of Greece maintained the CCyB rate at 0% throughout 2023 and for the first and second quarters of 2024. Given that the CCyB rate remained at the minimum level, the capital requirements on credit institutions were not affected.

2 IDENTIFICATION OF OTHER SYSTEMICALLY IMPORTANT INSTITUTIONS (O-SIIS) IN GREECE AND SETTING OF THE O-SII BUFFER RATE

An O-SII buffer[7] aims to reduce moral hazard and strengthen the resilience of O-SIIs. In this context, moral hazard arises when an institution expects not to be let to fail given its systemic importance ("too big to fail"). Imposing additional capital requirements in the form of an O-SII buffer limits excessive risk-taking by a systemically important institution through higher capital requirements, thus reducing moral hazard by strengthening the systemically important institution's capital buffer to absorb potential losses and thereby limiting contagion risk.

Under Law 4261/2014 (Article 124), the Bank of Greece is responsible for identifying other systemically important institutions (O-SIIs) among the institutions authorised in Greece. O-SIIs are identified on an annual basis so as to determine whether to apply an O-SII buffer, which consists of Common Equity Tier 1 (CET1) capital.

The Bank of Greece identifies O-SIIs using the methodology set out in the relevant guidelines of the European Banking Authority (EBA/GL/2014/10), as adopted under Bank of Greece Executive Committee Act 56/18.12.2015. According to this methodology, the competent authorities calculate a score indicating the systemic importance of each credit institution based on specific criteria. These criteria relate to size, importance for the Greek economy, cross-border activity and interconnectedness of the institution with the financial system (see Table VIII.1). These four criteria each consist of one or more mandatory indicators, which should be used as a minimum by the competent authorities in calculating the score of each credit institution. The score of each credit institution is expressed in basis points (bps). Each competent authority sets a threshold in bps; institutions with a score equal to or higher than that should be identified as O-SIIs. This threshold can be set from 275 bps to 425 bps to take into account the specificities of each Member State's banking sector and to ensure the homogeneity of the group of O-SIIs designated in this way based on the O-SIIs' systemic importance. The EBA proposes 350 bps as an indicative threshold. Moreover, the competent authorities may designate further relevant entities as O-SIIs based on additional qualitative and/or quantitative indicators of systemic risk.

Table VIII.1 Mandatory scoring indicators

Criterion	Indicators	Weight (%)
Size	Total assets	25
Importance	Value of domestic payment transactions	8.33
	Private sector deposits from depositors in the EU	8.33
	Private sector loans to recipients in the EU	8.33
Cross-border activity	Value of OTC derivatives (notional)	8.33
	Cross-jurisdictional liabilities	8.33
	Cross-jurisdictional claims	8.33
Interconnectedness	Intra-financial system liabilities	8.33
	Intra-financial system assets	8.33
	Debt securities outstanding	8.33

Source: EBA, EBA/GL/2014/10.

7 Other systemically important institutions are contrasted with those identified as global systemically important institutions (G-SIIs).

In calculating the systemic importance scores for credit institutions authorised in Greece, the Bank of Greece used the mandatory indicators only (see Table VIII.1) and selected a threshold of 350 basis points.

On the basis of the above, the following credit institutions were designated as O-SIIs for 2023:

- National Bank of Greece S.A.
- Piraeus Financial Holdings S.A.
- Alpha Services and Holdings S.A.
- Eurobank Ergasias Services and Holdings S.A.

Under Executive Committee Act 221/2/17.10.2023, the Bank of Greece decided to set the O-SII buffer rates for 2024 for the institutions identified as O-SIIs at

- 1.25% for Eurobank Ergasias Services and Holdings S.A. on a consolidated basis; and
- 1% for the following O-SIIs: National Bank of Greece S.A. on a solo and on a consolidated basis, Piraeus Financial Holdings S.A. on a consolidated basis and Piraeus Bank S.A. on a solo basis, Eurobank S.A. on a solo basis, Alpha Services and Holdings S.A. on a consolidated basis and Alpha Bank S.A. on a solo basis.

3 MACROPRUDENTIAL BORROWER-BASED MEASURES

The macroprudential borrower-based measures aim to prevent the accumulation of systemic risks stemming from the real estate market and related to private sector financing. The activation of these measures helps curb the excessive easing of credit standards, thus strengthening the resilience of borrowers and reducing credit risk for lenders.

In Greece, the Bank of Greece is responsible for enacting macroprudential borrower-based measures pursuant to article 133A of Law 4261/2014, as inserted by Article 54 of Law 5036/2023, with effect from 29 March 2023. Within its macroprudential mandate, the Bank of Greece may adopt a decision laying down, inter alia, the type of borrower-based measures, the ratios or features of credit to which caps apply, as well as the cap percentages, the type of loans to which borrower-based measures apply, and the terms and conditions of their implementation.

The Bank of Greece introduced borrower-based measures (BBMs) for loans and other credit extended to natural persons and secured by residential real estate in Greece under Executive Committee Act 227/1/08.03.2024, effective from January 2025, thus allowing sufficient time for stakeholders to adjust to the new situation. In particular, the cap on the loan-to-value ratio at origination (LTV-O ratio) was set at 90% for first-time buyers and 80% for second and subsequent buyers. Also, the cap on the debt service-to-income ratio at origination (DSTI-O ratio) was set at 50% for first-time buyers and 40% for second and subsequent buyers. More relaxed caps for first-time buyers were set to facilitate their access to the mortgage lending market. Furthermore, credit providers are allowed to exempt up to 10% of the total number of new loans approved and at least partially disbursed in each quarter at institution or entity level from each of the abovementioned caps. Compliance with the exemption quotas is evaluated separately for first-time buyers and for second and subsequent buyers. It should be noted that the abovementioned BBMs shall not apply to non-performing loans and forborne loans, portfolios of re-performing loans purchased by credit institutions from NPL servicers, as well as to loans and other credit disbursed under national housing policy or green transition programmes.

IX CAPITAL MARKETS

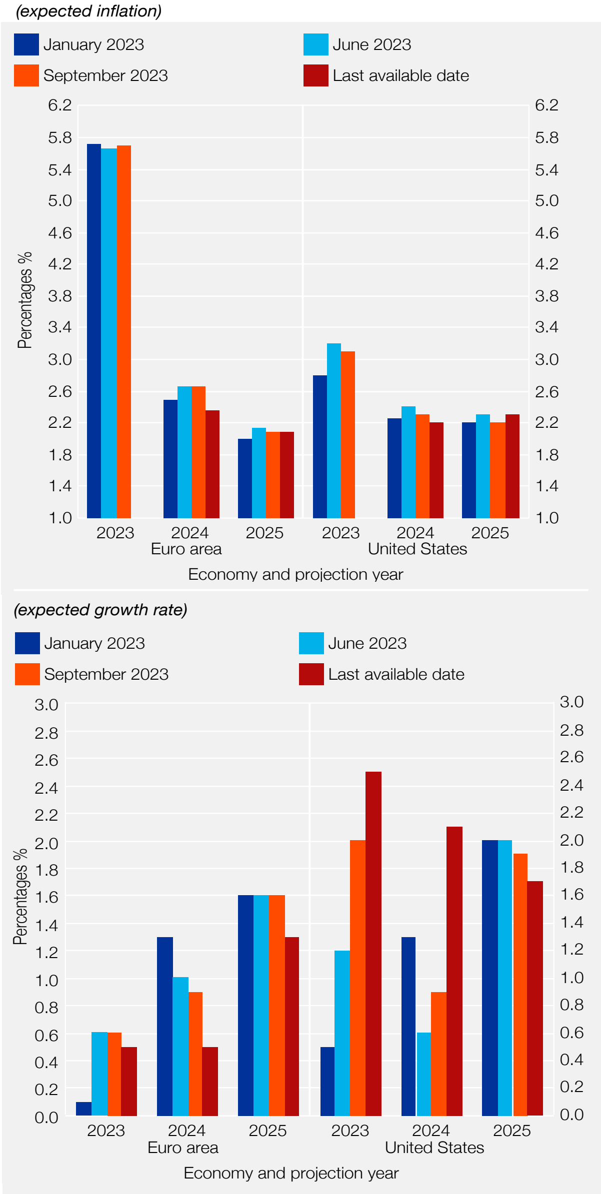
Market-based measures of inflation expectations (see Chart IX.1, top panel, and Chart IX.3) suggest that inflation should decline further in 2024 and 2025 towards central banks' target levels. By the end of January 2024, investors had been expecting sizeable interest rate cuts within the year, which triggered a decline in global bond yields in the fourth quarter of 2023. But investor expectations were revised thereafter, as activity in major economies, particularly in the US economy, has proved to be stronger than expected (see Chart IX.1, bottom panel). The revision of investor expectations led to lower expectations of interest rate cuts in the United States, which has had a similar effect on the euro area. As a result, government and corporate bond yields have increased since the beginning of 2024 both in the United States and in the euro area.

With regard to Greece, the recent sovereign credit rating upgrade to investment grade led to an increase in international investment positions, thus driving Greek bond yields downwards and equity prices upwards (see Box IX.1). This development has already been mirrored in the compression of borrowing costs in the new issues of Greek government and bank bonds, with possible important benefits for the real economy. Structural reforms as well as the robust performance of the Greek economy must, of course, be sustained for further upgrades to materialise.

1 OVERVIEW OF DEVELOPMENTS AND PROSPECTS[1]

Interest rate hikes by major central banks have contributed to containing inflation expectations. In the fourth quarter of 2023, expectations of sizeable interest rate cuts during 2024 were shaped, which translated into lower government and corporate bond yields and higher equity prices globally. Naturally, this development brought about significant divergence between the interest rate derivative (IRD) market-based

Chart IX.1 Expectations about inflation and growth rates



Sources: ECB, Federal Reserve Bank of New York and LSEG.
Note: The top panel shows inflation expectations in the euro area (HICP) and the United States (CPI) on four dates for 2023, 2024 and 2025. The bottom panel shows economic growth expectations in the euro area and the United States on four dates for 2023, 2024 and 2025. The sources of inflation data for 2023 and 2024 are the ECB Survey of Monetary Analysts and the New York Fed's Survey of Market Participants (median of responses). For 2025, data from Reuters Polls were used. The source of data on growth rates is Reuters Polls.

1 The cut-off date for information and data used in this chapter is 21.3.2024.

measures of interest rate expectations and the more moderate view on the future path of interest rates that is repeatedly expressed by central bank officials. Subsequently however, since end-January 2024, as expectations about growth rates in major economies and the US economy in particular were revised upwards, the level of interest rates that is expected by investors has risen and, as a consequence, global government and corporate bond yields have increased.

Turning to Greece, the credit rating upgrades, which reinstated the investment grade status of the Greek economy, led to increased investor positioning in Greek government bonds (see Box IX.1). As a result, Greek yields on the secondary market dropped considerably more compared with the other euro area countries, while a substantially stronger investor participation in new issues of Greek government bonds is also observed, thereby compressing borrowing costs. Finally, the upgrade to investment grade also leads to the compression of banks' borrowing costs, with potential positive spillover effects on the real economy.

2 GLOBAL MONEY AND CAPITAL MARKETS

In 2023 through the second quarter, major central banks worldwide continued raising their key interest rates, but to a lesser extent relative to 2022, keeping interest rates unchanged from the fourth quarter onwards.[2] The weaker pace of interest rate increases, followed by the maintenance of interest rates at the levels seen until the fourth quarter, was mainly driven by declining inflation in both the euro area and the United States, as well as by the fact that longer-term inflation expectations remained well-anchored at central banks' inflation targets. Against this background, global financial conditions improved from the last quarter of 2023 onwards, with bond yields declining markedly and equity prices surging worldwide.

In greater detail, inflation in the euro area and the United States declined visibly in 2023,[3] while for 2024 and 2025 it is expected to continue declining in both regions (see Chart IX.1, top panel) until it has reached, by 2025, an average level close to the respective central banks' inflation targets of 2%. On the one hand, increases in key interest rates pushed inflation downwards and contributed to anchoring inflation expectations at central banks' targets. On the other hand though, in some economies, rising interest rates have lowered investor expectations regarding growth rates (see Chart IX.1, bottom panel). For the euro area in particular, the expected growth rate for 2024 is lower by around 1 percentage point than what was expected in early 2023. By contrast, for the United States the expected growth rate for 2024 is higher, while investor expectations about the economic outlook were also revised upwards, reflecting the higher-than-anticipated resilience of the US economy to the interest rate hikes.

Lower inflation and investor expectations about a sustained decline until it has approached central banks' target levels in the euro area area and the United States created in the fourth quarter of 2023 expectations of sizeable interest rate cuts by the ECB and the Fed in the course of 2024. More specifically (see Chart IX.2), as suggested by IRD prices at end-2023, investors expected interest rate cuts of around 150 basis points by the end of 2024 in both the euro area and the United States.

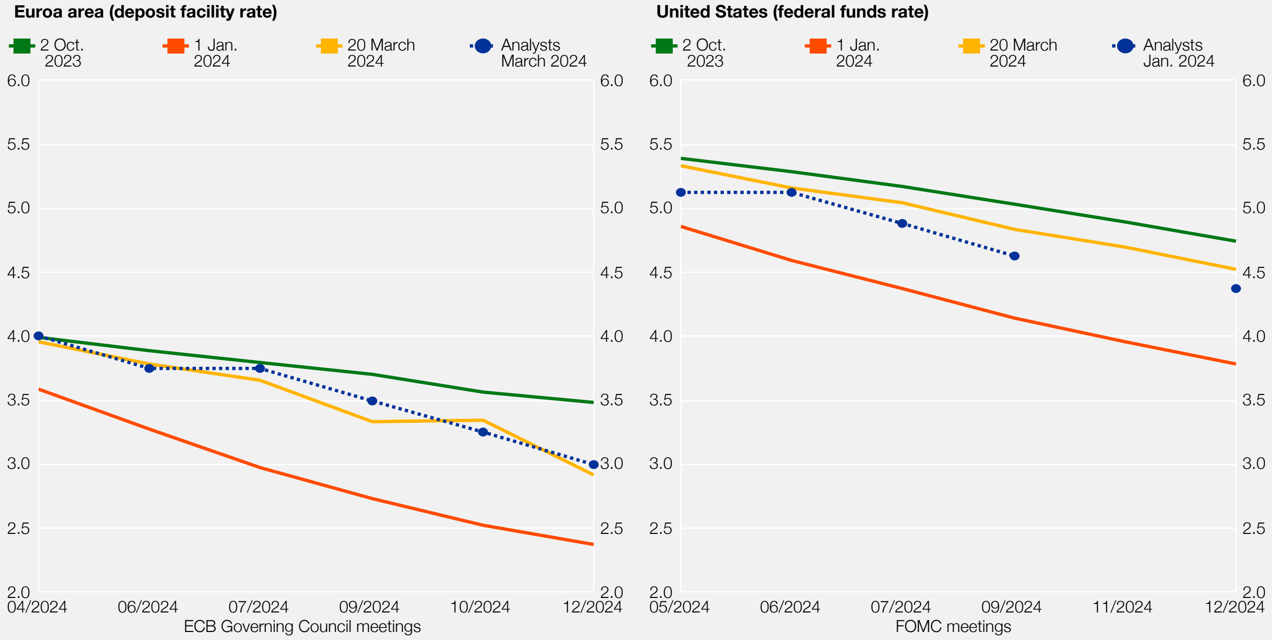
Nevertheless, it should be noted that such expectations were surrounded by high uncertainty, as indicated by the large variations in expectations between analysts and IRD

2 The US Federal Reserve (Fed) raised for the last time the target-range of the federal funds rate (FFR) to 5.25%-5.5% on 26.7.2023, while the ECB also decided to raise its policy rate by 25 basis points on 14.9.2023 (namely, the deposit facility rate (DFR) now stands at 4%, up from 3.75%).

3 Average inflation (i.e. annual change in the consumer price index) in 2022, month-on-month, was 8.2% for the euro area and 8% for the United States. Inflation dropped sharply in 2023, as average inflation came to 5.5% in the euro area and 4.1% in the United States.

Chart IX.2 Expected key interest rates in the euro area and the United States

(percentages %)



Sources: ECB, Federal Reserve Bank of New York and LSEG.
Note: The panels show the expectations about key interest rates in the euro area and the United States, which are based on financial indicators and opinion surveys among analysts. The expected market rates are derived from €STR overnight index swap (OIS) rates for the euro area and from CME's futures contracts for the United States. Respectively, analysts' expectations about the key interest rates of each central bank are drawn from the ECB Survey of Monetary Analysts conducted in March 2024 and the New York Fed's Survey of Market Participants conducted in January 2024.

prices.[4] In the United States, investor expectations regarding interest rates differed considerably from the projections of the FOMC members.[5] The high dispersion of expectations about the path of interest rates was indicative of the uncertainty surrounding such expectations (see Chart IX.2). Later on, as the US economy was exhibiting a much higher-than-expected resilience, investor expectations about interest rates in the United States were adjusted to smaller reductions, also steering expectations about interest rates in the euro area in the same direction.

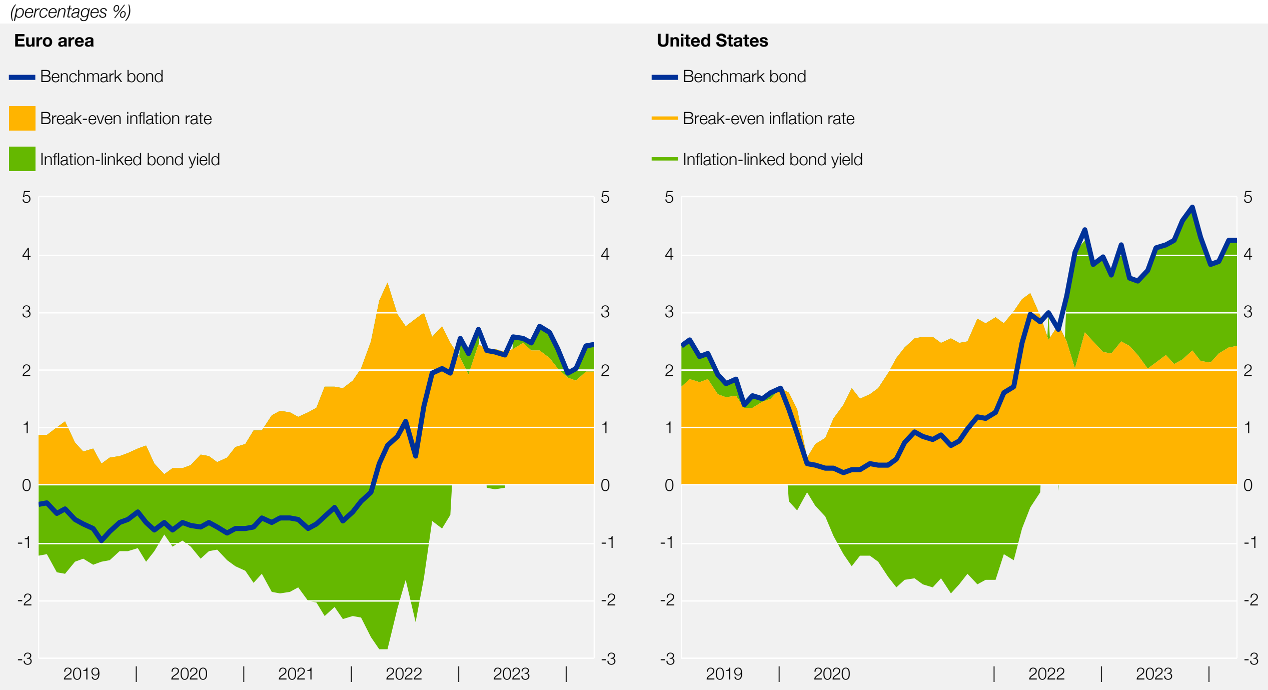
The yield spread between benchmark bonds and inflation-linked bonds, which captures inflation expectations among investors, has been standing very close to the inflation target of 2% both in the euro area and in the United States (see break-even inflation rate in Chart IX.3).[6] This implies that medium-term inflation expectations among investors are in close proximity

4 Up until the end of January 2024, overnight index swap (OIS) rates had been pointing to a high probability (31.1.2024: 75%) that the ECB would reduce interest rates by 25 basis points in April. However, the analysts of large European banks participating in the Eurosystem-wide Survey of Monetary Analysts (SMA) reported that they expected an interest rate reduction of 25 basis points in June. In addition, over the same period, the euro OIS rates implied that investors anticipated interest rate cuts of 150 basis points by end-2024, whereas analysts expected lower cuts, namely of up to 100 basis points. According to the latest estimations by both markets and analysts, the ECB is expected to reduce interest rates by around 100 basis points by end-2024.

5 The most recent projections of the FOMC members (March 2024) suggest that the FFR is anticipated to stand at a range of 4.5%-4.75% at the end of 2024, i.e. down by 75 basis points compared with its current level. On the basis of futures contracts' prices as well as opinion surveys among analysts of major financial institutions (see Survey of Market Participants, Federal Reserve Bank of New York), until end-January it was expected that the Fed would start cutting interest rates in March 2024. By the end of the first quarter of 2024, those expectations about the path of the Fed's policy rates had been revised upwards, with investors on 20.3.2024 expecting interest rate cuts of a cumulative 100 basis points during 2024.

6 On 20.3.2024, the 5-year break-even inflation rate averaged 1.97% in the euro area and 2.41% in the United States, down by 0.67 and 0.96 percentage points, respectively, compared with the levels seen before the respective central banks began raising their key interest rates.

Chart IX.3 Financial measures of expected inflation and real interest rates



Source: LSEG.
Notes: The chart depicts 5-year benchmark government bond yields (blue line), 5-year inflation-linked bond yields (green shaded area) and 5-year break-even inflation rates (spread between nominal and inflation-linked bonds; orange shaded area). For the euro area, German bonds were taken into account as benchmark. Data are of monthly frequency and refer to the period January 2019-March 2024.

to central banks' inflation aim, while long-term expectations are also anchored at the target-level of central banks.[7]

While global bond yields had been rising since early 2023, expectations about interest rate slashes by central banks initially spurred a decline in government bond yields from the beginning of the fourth quarter of 2023 until the end of January 2024 (see Chart IX.4). The decline in yields over the last quarter of 2023 was more pronounced for lower-rated bonds. From end-January 2024 onwards, the upward revision of expected interest rates also pushed up benchmark bond yields in the euro area and the United States.

Compared with long-term bonds, short-term bonds were more strongly affected by changes in investor expectations about key interest rates, with their yields experiencing larger swings. As a consequence, such swings affected the slope of the yield curve in the United States and in large euro area economies, where it turned more negative (see Chart IX.5).[8]

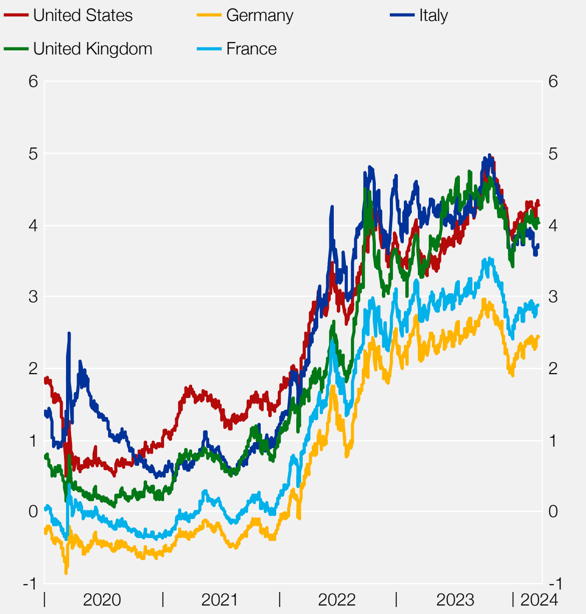
Overall, conditions in global financial markets improved somewhat from the fourth quarter of 20023 until the end of January 2024, but tightened thereafter. Equity prices rose markedly both in the euro area and the United States, mainly driven by the technology sector, while implied volatility indices for stocks were lower in 2023 than in 2022. It should be noted however that low volatility in equity markets continues into early 2024, but implied volatility indices for

7 Long-term inflation expectations have stabilised since end-March 2023. On 20.3.2024, the 10-year break-even inflation rate averaged 2.05% in the euro area and 2.33% in the United States (against 2.07% and 2.86% in July 2022 and in March 2022, respectively). Moreover, on 20.3.2024, the 5-year, 5-year forward inflation-linked swap rate averaged 2.29% in the euro area and 2.57% in the United States (against 2.06% and 2.61% in July 2022 and in March 2022, respectively).

8 Spread between 10-year and 2-year US federal bonds: -20 basis points on 20.3.2024, against -39 basis points on 31.12.2023. The respective spread for German bonds is -47 basis points on 20.3.2024, against -37 basis points on 31.12.2023.

Chart IX.4 Ten-year government bond yields
(January 2020 - March 2024)

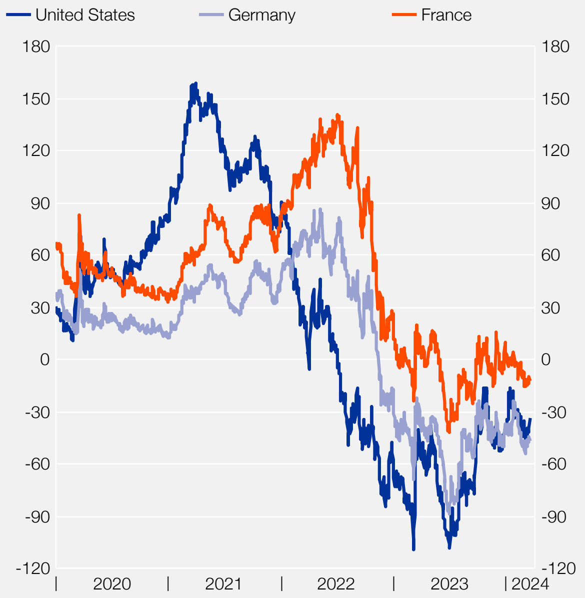
(daily percentage yields)



Source: LSEG.

Chart IX.5 Yield spreads between 10-year and 2-year benchmark bonds
(January 2020 - March 2024)

(daily data, basis points)



Source: LSEG.

bonds are elevated.[9] Therefore, securities prices worldwide are subject to risks that are associated with investor expectations about the future path of key interest rates.

9 The MOVE index mainly reflects interest rate risk and its current level corresponds to the 75th percentile of the distribution.

Box IX.1

THE ALLOCATION OF INVESTMENT FUNDS' PORTFOLIOS IN GREECE AND INTERNATIONALLY

Investment funds are entities that take individual investors' contributions and invest them collectively in equity shares, bonds and other securities portfolios, while the management of these portfolios is delegated to professional fund managers. Together with insurance companies, investment vehicles and pension funds, they belong to the category of non-bank financial intermediaries.

According to the findings of a relevant ECB report issued in the context of the review of its monetary policy strategy, the role of the non-bank financial intermediaries has strengthened significantly over the past decade.[1] According to the Financial Stability Board, the value of the assets of non-bank financial intermediaries amounts to USD 218 trillion, of which investment funds hold about 30%.[2] At the same time, as the role of investment funds is to invest their resources by financing the economy through capital markets, their impact on financing economic activity has increased substantially.[3]

1 See Workstream on Non-Bank Financial Intermediation (2021), "Non-bank financial intermediation in the euro area: implications for monetary policy transmission and key vulnerabilities", ECB Occasional Paper No. 270.
2 See Financial Stability Board, "2023 Global Monitoring Report on Non-Bank Financial Intermediation".
3 Indicatively, recent research argues that capital raising through the issuance of corporate bonds has doubled since 2009 (see OECD (2020), "Corporate bond market trends emerging risks and monetary policy"), namely in a period of constrained bank lending, reflecting the significant increase of investment funds' activities (see Altavilla ,C., M.D. Pariès and G. Nicoletti (2019), "Loan supply, credit markets and the euro area financial crisis", *Journal of Banking & Finance*, 109, 105658).

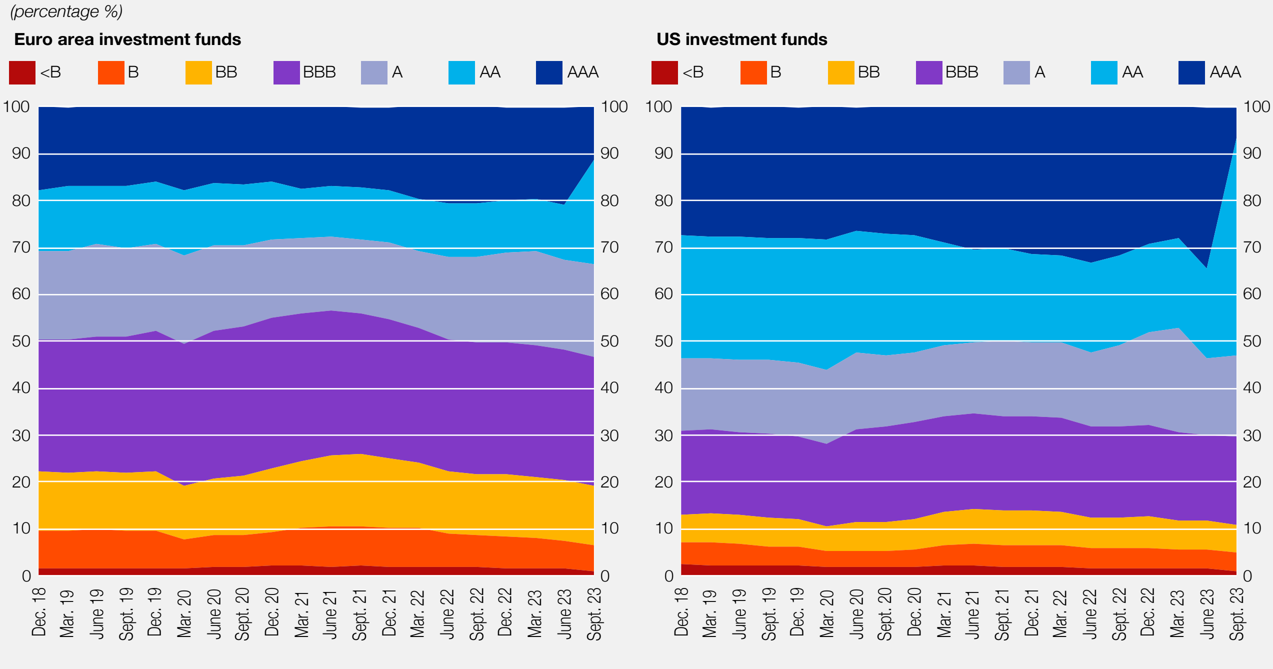
Developments in the international portfolios of investment funds

This box provides an overview of the findings of research conducted by the Bank of Greece on investment funds' positions internationally, with a view to linking them to monetary policy, as well as to the financing of the economy through their holdings of sovereign bonds or bank and corporate equity shares and bonds. To this end, portfolio data have been collected for the period from the fourth quarter of 2018 to the third quarter of 2023.[4] Based on the characteristics of the investment funds' holdings, there follows an analysis of their portfolio strategy and its changes. Focusing on EU and US investment funds, their structure is examined in terms of geographical origin and credit ratings of investment positions.

As regards the geographical structure of investment fund portfolios, US funds have invested around 80 % (±2%) in US securities over time, while European funds invest around 45% (±3%) in European securities and around 34% in US securities. Of course, one reason why international investment funds hold securities originating from the USA is the role of the dollar as an international reserve currency and, for US funds, the need to not incorporate exchange rate risk in their portfolios.[5] At the same time, though, the high credit rating of the United States also affects investment decisions significantly, resulting in US Treasury bonds being considered safe in terms of credit risk. This explains the high share of US securities in both US and European investment fund portfolios.

With regard to the role of credit ratings in the structure of investment fund portfolios, Chart A shows that both European and US investment funds hold a very large proportion of their portfolios in investment grade securities. Specifically, 80% of the value of European investment funds' portfolios and around 88% of the value of US investment funds' portfolios are in investment grade securities, in line with their investment man-

Chart A Portfolio structure of European and US investment funds



Sources: Lipper for Investment Management and Bank of Greece calculations.
Note: The panels show the percentage distribution of the value of the portfolios of European (left panel) and US (right panel) investment funds in terms of the credit ratings of the securities held. Included are securities rated by at least one of the three rating agencies (S&P, Moody's and Fitch), according to Lipper's definition.

4 In particular, data have been collected for around 120 thousand international investment funds, with a total value around EUR 54 trillion, excluding funds of funds. The source of data is Lipper for Investment Management. These data provide information on the investment funds themselves, such as the economy from which they originate, but also on the characteristics of their holdings (type of securities, credit ratings of the legal entities financed, geographical origin of the securities, etc.).

5 See Longaric, P.A. and M.M. Habib, "The US dollar bias of US-fixed income funds" (Box 4), ECB, *The international role of the euro*, June 2021.

dates.[6] In fact, these percentages remain broadly stable for the period under review, indicating the importance of credit ratings in investment funds' strategy design.

However, it is evident that since the fourth quarter of 2021, both European and US investment funds have increased their holdings in higher-rated securities, decreasing their holdings in lower-rated securities. In particular, European funds have increased their holdings of investment grade securities by 6 percentage points (pps) and reduced by an equal amount their holdings of lower-rated securities (i.e. non- investment grade). Similarly, US funds have increased their holdings of investment grade securities by 5 pps, reducing their holdings of lower-rated securities commensurately. Consequently, it appears that the period since the Federal Reserve signalled a gradual tightening of monetary policy is characterised by a rebalancing of the portfolios of European and US funds towards higher-rated securities.[7]

Developments in investment fund portfolios holding Greek securities

During this period, when investment funds worldwide reduced their positions in non-investment grade securities, Greek securities and entities did not have an investment grade rating. However, at the same time, Greece's sovereign credit rating was consistently being upgraded, while prospects for the continuation of this upward trend were visible.[8] Consequently, while the general trend in investment fund portfolios was in the direction of reducing the exposure to non-investment grade securities, investment funds increased their positions in Greek bonds and stocks, possibly in anticipation of the upgrade of Greece's sovereign credit rating.

In order to draw conclusions on changes in the positions of investment funds in Greek securities, the sample was limited to the portfolios of investment funds holding Greek sovereign bonds or stocks. As can be seen from the top panel of Chart B, the total value of international investment fund positions in Greek securities amounted to EUR 18 billion in the third quarter of 2023, of which EUR 7.5 billion held by European funds and EUR 5.8 billion by US funds. These positions have been on a continuous upward trend, starting in the fourth quarter of 2022 and, as a result, the total value of investment fund positions in Greek securities increased by around EUR 5.9 billion. Around EUR 2.1 billion of this increase corresponds to a rise in the value of Greek bond holdings, mainly sovereign bonds, and EUR 3.5 billion to an increase in the value of stocks.

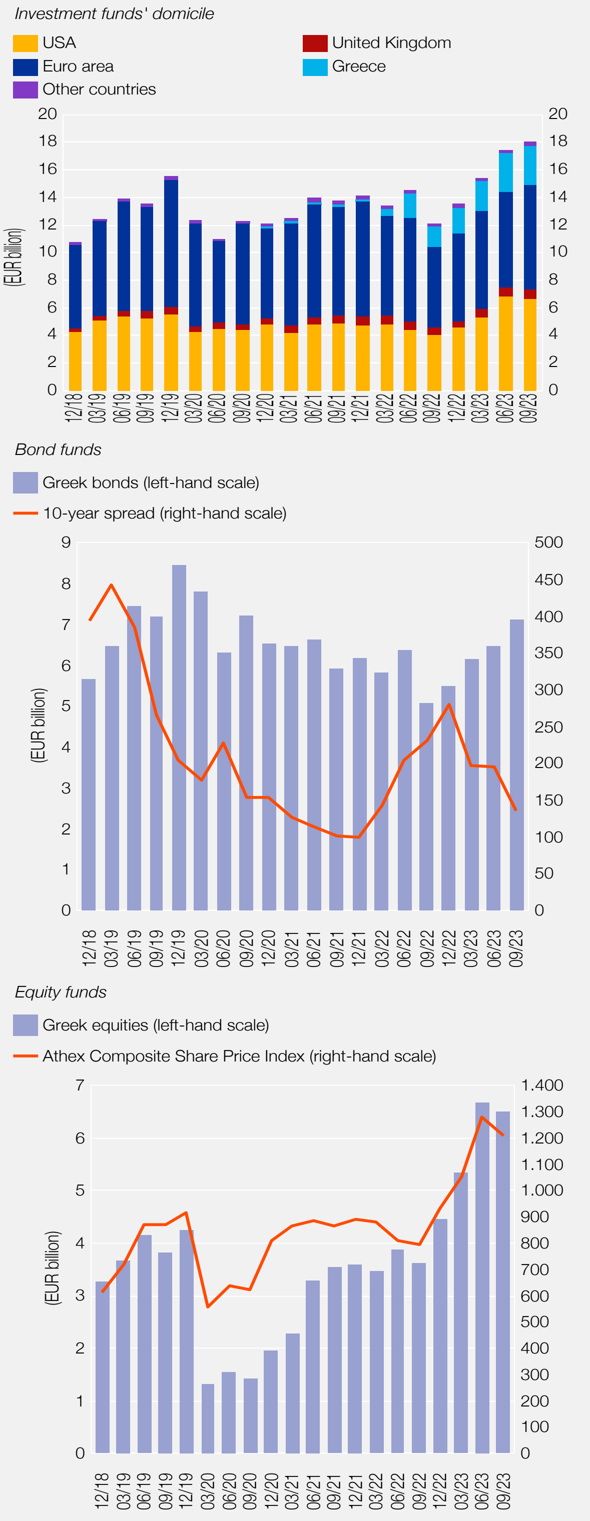
Is this a result of improved valuations of Greek bonds and stocks? In order to answer this question, the value of investment positions in Greek bonds and stocks was recalculated, net of the impact of their valuations.[9]

The middle panel of Chart B shows the evolution of investment funds' positions in Greek bonds, net of the impact of the appreciation of Greek bonds. Thus, the EUR 2 billion increase in holdings of Greek bonds reflected an increase in investment fund positions mainly in Greek sovereign bonds. At the same time, it appears that the increase in Greek sovereign bond positions was related to a significant decline, by around 150 basis points, in the spread of Greek sovereign bonds over the ten-year Bund, while it is, by definition, unaffected by it. In other words, it appears that the significant increase in investment positions, which took place ex ante to the upgrade of Greece's sovereign credit rating to investment grade, explains the decline in spreads of Greek sovereign bonds over German and other euro area sovereign bonds.

The lower panel in Chart B shows the corresponding evolution of investment fund positions in Greek stocks, net of the effects of the rise in their prices on their valuations in investment funds' financial statements. As in the case of

6 See Baghai, R., B. Becker and S. Pitschner (2023), "The use of credit ratings in the delegated management of fixed income assets", Management Science (article in advance).
7 In December 2021, the Federal Reserve started tapering its asset purchases, in accordance with the FOMC's decision of 3.11.2021. The tightening of the US monetary policy, which would at first become less accommodative and gradually restrictive, had already been signalled by Fed officials' statements in the previous months.
8 Specifically, the outlook for Greece's sovereign rating was positive for all three major rating agencies (Fitch announced the change of outlook to positive on 14.1.2022, S&P on 21.4.2023 and Moody's on 21.3.2023).
9 In particular, changes in the market value of investment funds' positions were divided by changes in bond or equity prices (depending on the type of security), thereby isolating the effect on the value of positions stemming from the change in securities' prices for the period under review, so that adjusted values reflect only net changes in investment fund positions.

Chart B Total value of Greek securities in international investment fund portfolios



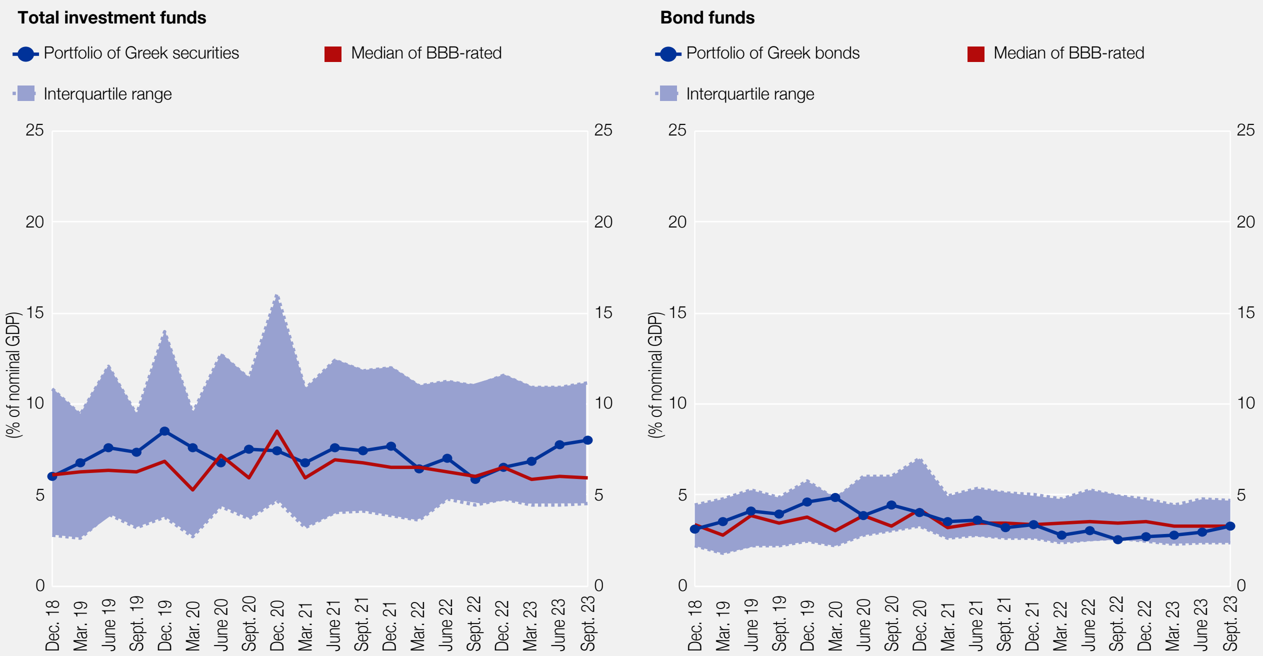
Sources: Lipper for Investment Management, LSEG and Bank of Greece calculations.
Note: The panels show the total value of Greek securities in investment funds portfolios classified by country of origin (top panel). Bond funds are shown in the middle panel and equity funds in the lower panel. The values of equity and bond positions are net of the effect of price changes. Data for the third quarter of 2023 are preliminary.

bonds, investment funds' new positions in Greek equity shares amount to around EUR 2.9 billion. Thus, also in the case of stocks, investment funds seem to have increased their positions in advance of the upgrade of Greece's sovereign credit rating to investment grade, and this increase explains the rise in share prices. Again, this development is related to, but not affected by, the period of strong stock price increases on the Athens Stock Exchange.

Subsequently, the analysis of broader changes in the portfolios of investment funds holding Greek securities (see Chart C) shows that the increase in Greek securities is largely a result of developments related to the Greek economy, such as the anticipated upgrade of Greece's sovereign credit rating to investment grade, rather than broader changes in the composition of these portfolios. Specifically, Chart C displays the average weights for all types of securities (left panel) and bonds (right panel) from the Greek economy and from BBB-rated economies, relative to the size of each economy. Both panels show that investment funds hold a broadly stable percentage of BBB-rated securities, taking into account the size of the underlying economies. At the same time, however, it appears that the increase in exposure to Greek equities and bonds since the fourth quarter of 2022 is not explained by a corresponding increase in the relative size of the Greek economy. Moreover, it appears that the exposure of investment funds to all types of securities (left panel) has risen significantly more than their exposure to Greek sovereign bonds (right panel). Consequently, it appears that since the fourth quarter of 2022 the exposure of investment funds to the Greek economy has increased, from which the private sector of the Greek economy benefits the most, through a relatively higher increase in equity holdings.[10]

10 The economic effects of stock prices on the real economy are explained by the Tobin's Q model, according to which an increase in a firm's share price facilitates the attraction of capital and investment. The link between stock market valuations and investments in the economy has been documented by relevant studies (see e.g. Eberly, J., S. Rebelo and N. Vincent (2012), "What explains the lagged-investment effect?", *Journal of Monetary Economics*, 59, 370-380), even if stock valuations diverge significantly from the companies' fundamentals (see Gilchrist, S., C.P. Himmelberg and G. Huberman (2005), "Do stock price bubbles influence corporate investment?", *Journal of Monetary Economics*, 52, 805-827). Moreover, the same mechanism also operates through the bond market (see Philippon, T. (2009), "The bond market's q", *Quarterly Journal of Economics*, 124(3), 1011-1056), while recent research indicates a strong link of investment with the credit risk pricing (for instance, see Lin, X., C. Wang, N. Wang and J. Yang (2018), "Investment, Tobin's q, and interest rates", *Journal of Financial Economics*, 130(3), 620-640).

Chart C Evolution of positions in Greek securities and BBB-rated securities



Sources: Lipper for Investment Management, IMF (World Economic Outlook) and Bank of Greece calculations.
Note: The chart shows the evolution of the value of investment fund portfolio positions in Greek securities and BBB-rated securities. The left panel includes stocks and bonds, while the right panel only includes bonds. Specifically, the chart depicts investment positions in the Greek market (blue line), as well as the distribution over time of investment positions in countries with a BBB credit rating weighted by the nominal GDP of each country (the red line depicts the median and the shaded area the interquartile range 75%-25%).

Conclusions

Investment funds, like all other types of non-bank financial intermediaries, have an increasingly important role as a source of finance globally. Around 80% of the European funds' and 88% of the US funds' holdings are in investment grade securities. In recent years, and in particular since the fourth quarter of 2021, there has been a shift in their holdings internationally towards higher-rated securities. This observation relates to the tightening of monetary conditions worldwide, leading to a reduction in the exposure of funds to riskier assets.

At the same time, however, investment funds' purchases of Greek bonds and equities increased by EUR 2.1 billion and EUR 3.5 billion, respectively, already in the fourth quarter of 2022, i.e. ex ante to the upgrade of Greece's sovereign credit rating to investment grade. This increase appears to explain the significant decline in Greek sovereign bond spreads and the increase in equity prices for the period up to the third quarter of 2023. In other words, international investment funds seem to have anticipated the upgrade of Greece's sovereign credit rating to investment grade, as during the same period they reduced their exposure to non-investment grade securities. Finally, it is also noteworthy that the increase in the exposure of investment funds benefited significantly the private sector of the Greek economy, as shown by the strong rise in investment funds' holdings of Greek equities.

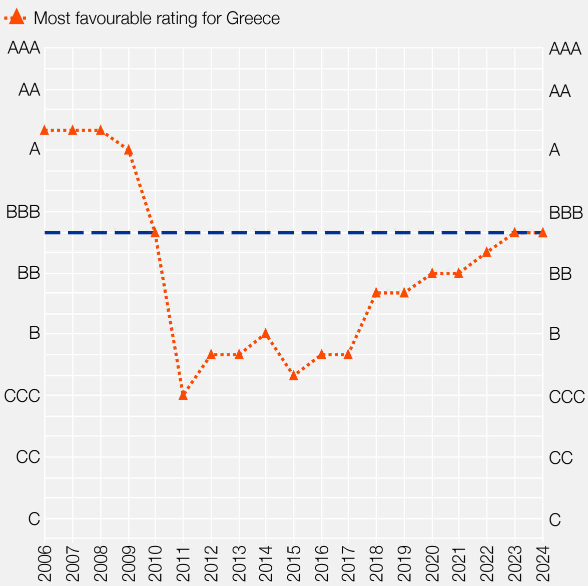
3 GREEK GOVERNMENT BONDS

3.1 Credit rating developments

Greek government bond yields declined more sharply in 2023 than those of other euro area government bonds. This development was largely driven by the expectation of Greece's sovereign credit rating upgrade to investment grade, followed by the upgrade itself. As a matter of fact, an increase in international investment positioning in Greek government bonds had already been observed, even before the upgrade (see Box IX.1).

Chart IX.6 Greece's sovereign credit rating (2006 - 2024)

(annual data)



Sources: Credit rating agencies.
Note: The triangles denote the level of the most favourable long-term sovereign credit rating for Greece at the end of each year, while the dotted blue line denotes the investment grade threshold. The latest available most favourable rating is reported for the current year.

More specifically, on 21 April 2023, S&P revised its outlook on Greece to positive. Then, on 20 October 2023, it was the first among the three major credit rating agencies (Fitch, Moody's and S&P) to upgrade Greece's sovereign credit rating from BB+ to BBB-, i.e. within investment grade territory (see Chart IX.6).[10]

The drivers of this development, according to the credit rating agencies, were the stronger-than-expected growth in the Greek economy, as well as the achievement of fiscal targets and the significant reduction in the public debt-to-GDP ratio.[11] Continuing structural reforms as well as the robust performance of the Greek economy, which will also be underpinned by a faster use of the available NGEU resources, is estimated to support credit ratings, leading to further upgrades.[12]

3.2 Market developments

Investors had already started to price in Greece's sovereign credit rating upgrades to investment grade after the aforementioned revision of its outlook to positive. Against this backdrop, international investment funds' portfolio positions in Greek government bonds increased considerably (see Box IX.1). This increase explains the sharp decline in Greek government bond yields, which had already taken place since the second quarter of 2023 and was stronger than the general trend of declining yields for European sovereign bonds.

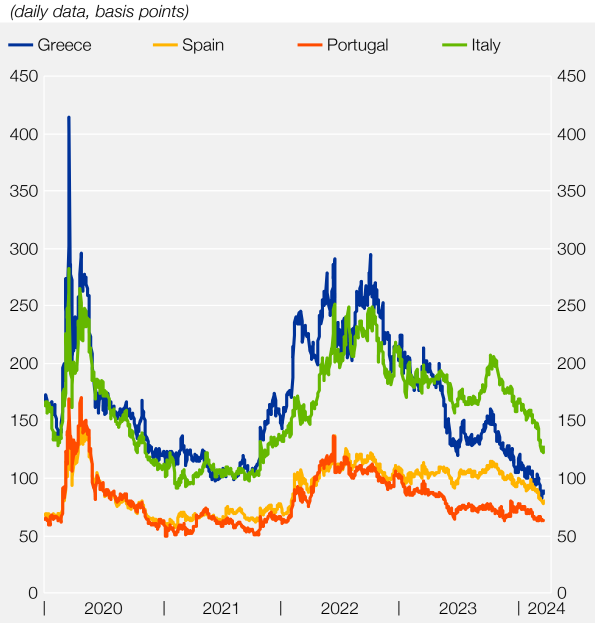
In this environment, their yield spreads vis-a-vis other euro area government bonds have narrowed significantly (see Chart IX.7). In particular, the spread between the Greek ten-year government bond and its German counterpart narrowed between January and December 2023 (by 98 basis points to 105 basis points). Over the 1.1-20.3.2024 period, this spread narrowed by another 15 basis points to 90 basis points. Meanwhile, since the second quarter of 2023 the yield on the Greek ten-year government bond has been hovering at quite lower levels relative to the Italian ten-year government bond (spread between Greek and Italian 10-year bonds on 20.3.2024: -38 basis points, against -11 basis points on 1.1.2023). Therefore, it follows that the upgrades of Greece's sovereign credit rating have contributed to considerably lower yield levels for Greek government bonds at end-2023 compared with the beginning of the year across the entire yield curve (see Chart IX.8).

10 In early December, another major agency, Fitch Ratings, upgraded Greece to BBB from BB+. Before that, two more agencies among those accepted by the Eurosystem as External Credit Assessment Institutions (ECAIs), namely Scope Ratings in August 2023 and Morningstar DBRS in early September 2023, had upgraded Greece to investment grade category. Finally, it should be noted that Moody's had also upgraded Greece by two notches (from Ba3 to Ba1, which corresponds to BB+) in September, bringing its rating closer to that of the other agencies.

11 This positive development was to be expected according to Bank of Greece analysis (for instance, see Box IX.2 "The drivers of an upgrade in Greece's sovereign credit rating", *Annual Report 2022*).

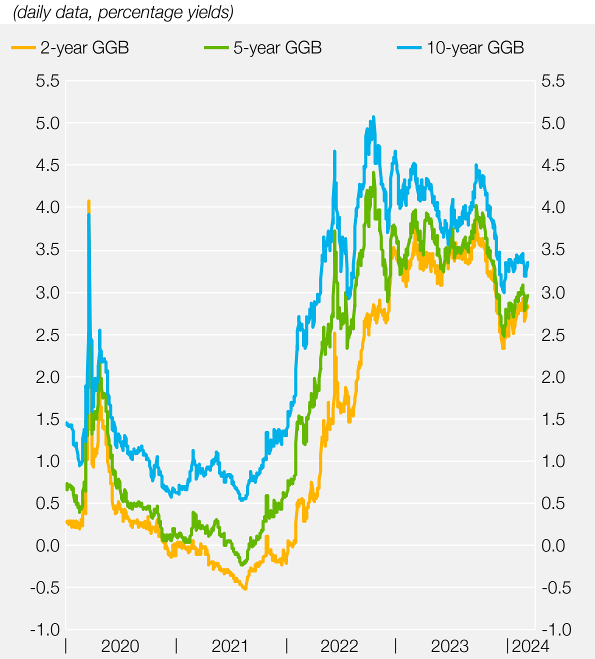
12 For more details about the factors that should contribute to further upgrades, see Box 5 "The drivers of Greece's sovereign credit rating upgrades", Bank of Greece, *Monetary Policy Interim Report 2023 – Executive Summary and Boxes*, December 2023.

Chart IX.7 Ten-year government bond yield spreads (January 2020 - March 2024)



Source: LSEG.
Note: The lines show the yield differentials of government bonds issued by the reviewed countries against German 10-year government bonds.

Chart IX.8 Greek government bond yields (January 2020 - March 2024)



Source: LSEG.

In 2023, the Greek government raised more funds with a medium-to-long term maturity from international capital markets compared with 2022. Bond issues during 2023 saw their weighted average yield rise relative to 2022, in line with rising sovereign bond yields globally before the fourth quarter of 2023.[13] In 2023, short-term securities (Treasury bills of 3, 6 and 12 months) totalling EUR 24.9 billion (up from EUR 23.2 billion in 2022) were issued, with higher weighted average issue costs as well (3.50%, against 0.68% in 2022). Of course, it should be noted that the cost of borrowing for the Greek government is substantially lower in the recent 2024 bond issues, reflecting the upgrade to investment grade, which has resulted in international investors' stronger demand for Greek securities and Greek government bonds in particular (see Box IX.1).[14]

Finally, trading volumes on the secondary market improved in 2023, posting a year-on-year increase. More specifically, the average daily value of transactions on the Electronic Secondary Market for Government Securities (HDAT) came to around EUR 106 million in 2023, compared with EUR 83 million in 2022. The average daily trading volume on the Dematerialised Securities System (DSS), which settles both domestic and international transactions, reached EUR 583 million in 2023, up from EUR 475 million in 2022.

13 In 2023, fixed-rate bonds were issued, amounting to a total of EUR 11.5 billion with a weighted average yield of 4.20%. In 2022, fixed-rate bonds totalling EUR 6.1 billion, with a weighted average yield of 2.46%, and variable-rate bonds (123 basis points above the Euribor rate) totalling EUR 2.2 billion had been issued.

14 For example, a very strong participation from foreign investors was observed in the launch of the new ten-year benchmark bond, with bids reaching as high as EUR 35 billion for an issue worth EUR 4 billion. As a result, the weighted average yield stood at 3.478% (coupon 3.375%). This compares to the reopenings of past ten-year bonds that took place in the second and third quarters of 2023 for much lower amounts and which saw their yields increase by 50-80 basis points. In addition, a total of EUR 900 million was raised through four bond reopenings, with a weighted average yield of around 2.9%. According to the PDMA's "Funding strategy for 2024", the Greek government is expected to raise EUR 10 billion from international capital markets, without taking account of green bond issues throughout 2024.

4 GREEK CORPORATE BONDS

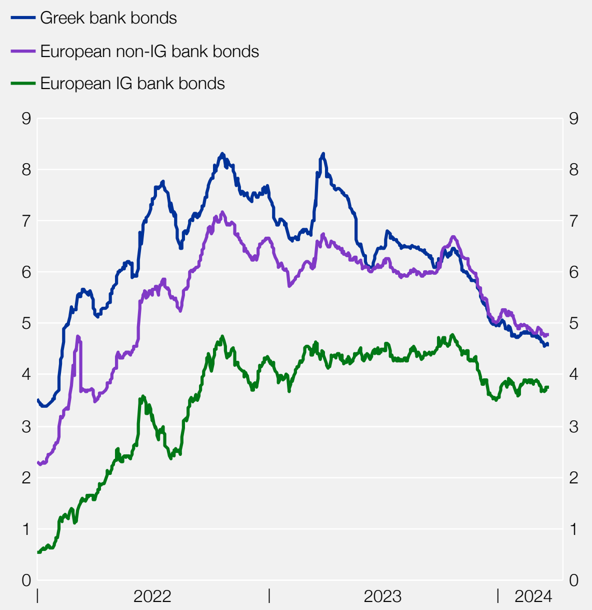
4.1 Greek bank bonds

Greek banks are very active in bond issuance on international bond markets, in order to meet the minimum requirement for own funds and eligible liabilities (MREL).[15] Since April, when S&P announced a positive outlook on Greece's sovereign credit rating, the average yield of senior bank bonds, weighted by the value of the underlying bonds, has dropped by 294 basis points (see Chart IX.9). An even more important development, as it feeds into banks' financial results (see Box VI.4), is the issuance of new bonds by Greek banks at lower borrowing costs.

More specifically, after the Greek sovereign's upgrade to investment grade, the four significant Greek banks have issued senior bonds with a weighted average yield of 5.5% and a term-to-maturity of 5-6 years, while before the upgrade the weighted average yield at issue for senior bonds with the same maturity issued by the same banks was 7%. It should also be recalled that key interest rates have risen after the upgrade. In the light of the above, it is confirmed that Greece's recent upgrade to investment grade will make an important positive contribution to both the profitability and the resilience of the Greek banking system.[16]

Chart IX.9 Yields on senior bonds issued by Greek and European banks (January 2022 - March 2024)

(daily percentage yields)



Sources: Bank of Greece and LSEG.
Notes: The blue line depicts the evolution of the average yield on senior bonds issued by Greek banks, weighted by the value of the issue. The green line shows the iBoxx yield on investment grade (IG) senior bonds issued by European banks, while the purple line shows the iBoxx yield on the respective non-IG bonds.

4.2 Bonds issued by Greek non-financial corporations

In 2023, Greek non-financial corporations launched two bond issues, raising EUR 600 million from the markets, while in 2024 two more bonds were issued by Greek non-financial corporations, with funds raised amounting to EUR 330 million.[17] Greek corporate bond yields remained broadly unchanged in 2023, as the gains from the successive positive developments in the credit ratings of Greek government bonds largely offset the upward pressures exerted by higher interest rates. Furthermore, yields moved along a similar path as those on BBB-rated bonds, decoupling from high-risk bonds (see Chart IX.10).

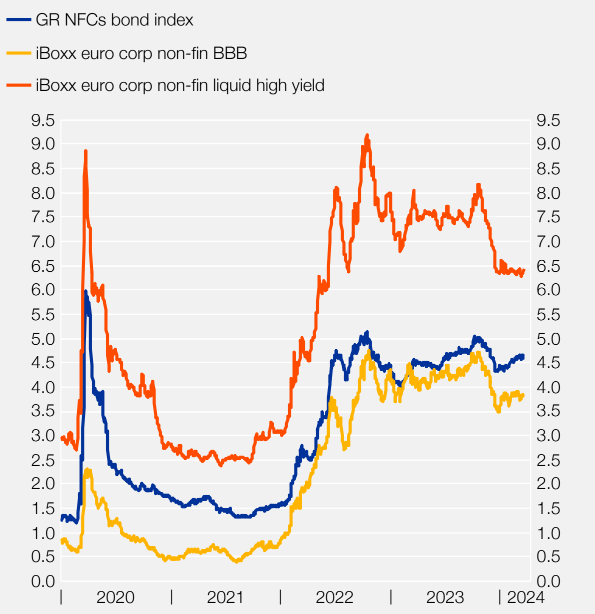
15 The four significant Greek banks have issued bonds worth around EUR 15.3 billion since 2018. Out of the outstanding amount of about EUR 14.4 billion, EUR 8 billion was raised through the issuance of senior debt, while the remaining EUR 6.4 billion was raised through the issuance of subordinated debt. On the basis of end-September 2023 data from the Single Resolution Board (SRB, MREL Dashboard), there is still around EUR 6.6 billion to be covered by such bond issues until the end of 2025. Ever since, banks have issued bonds worth EUR 3.8 billion.

16 See Anastasatou, M., H. Balfoussia, Z. Bragoudakis, D. Malliaropulos, P. Migiakis, D. Papageorgiou and P. Petroulas, "Effects of a sovereign credit rating upgrade to investment grade on the Greek economy", Bank of Greece, *Economic Bulletin*, No. 58.

17 More specifically, in 2023, Mytilineos S.A. issued a 7-year bond, raising EUR 500 million with a 4% coupon, and IDEAL Holdings S.A. issued a 5-year bond, raising EUR 100 million with a 5.5% coupon. In January 2024, Autohellas issued a 5-year bond worth EUR 200 million with a 4.25% coupon and in February Intralot issued a 5-year bond worth EUR 130 million with a 6% coupon. Since 2013, Greek non-financial corporations, through their subsidiaries, have issued in international markets bonds amounting to a total of about EUR 12.6 billion, with their outstanding amounts, after interim maturities, coming to EUR 4.8 billion. In the domestic market, up until March 2024, bonds totalling around EUR 4.9 billion were issued by Greek non-financial corporations, with their outstanding amount standing at EUR 4.1 billion.

Chart IX.10 Greek and other European non-financial corporate bond yields (January 2020 - March 2024)

(daily data, percentage yields)



Sources: Bank of Greece and LSEG.
Notes: The GR NFCs bond index denotes the average weighted bond yield for Greek non-financial corporations that have issued eurobonds in international bond markets since December 2012. The iBoxx indices are weighted average indices for euro-denominated non-financial corporate bonds. The "iBoxx euro corp non-fin BBB" index comprises BBB-rated corporate bonds and the "iBoxx euro corp non-fin liquid high yield" index comprises high yield/non-investment grade corporate bonds.

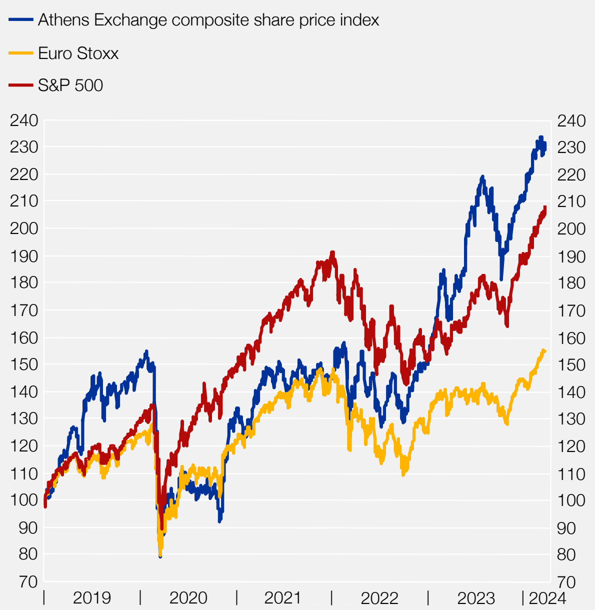
5 STOCK MARKET

Global stock prices rose markedly in 2023 (MSCI World: +21.8%; S&P 500: +24.2%; EURO STOXX: +15.7%). Over the first months of 2024, stock prices continued to recover and implied volatility subsided.[18] In this environment, share prices on the Athens Exchange (Athex) rose sharply in 2023 (change in the composite index +39.1%; see Chart IX.11), faring considerably better than share prices in the United States and the euro area, owing to increased demand for Greek shares by international investors (see Box IX.1). The banking index outperformed the Athex composite index (FTSE/Athex banks: + 65.7%), mainly in line with Greece's upgrade to investment grade, as well as with banks' higher profitability and credit rating upgrades.

The considerably stronger demand for Greek shares by international investors has greatly facilitated the disposal of the Hellenic Financial Stability Fund (HFSF)'s stakes in Greek banks. The successful disinvestment of the HFSF from the four systemic banks attests to the banks' improved attractiveness and prospects. More specifically, in October 2023, the HFSF sold back to Eurobank the shares it held in the bank for a total of EUR 93.7 million. Moreover, immediately after Greece's upgrade to investment grade by S&P, the Italian banking group UniCredit S.p.A. announced its offer to acquire the HFSF's entire stake in Alpha Bank. The bid was accepted, leading to the transfer of about 8.98% of the bank's shares at a total price of EUR 293.48 million (or EUR 1.39/share). In November, the divestment of part of the HFSF's stake in National Bank of Greece was completed, with the launch of a public offering of around 20% of the bank's share capital at a price of EUR 5.3 per share. Finally, in March 2024, the HFSF disposed of its entire stake in Piraeus Bank (27%

Chart IX.11 Share price indices (January 2019 - March 2024)

(1.1.2019=100, daily data)



Source: LSEG.
Note: The indices were rebased to the beginning of 2019, i.e. the stock prices as of 1 January 2019 are set at 100 and all other observations capture the evolution of the indices relative to the reference value.

18 In greater detail, between 1 January and 20 March 2024, S&P 500 rose by 9.5%, EURO STOXX by 7.7%, MSCI World by 7.8% and FTSE/Athex by 9.6%. VIX and VDAX averages were lower year-on-year (by 34% and 31%, respectively). Both in the United States and in the euro area, the high-tech index has outperformed the general index.

of the share capital) for a total of EUR 1.35 billion (i.e. EUR 4/share). The public offering of Piraeus Bank's shares was met with strong investor demand and was oversubscribed by almost eight times.

Trading activity (average daily volume of transactions) in 2023 amounted to EUR 110.5 million, up by 50% relative to 2022. Between 1 January and 20 March 2024, the average volume of transactions grew by about 8% year-on-year, reaching EUR 127 million. It should be noted that in 2023 nine companies were delisted from the primary market, while three companies were listed on the primary market and two companies were listed on the alternative market. In early 2024, one company was listed on the primary market, attracting strong investor demand.[19] Finally, share capital increases amounting to around EUR 494 million were effected in 2023 by Athex-listed non-financial corporations, compared with about EUR 501 million in 2022.

19 90 million shares in Athens International Airport S.A. were offered by the Hellenic Republic Asset Development Fund (HRADF) at EUR 8.2 each. The combined offering was oversubscribed by 11.6 times, while the institutional offering was oversubscribed by 10.8 times (see the announcement regarding the outcome of the offering by the "Hellenic Republic Asset Development Fund S.A.", 6.2.2024).

X ENVIRONMENT, ENERGY AND CLIMATE CHANGE

Humanity's effort to tackle global warming and its negative consequences is on a turning point as regards its continuation with the required intensity. On the other hand, the outcome of the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28, December 2023) has been positive, dispelling initial concerns, albeit leaving certain issues yet to be resolved. Also, in the EU, the European Commission published (February 2024) a recommendation on the necessary reduction of greenhouse gas emissions by 2040, in order to reach the target of climate neutrality by 2050. In addition, a recent report by the International Energy Agency notes a highly significant increase in global energy production capacity from renewable sources.

1 GLOBAL REAL DEVELOPMENTS AND POLICIES ON CLIMATE CHANGE AND ENERGY, SCIENTIFIC FINDINGS AND REPORTS[1]

Humanity's fight to prevent climate catastrophe has reached a turning point due to a combination of factors. The most important of them are:

First, the implications of the two ongoing wars (in Ukraine since February 2022 and in the Middle East since October 2023) on energy supply, but also on the free movement of raw materials and commodities.

Second, the "triangular" economic competition among the EU, US and China, which – apart from the positive aspect of emulation that favours economic progress – may hamper trade in critical raw materials that are especially useful in the effort of decarbonisation or in equally important products, such as microchips.[2]

Third, the fact that the EU countries started implementing the package of measures that have already been decided at Community level in order to achieve decarbonisation and climate neutrality in the medium term – while being faced again with the restrictive fiscal rules that had been suspended in the white heat of the coronavirus pandemic, making it difficult to adequately compensate or subsidise those affected by the relevant arrangements (the mass reactions of farmers in many EU countries over the last months are characteristic).

Fourth, the intensity and proliferation of extreme weather events associated with climate change, which caused major natural disasters all over the world, entailing the loss of human lives, destruction of infrastructures and severe consequences on economic sectors, the environment and biodiversity, while at the same time putting a burden on State budgets and social security funds.

Fifth, despite the evident change in climate, an observed fatigue in public opinion regarding this issue – either because government policies do not take sufficiently into account the adverse distributional effects of the energy transition measures (for the abovementioned

1 The cut-off date for information and data used in this chapter is 11 March 2024.
2 A semiconductor sheet upon which an integrated circuit is built, also called a chip.

reasons) or due to the increased influence of extremist political forces that deny climate change.[3]

The most important policy decisions in 2023 for addressing the climate crisis were the result of a broad consensus during the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28), which took place in Dubai, United Arab Emirates, from 30 November to 12 December 2023. The Conference set the overall direction for the transition away from fossil fuels and took other important decisions, leaving however certain pending issues. These decisions,[4] as well as the first global stocktake[5] eight years after the Paris Agreement, are presented and discussed in Box X.1.

At the EU level, it is encouraging that the European Commission (in its communication[6] dated 6.2.2024 to the European Parliament, the Council and EU institutions representing social partners and the regions) sets the target of reducing emissions by 90% until 2040, in order to achieve climate neutrality by 2050. The 2040 target was set after an assessment of the alternative pathways to the objective for 2050 and is consistent with the already agreed target for a 55% reduction of emissions by 2030 (all reductions are compared against 1990), as well as with the recent recommendations of the European Scientific Advisory Board on Climate Change (ESABCC).[7] Relevant legislative proposals for reaching the target are expected to be presented by the next European Commission, after the European elections in June. Meanwhile, however, there is a delay in the completion of other legislative initiatives, the adoption of which is recommended by the ESABCC. These are: the Critical Raw Materials Act, the Net-Zero Industry Act and the Nature Restoration Law. It is particularly positive that the Regulation on nature restoration was finally adopted by the European Parliament on 27 February 2024, following an agreement with the Member States. It provides for the gradual restoration of nature's degraded ecosystems in three phases (setting out targets for 2030, 2040 and 2050), with a particular reference to the improvement of biodiversity in agricultural ecosystems.[8] The initiatives still pending are related to dealing with the issue of cheap Chinese imports (e.g. solar panels), or the provisions of the US Inflation Reduction Act, some of which are deemed to discourage the exports of European products, or investments in Europe linked to tackling climate change. Nevertheless, so far such initiatives have come up against vested interests. However, acknowledged scientific bodies and committees stress the need for a consistent implementation or even acceleration of the scheduled measures, so as to avoid deviations from the targets of the Paris Agreement.[9]

As already mentioned, in many EU countries farmers react to measures that are related to tackling climate change. The relevant provisions, envisaging the transition away from fossil fuels towards ecological farming, carry adverse distributional effects, since they are not offset by compensations or subsidies to the affected farmers. However, providing adequate compensation is becoming difficult for Member States, as they are again subject to the restrictive fiscal rules that had been sus-

3 Nonetheless, a recent survey that interviewed a representative sample of 130,000 individuals across 125 countries revealed broad support for climate action (86%-89%) and widespread willingness for personal contribution (69%). At the same time, however, respondents' perceptions of the attitude of their fellow citizens imply that they significantly underestimate the support and positive willingness of others. See Peter Andre et al., "Globally representative evidence on the actual and perceived support for climate action", Nature Climate Change, 9.2.2024.

4 For a presentation, see COP28 The UAE Consensus, 19 December 2023.

5 Outcome of the first global stocktake.

6 European Commission Communication, "Securing our future – Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society", 6.2.2024.

7 European Scientific Advisory Board on Climate Change, *Towards EU climate neutrality: progress, policy gaps and opportunities – Assessment report 2024*, 18.1.2024.

8 See European Parliament, press release, 27.2.2024.

9 The "Scientific dialogue on the Environmental and Institutional dimensions of the Climate Crisis" at the Academy of Athens, on 13 February 2024, between the Academy of Athens members Christos Zerefos and Prokopis Pavlopoulos was also relevant to this issue.

pended in the white heat of the COVID-19 pandemic. Germany faces additional restrictions, as the Federal Constitutional Court, in a judgement it pronounced on 15 November 2023,[10] declared a Budget Act of the German government that concerned the use of a Fund for the financing of expenditure to be void, thus significantly limiting its fiscal space. In any case, climate crisis is one of the major issues of concern for European citizens in view of the upcoming European elections.[11]

At international level, it is interesting that the recently elected president of Argentina, Javier Milei, while declaring himself to be a denier of climate change and to oppose the targets of the Paris Agreement before the elections, changed his attitude after taking office and sent a delegation of his country to COP28. On 10 December 2023, the head of this delegation stated to Reuters that Argentina remained committed to the Paris Agreement and would honour all the environmental agreements it had signed, explaining that "the market demands [from the president] to include [in his policy] measures to address climate change".[12] By contrast, in the US, the Heritage Foundation (a conservative think tank) has prepared a very extensive action programme for all the branches of federal government since the summer of 2023, in the event that the candidate of the Republican Party is elected President in November 2024 and assumes office in January 2025.[13] According to this programme, all legislation to address climate change and promote clean energy would be repealed.

The need for faster implementation of the climate crisis policy measures that are laid down both in the Paris Agreement and in EU decisions arises also from the continued increase in global temperature. According to the EU's competent observatory (Copernicus Climate Change Service), the temperature of the atmosphere in 2023 was higher by 1.48°C compared to pre-industrial levels and January 2024 was the warmest on record, while similar observations also hold true for the temperature of the oceans. This development was compounded by a dramatic increase in extreme weather events and the ensuing natural disasters across continents, as well as in Greece, resulting in the loss of human lives, the destruction of infrastructure and houses, severe blows on economic sectors (such as agriculture and tourism) and a very serious degradation of the biodiversity of certain areas (see also Box X.2).[14] After the 15th UN Biodiversity Conference (COP15, Montreal, December 2022),[15] the 16th Conference will be held in Colombia on 21.10-1.11.2024. Besides, the European Environment Agency, in its first climate risk assessment published on 11 March, considers that these risks threaten Europe's energy and food security, the ecosystems, infrastructure, water reserves, financial stability and human health, warning that they have reached critical levels and may prove devastating if no urgent and decisive action is taken.[16]

According to a report from the International Energy Agency,[17] an important positive development during 2023 was the great increase in the power generation capacity from renewables, which is forecast to continue until 2026 – when electricity generation from nuclear energy is also expected to peak. It should be recalled that nuclear energy has qualified as "green" in the EU's investment taxonomy, subject to specific criteria. As far as nuclear fusion is concerned, research is ongoing, but – as already mentioned in the *Annual Report 2022* – it will take two or more

10 See Press Release 101/15.11.2023.
11 Ivan Krastev and Mark Leonard, "A crisis of one's own – the politics of trauma in Europe's election year", European Council on Foreign Relations (ECFR), *Policy Brief*, 17.1.2024.
12 Reuters Interview, 10 December 2023.
13 Project 2025 (Presidential Transition Project), *Mandate for Leadership – The Conservative Promise*, Heritage Foundation, 2023.
14 As regards biodiversity and the risks that threaten it, on 2 May 2023, the report entitled "Resilience of the Greek Forest Ecosystems to Climate Change" of the Committee for the Resilience of Greek Forest Ecosystems to Climate Change (EADO) was presented at the Academy of Athens. Besides, on 24 May 2023, The Hellenic Federation of Enterprises published a Special Report entitled: "Protecting biodiversity and the new framework of obligations for firms".
15 See *Annual Report 2022*, p. 213.
16 European Environment Agency, *European climate risk assessment – Executive summary*, 11.3.2024.
17 International Energy Agency (IEA), Electricity 2024 – Analysis and forecast to 2026, 24.1.2024.

decades for its commercialisation for electricity generation to become possible. It is worth noting that in early February 2024 it became known that the pilot European fusion programme – Joint European Torus – that had been operating in the UK since 1984 would be replaced by the Spherical Tokamak for Energy Production (STEP), which is subject to the UK Atomic Energy Authority and aspires to be capable of producing electricity for commercial use within the 2040s.[18] Another remarkable development concerns the U.S. Geological Survey's (USGS) research on hydrogen found in the bowels of the earth.[19] According to a recent article,[20] the project leader said – at the last annual meeting of the American Association for the Advancement of Science – that, based on a still unpublished survey of the USGS, the underground stores of hydrogen are vast and most of them are likely inaccessible, but even a few per cent recovery would still supply all projected demand for hundreds of years.

Below is a list of noteworthy activities, studies and other publications on incorporating climate change considerations into the institutional and supervisory frameworks of financial institutions.

– Network of Central Banks and Supervisors for Greening the Financial System (NGFS): (a) studies, such as an analysis of blended finance for climate mitigation and adaptation,[21] a presentation of developments as regards the legal risks arising from climate change,[22] stocktaking of the practices for integrating climate impacts into macroeconomic forecast models and central banks' monetary policy,[23] as well as findings from the analysis of transition plans and the relevant supervisory actions;[24] (b) recommendations, such as a framework for integrating nature-related risks into the actions taken by central banks and supervisors[25] and development of scenarios for assessing nature-related economic and financial risks;[26] and (c) updated tools, such as new scenario narratives for stress testing climate-related risks.[27]

– Basel Committee on Banking Supervision (BCBS): proposals on the disclosure of climate-related financial risks by financial institutions in the context of Pillar 3.[28]

– European Banking Authority (EBA): survey on the role of environmental and social risks in the institutional and prudential framework, together with recommendations for targeted enhancements across Pillar 1 concerning these risks,[29] analysis of the risk of greenwashing for banks, investment firms and payment service providers,[30] as well as recommendations on the creation of a voluntary European green loan label.[31]

– European System of Central Banks (ESCB): report of the Expert Group on productivity, innovation and technological changes about the impact of climate change and related policies on productivity.[32]

18 UK Atomic Energy Authority, "STEP – Spherical Tokamak for Energy Production".
19 U.S. Geological Survey, The Potential for Geologic Hydrogen for Next-Generation Energy, 13.4.2023.
20 "Geologists signal start of hydrogen energy 'gold rush'", Financial Times, 18.2.2024.
21 NGFS, Scaling Up Blended Finance for Climate Mitigation and Adaptation in Emerging Market and Developing Economies (EMDEs), 4.12.2023.
22 NGFS, Report on climate-related litigation: recent trends and developments, 1.9.2023.
23 NGFS, Monetary policy and climate change: Key takeaways from the membership survey and areas for further analysis, 24.7.2023.
24 NGFS, Stocktake on Financial Institutions' Transition Plans and their Relevance to Micro-prudential Authorities, 31.5.2023.
25 NGFS, Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors, 6.9.2023.
26 NGFS, NGFS Recommendations toward the development of scenarios for assessing nature-related economic and financial risks, 13.12.2023.
27 NGFS, NGFS Scenarios for central banks and supervisors Phase IV, 7.11.2023.
28 BIS, Consultative document: Disclosure of climate-related financial risks, 29.11.2023.
29 EBA, The EBA recommends enhancements to the Pillar 1 framework to capture environmental and social risks, 12.10.2023.
30 EBA, ESAs present common understanding of greenwashing and warn on related risks, 1.6.2023.
31 EBA, The EBA proposes a voluntary EU green loan label to help spur markets, 15.12.2023.
32 ECB, "The impact of climate change and policies on productivity – A report of the ESCB Expert Group on productivity, innovation and technological changes", Occasional Paper No. 340, February 2024.

– Single Supervisory Mechanism (SSM): updated report on the progress of European financial institutions as regards their climate-related and environmental risks disclosures.[33]

– European Insurance and Occupational Pensions Authority (EIOPA): jointly with the ECB, publication of proposals for policies to reduce the insurance gap of climate-related risks.[34]

– European Securities and Markets Authority (ESMA): proposals on guidelines regarding the supervision of sustainability reporting,[35] proposed technical standards for the disclosure of information on sustainability in the context of the Sustainable Finance Disclosure Regulation (SFDR)[36] and greenwashing risk analysis for companies under the responsibility of the ESMA.[37]

– European Systemic Risk Board (ESRB): jointly with the ECB, publication of a survey about the impacts of climate change on the EU financial system, including, among other things, proposals for the integration of these risks into the macroprudential framework.[38]

– European Commission: measures to strengthen sustainable finance in the EU by adding further activities to the European Taxonomy Regulation and new rules for Environmental, Social and Governance (ESG) rating providers, and provision of recommendations for financing the transition.[39]

33 ECB Banking Supervision, "Banks must continue improving climate risk disclosures as new EU rules take effect, ECB report shows", 21.4.2023.
34 ECB/EIOPA, "Policy options to reduce the climate insurance protection gap", 24.3.2023.
35 ESMA, "Consultation Paper on Draft Guidelines on Enforcement of Sustainability Information", 15.12.2023.
36 ESAs, *Final Report on draft Regulatory Technical Standards on the review of PAI and financial product disclosures in the SFDR Delegated Regulation*, 4.12.2023.
37 ESMA, Progress Report on Greenwashing Response to the European Commission's request for input on "greenwashing risks and the supervision of sustainable finance policies", 31.5.2023.
38 ECB/ESRB, *Towards macroprudential frameworks for managing climate risk*, 18.12.2023.
39 European Commission, Sustainable finance package, 13.6.2023.

Box X.1

STOCKTAKE TOWARDS THE ACHIEVEMENT OF THE PARIS AGREEMENT GOALS

The Paris Agreement (hereinafter the "Agreement"), reached in December 2015 in the context of the 21st UN Climate Change Conference (COP21), sets as a key goal to hold the increase in the global average temperature to well below 2°C above pre-industrial levels, while trying to limit the temperature increase even further to 1.5°C by 2050.

The 195 countries that have signed the Agreement commit, inter alia, to periodically review their overall progress in achieving its long-term goals. In addition, they commit to renew every five years their national action plans which list their goals and national measures to limit greenhouse gas emissions and strengthen their resilience to the impacts of climate change.[1]

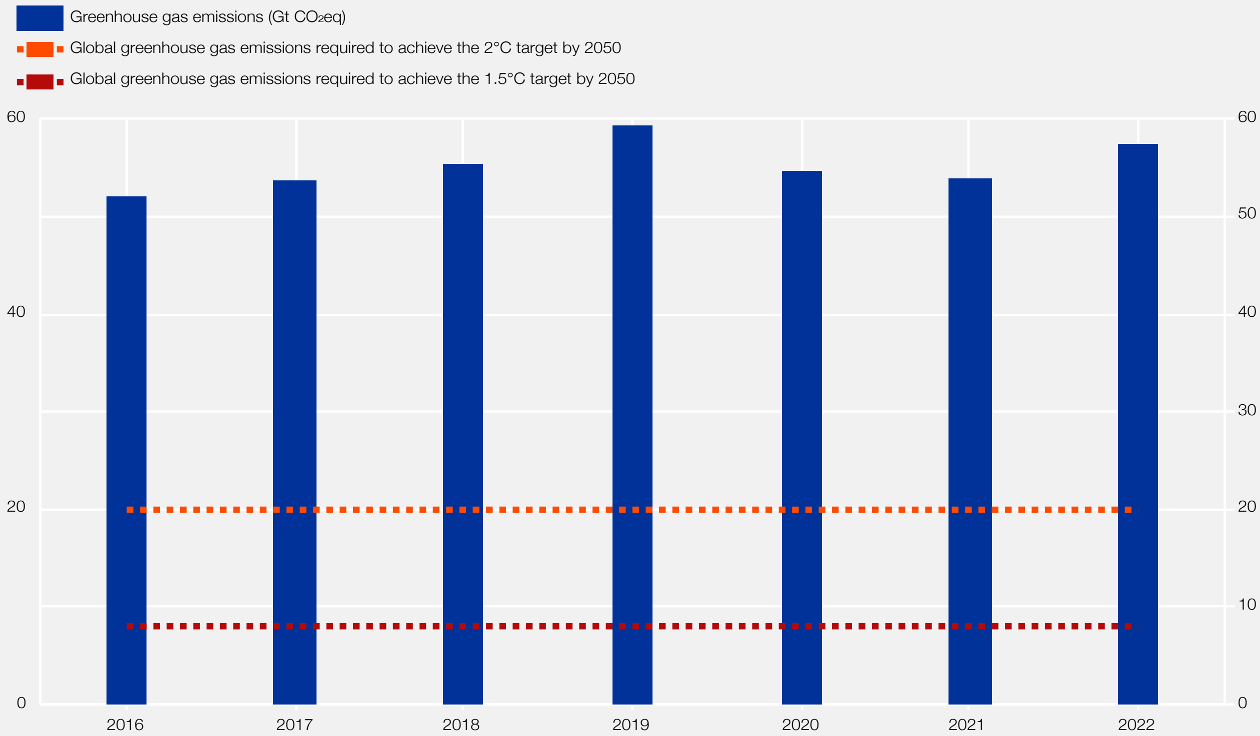
Global Stocktake

The latest UN Climate Change Conference (COP28) that took place in Dubai, United Arab Emirates, in December 2023, discussed the first Global Stocktake towards the achievement of the Agreement's goals. It was found that, on the basis of the measures already adopted, there is a significant deviation from the goal to contain the

1 United Nations, All About the NDCs.

Chart A Global greenhouse gas emissions (2016-2022)

(in gigatonnes of CO_2 equivalent)



Source: United Nations, Emissions Gap Report for the years 2017 to 2023.

global average temperature increase. In particular, there is a significant gap between the estimated greenhouse gas emissions and those that would reduce the temperature increase by 1.5°C. This "emission gap"[2] is equal to 19 gigatonnes (i.e. billion tonnes) of carbon dioxide equivalent (Gt CO_2eq).[3] Chart A shows the levels of global greenhouse gas emissions from 2016 to 2022 and the corresponding levels required by 2050 in order to achieve the goal of holding the temperature increase below 2°C and 1.5°C respectively.

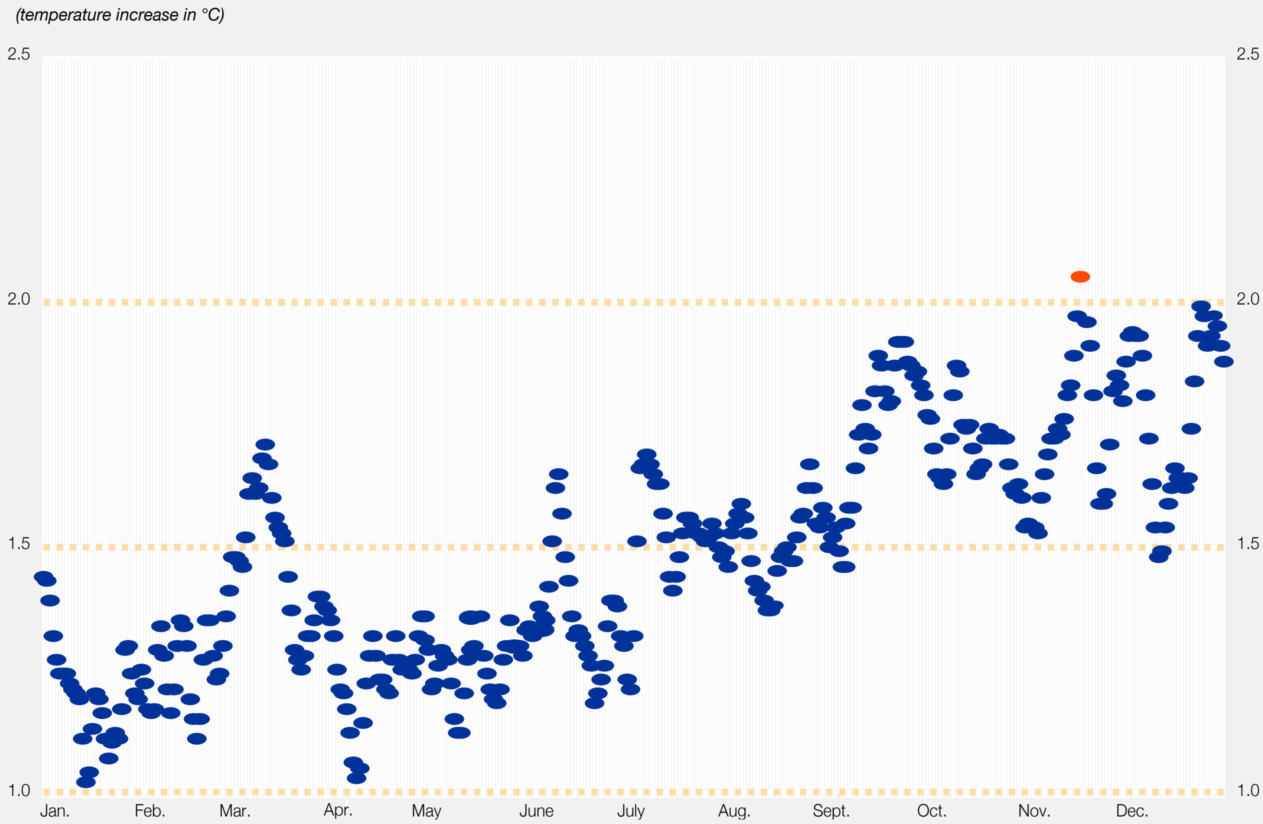
The gap is also confirmed by the temperatures throughout 2023, which goes down in history as the warmest calendar year on record. 2023 marks the first time on record that every day within a year has exceeded 1°C above the pre-industrial levels. Moreover, close to 50% of days were more than 1.5°C warmer than the pre-industrial levels and two days in November were, for the first time, more than 2°C warmer[4] (see Chart B).

The analysis from the Global Stocktake notes that, in order to align with the goals of the Agreement towards a zero-emission economy by 2050 and limit the global average temperature increase, transformations are needed across all sectors of economic activity, as well as national partnerships and more ambitious measures to reduce greenhouse gas emissions and adapt to climate change. Specifically, greenhouse gas emissions need to be reduced by 43% by 2030, 60% by 2035 and 84% by 2050, compared with the 2019 levels, in order to limit global warming to 1.5°C.[5]

With regard to adaptation to climate change, the Global Stocktake analysis highlights, among other things, the need for more decisive and effective adaptation strategies, such as the involvement of local communities, which

2 The emission gap is defined as the difference between the estimated global greenhouse gas emissions resulting from the full implementation of the most recent Nationally Determined Contributions (NDCs) and the levels in line with the transition pathways to meet the long-term goals of holding the temperature increase under the Paris Agreement.
3 United Nations (2023), Emissions Gap Report 2023.
4 Copernicus, Global climate highlights 2023.
5 United Nations (2023), Technical dialogue of the first global stocktake.

Chart B Daily global average temperature increase above pre-industrial levels (1850-1900) in 2023



Sources: Copernicus and ERA5.

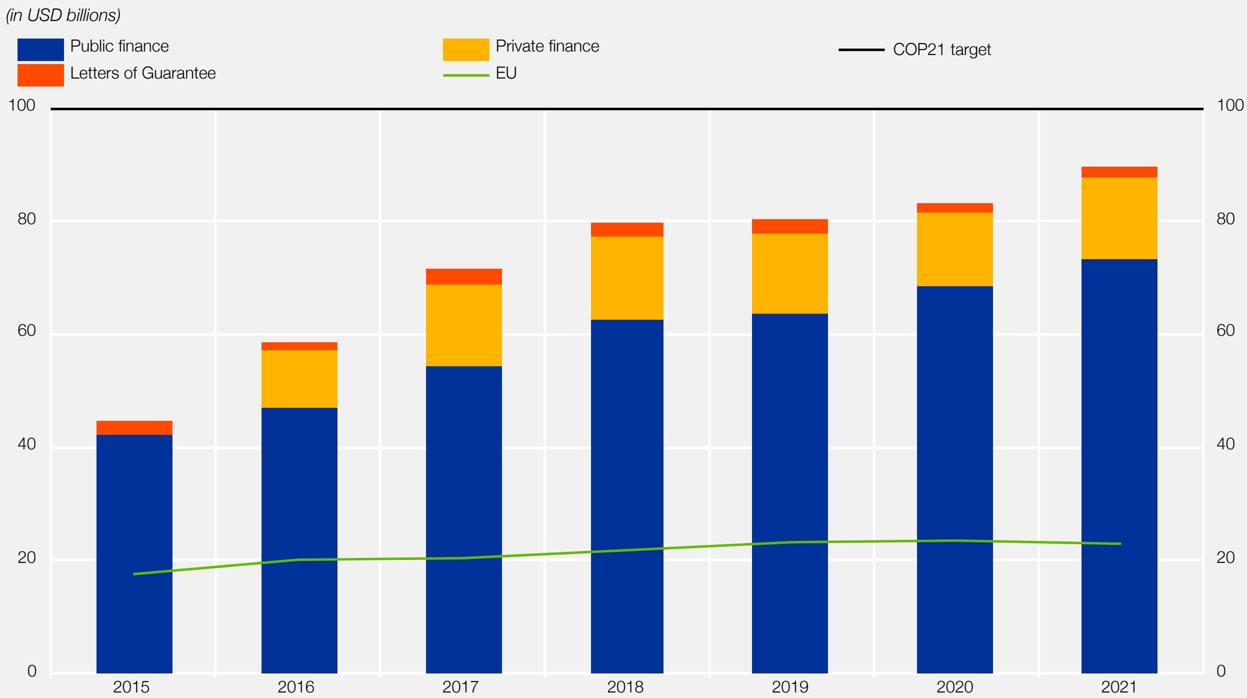
are experiencing the consequences of climate change, in decision-making, as well as enhanced transparency on progress in adaptation.

Furthermore, it notes that financial flows should be scaled up in order to achieve the goals of the Agreement, as the issue of funding constitutes an important part of it. Among other things, while the Agreement set a target of USD 100 billion per annum for developed countries to contribute to international climate finance by 2025, there was a funding gap of USD 192 billion from 2015 to 2022 according to OECD data. There is a general need to accelerate climate finance from all sources, private, public, domestic or international, with developed countries providing financial assistance and support to developing countries. It is worth noting that the European Union is one of the largest providers of climate finance worldwide. In 2022 it contributed EUR 28.5 billion to climate actions finance from public sources[6,7] (see Chart C).

As far as the European Union is concerned, the Global Stocktake points are confirmed and reinforced by the recent report of the European Scientific Advisory Board on Climate Change, which proposes both immediate and medium-term measures to achieve the EU's "climate neutrality" objectives by 2030 and 2050.[8] Moreover, a report by the European Commission, published on 6.2.2024,[9] estimated that, in order to achieve a 90% reduction in emissions by 2040 and full climate neutrality in the EU economy by 2050, investments of EUR 1.53

6 OECD (2023), Climate Finance Provided and Mobilised by Developed Countries in 2013-2021.
7 Council of the EU, Infographic – Europe's contribution to climate finance.
8 European Scientific Advisory Board on Climate Change, Towards EU climate neutrality: progress, policy gaps and opportunities – Assessment Report 2024.
9 European Commission Communication: Securing our future: Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society.

Chart C Finance provided to developing countries to fight climate change for the period 2015-2022 per finance type



Sources: OECD and European Commission.
Note: The Paris Agreement set a target of USD 100 billion per annum for developed countries to contribute to international climate finance by 2025.

trillion per annum will be required over the period 2031-2050 (EUR 660 billion per annum net of the investment in transport and purchase of new vehicles cost, estimated at EUR 870 billion per annum).

Decisions of the 28th UN Climate Change Conference

The undeniable culmination of the latest UN Climate Change Conference (COP28) is the final consensual text, which, among other things, speaks of moving away from fossil fuels in energy systems, tripling renewable energy capacity by 2030 and expediting the energy transition in a just, orderly and equitable manner, accelerating action over the remainder of this critical decade in order to achieve carbon neutrality by 2050.[10,11,12]

Important decisions were also taken on critical issues. For the first time, methane emissions were specifically mentioned. This gas is considered to be a super pollutant. The EU and the US committed to take concrete measures to contain them.

It was also recognised that it is now of strategic importance to speed up implementation or research (as appropriate) for critical technologies classified as "green", such as renewables, nuclear energy (for which serious objections have been raised), carbon sequestration technologies and nuclear fusion (the actual use of which on a massive scale is estimated to require decades). To this end, it was decided to triple electricity production from renewable energy sources (RES), double energy efficiency measures, introduce new standards to liberalise the hydrogen market, triple electricity production from countries with nuclear power plants and reduce to the greatest degree possible Scope 1 and Scope 2 emissions[13] from all countries.

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10 McKinsey, "Outcomes from COP28: What next to accelerate climate action?", 21.12.2023.
11 International Energy Agency, "IEA assessment of the evolving pledges at COP28", 10.12.2023.
12 United Nations, "COP28 Agreement Signals 'Beginning of the End' of the Fossil Fuel Era", 13.12.2023.
13 "Scope 1 emissions" are defined as direct greenhouse gas emissions from sources owned or controlled by the financial entity concerned. "Scope 2 emissions" are defined as indirect emissions resulting from the consumption of electricity purchased by the financial entity concerned (see https://ghgprotocol.org/).

The energy, industrial and transport sectors, which are regarded as high greenhouse gas emissions-generating sectors, have decided to cooperate, invest in research and development and move faster towards a zero-emission economy. For the first time, representatives of 130 countries signed the declaration on sustainable agriculture, resilient food systems, and climate action at COP28, which sets specific targets by 2025.

It is worth noting that an agreement has been reached on the application of the rules of the Loss and Damage Fund. The members' financial pledge so far amounts to USD 726 million and it has been agreed that the World Bank will be responsible for its initial management.

It was also decided that the targets and structure of the adaptation measures of the signatories to the Agreement would be aligned with a framework for a Global Goal on Adaptation (GGA). All of them are now required by 2030 to adopt concrete measures and actions for their respective national adaptation policies.

COP28 was concluded leaving several open issues. In particular, there was no clear reference to the complete and definitive elimination of fossil fuels, there was no agreement on a common practice to finance poorer states towards climate transition and to reduce the funding gap from developed countries to developing countries, while the latter's funding needs in this respect are more urgent than ever. Finally, there was no reference to the establishment rules of the global emissions trading system, nor to general or specific funding issues.

At the same time, however, the foundations for future action plans were laid. All parties involved will have to submit their revised targets for limiting greenhouse gas emissions in the first four months of 2025, so that the targets are compatible with the aim of limiting the global average temperature increase to 1.5°C.

At the next United Nations Climate Change Conference (COP29), to be held in Azerbaijan, all governments involved will have to set specific climate finance goals and then at the 30th Conference (COP30) they must come prepared with new and concrete nationally determined contributions that are economy-wide. Finally, the total greenhouse gas emissions from the production process in each country should be fully in line with the global goal of limiting temperature increase to 1.5°C.

Conclusions

The first stocktake towards the achievement of the Paris Agreement goals demonstrates the need to accelerate actions to tackle the climate crisis. It is stressed that the issue of climate change should be addressed jointly by all institutions and national economies as a problem which requires a holistic approach. Cooperation and solidarity between nations, but also local societies, are now necessary to achieve the goals relating to the transition to zero-emission energy systems, climate finance and adaptation efforts. The climate crisis must mobilise us towards a unified and ambitious action by all parties involved, potentially leading us to a collective climate-neutral future, in terms of emissions.

Box X.2

THE DEGRADATION OF ECOSYSTEMS AND BIODIVERSITY LOSS POSE RISKS TO THE ECONOMY AND THE FINANCIAL SYSTEM

Biodiversity, an important element of ecosystem functions, contributes inter alia to ensuring adequate air quality for people to breathe, to the provision of food (and food security) and to pharmaceuticals, as well as to climate regulation through carbon capture and storage.[1,2] In addition, more than 50% of global GDP depends on nature and the services it provides, with construction, agriculture, as well as the food and beverages sector heavily dependent on it.[3]

1 See The Economics of Biodiversity: The Dasgupta Review (2021).
2 Biodiversity is defined as the variety of ecosystems (natural capital), species and genes in the world or in a particular habitat (see European Environment Agency, "Biodiversity – Ecosystems").
3 World Economic Forum (2020), *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy*.

Nature is in a crisis situation, which threatens human existence and well-being
Human activity is exerting increasing pressure on nature, reducing its ability to support the planet by providing sufficient resources and services. Indicatively, out of the nine planetary boundaries which constitute the safe operating space for humanity, it is estimated that six have already been transgressed, a fact that increases the risk of abrupt or irreversible environmental changes of a significant scale.[4] Studies also show that over the last four decades, almost three quarters of the Earth's surface have been altered, while the biodiversity loss rate has been constantly increasing – perhaps it is the highest ever, with a significant number of living things at risk of extinction and/or having already been extinct.[5]

The main reasons for the loss of ecosystem services[6] are: (a) changes in the use of land and water; (b) overexploitation of natural resources and ecosystems; (c) increase in greenhouse gases (leading to climate change); (d) pollution; and (e) invasive alien species.[7] Climate change is also found to be interrelated with nature; it affects and is affected by nature. For example, extreme weather events (such as a flood) destroy natural resources, while the reduction of nature's ability to regulate the climate, due to the destruction of the natural environment, is exacerbating climate change.

The risk of biodiversity loss and ecosystem collapse is assessed as the world's fastest growing risk for the next decade, according to the World Economic Forum, with significant social and economic consequences. Indicatively, the loss and degradation of land and biodiversity have the effect of reducing crop and catch yield, as well as increasing economic loss from flooding and other disasters.[8]

The loss of ecosystem services and resources creates financial risks
Nature-related and ecosystem financial risks are divided into physical and transition risks, as is the case with climate-related financial risks. In particular, physical risks may arise from acute and chronic events, while transition risks may be caused by changes in policies, technologies and consumer and investor preferences.[9]

The economy and the financial system can be affected by the loss of ecosystems and their services directly and indirectly. These risks are therefore direct and indirect. In particular, direct risks may arise from the direct dependence of economic activities, such as agriculture, mining and infrastructure, on the ecosystem or from its impact on them. Indirect risks can be created through the value chain and thus affect economic activities that are not directly related to nature, such as services. In addition, economic activities may also affect these ecosystems and the services they provide, i.e. there is a two-way relationship between economic activities and ecosystems. Recent examples of such risks in Greece, with nature and biodiversity interacting with the economy, include the wildfires in Rhodes and the Dadia Forest National Park, Thrace, in the summer of 2023, the floods in Thessaly in September 2023 and –two years earlier– the wildfires in Euboea in August 2021, while a prominent international example were the record-breaking wildfires in Canada's forests in the summer of 2023, which affected a vast amount of land with their pollutants.

These risks affect individuals, businesses, industries, local and national economies, i.e. they have micro and macroeconomic effects, potentially affecting the economy, financial institutions and the financial system. In a joint study, the European Central Bank and the European Systemic Risk Board estimate that in the euro area around 75% of

4 The planetary boundaries are: climate change, biosphere integrity, land system change, freshwater use, biogeochemical flows (nitrogen cycle, phosphorus cycle), chemical pollution, ocean acidification, atmospheric aerosol loading and stratospheric ozone depletion. The first six of these boundaries have already been transgressed, while ocean acidification is close to the safe operating space threshold for humanity. See Richardson et al. (2023), "Earth beyond six of nine planetary boundaries", *Science Advances*, 9(37).
5 IPBES (2019), *Global Assessment Report on Biodiversity and Ecosystem Services*.
6 Ecosystem services can be divided into provisioning, regulating and cultural services (see European Environment Agency, What are ecosystem services?).
7 See IPBES (2019), op. cit. and IPBES (2023), *Thematic Assessment Report on Invasive Alien Species and their Control*.
8 World Economic Forum (2023), *The Global Risks Report 2023*.
9 ECB/ESRB (2023), Towards macroprudential frameworks for managing climate risk – December 2023.

bank loans to non-financial corporations and more than 30% of insurers' investments in corporate bonds and equity are directed towards firms that have a high dependency on at least one ecosystem service.[10] These services mainly include: surface and ground water, mass stabilisation and erosion control, as well as flood and storm protection. The relevant sensitivity analysis exercise found that the credit risk of the bank credit portfolios examined increases in biodiversity loss scenarios. Moreover, the same study states that the economic activities of euro area non-financial corporations have an impact on nature comparable to the loss of 582 million hectares of "pristine" nature.

Central banks focus on nature-related and ecosystem risks

Nature-related and ecosystem risks have not been sufficiently analysed so far, due to their peculiar characteristics, such as the significant degree of uncertainty surrounding their impact, non-linearity, tipping points[11] and complexity. However, as the economy is inextricably linked with nature and while the primary responsibility for addressing these challenges lies with governments, central banks should also take into account nature-related risks in fulfilling their mandate.[12] Significant analyses on these issues, such as those of the Network for Greening the Financial System (NGFS) and the European Central Bank (ECB) (see Chapter X, Section 1 of the Bank of Greece's *Annual Report 2023*), help to properly assess and address these risks with a coherent and comprehensive approach, together with climate-related issues. Indicatively, in a recent communication on the orientation of its actions for 2024-2025, the ECB mentions nature-related risks as one of the three focus areas.[13] Further actions in this direction, such as the production of relevant research, the understanding of the transmission channels of these risks and the quantification of the impact, will contribute to a more complete and sound management of nature-related risks.

10 Op. cit.

11 Tipping points refer to critical thresholds in a system that, when exceeded, can lead to a significant change in the state of the system, often with an understanding that the change is irreversible (see IPCC (2019), *Special Report – Global Warming of 1.5 ºC*, Chapter 3).

12 See Frank Elderson, "The economy and banks need nature to survive", *The ECB Blog*, 2023.

13 "ECB steps up climate work with focus on green transition, climate and nature-related risks", press release, 30.1.2024.

2 GREENHOUSE GAS EMISSIONS IN THE EU AND GREECE

In 2021, total greenhouse gas emissions in the EU-27 – including land use, land use changes and forestry, indirect CO_2 emissions and international aviation – amounted to 3,311 million tonnes of CO_2 equivalent ($MtCO_2e$), having increased by 6.2% (+193 $MtCO_2e$) compared to 2020, although remaining below their respective level before the COVID-19 pandemic.[40] The increase in emissions in 2021 was the greatest in absolute terms annually in the EU since 1990 and may be attributed to the robust economic recovery that followed the sharp contraction of economic activity during the pandemic in 2020. Moreover, almost two-thirds of this increase were registered in public electric power and heat production, due to higher use of coal in power stations, and in road transport, due to the return to normality after the dramatic decline recorded in road transport in 2020 owing to the pandemic and the lockdowns. Passenger cars account for the largest share of the increase in emissions in road transport, while emissions from light-duty and heavy-duty vehicles also rose considerably in 2021. In addition, gas emissions from international aviation rose in 2021 compared to 2020; however, the increase did not offset the massive decline in 2020 due to the pandemic-related travel restrictions, with emissions in 2021 remaining at levels comparable to those in the mid-90s.[41]

40 Previous years' greenhouse gas emissions are recalculated every year on the basis of improvements in emissions recording by country and with a view to ensuring a more accurate and complete recording and the consistency of time series over time. Another reason for these recalculations is that, after Brexit, emissions from the United Kingdom are no longer included in the EU list, which comprises the sum of emissions of the EU's present 27 Member States.

41 European Environment Agency, Annual European Union greenhouse gas inventory 1990-2021 and inventory report 2023, 15.4.2023.

Compared to 1990, greenhouse gas emissions in 2021 declined by 30% (-1,401 $MtCO_2e$). The downward trend of emissions during the period 1990-2021 is attributed to various factors such as, among others, the increasing share of renewable energy sources (RES) in the overall energy mix; the use of less carbon-intensive fossil fuels; improvements in energy efficiency, e.g. due to optimised insulation standards in buildings; structural changes in the economy, with a higher share of services and a lower share of more energy-intensive industries in total GDP; and, more recently, the economic recession caused by the pandemic in 2020. As a result, the changes that took place over this long time period led to an economy of lower energy intensity as regards both energy production and energy consumption in 2021, as compared to 1990. At the same time, energy demand by households for heating was also lower, as winters in Europe have, on average, been milder over the past few years, a fact that also contributed to the reduction in emissions. Additionally, the overall reduction in emissions has been supported by agricultural and environmental policies in the 1990s, as well as by climate and energy policies since 2005, both at European and at national level.

Greenhouse gas emissions decreased in most sectors between 1990 and 2021, with the exception mainly of transport, cooling and air conditioning, which saw an increase in emissions (+131 and +64 $MtCO_2e$, respectively). Emissions reductions have been larger for electricity and heat production, manufacturing, households and iron and steel production (518, 218, 120 and -108 $MtCO_2e$, respectively).

The largest greenhouse gas emitters in the EU-27 in 2021 were Germany (23.6%), France (12.3%) and Italy (11.9%), followed by Poland (11.5%) and Spain (7.6%) (see Table X.1). Almost all EU-27 Member States reduced emissions in comparison to 1990, thus playing their role in the overall positive performance of the EU. Germany, Romania, Italy and France accounted for two-thirds of the overall emissions reduction in the EU over the past 31 years.

In Germany, the main reasons behind the considerable reduction in emissions, by 39.8% in 2021 compared to 1990, were the increased efficiency of heating facilities and economic restructuring, particularly in the iron and steel sector. Other important factors were a switch from coal to natural gas, a strong increase in the use of RES and waste management measures. In 2021, emissions in France were 24% below 1990 levels, given that great reductions were achieved in N_2O emissions in the chemical industry. Emissions in Italy were also 24% below 1990 levels. They decreased considerably from 2007 onwards, registering a sharp fall in 2009 mainly due to the economic crisis and the contraction of industrial production, and since 2010 they have been continuously declining, with the exception of 2015. Polish emissions in 2021 were 15% below 1990 levels, the main drivers of this development being – as well as in other Member States – a shrinking of the energy inefficient heavy industry sector and the overall restructuring of the economy in the late 1980s and early 1990s. An exception was the transport (mainly road transport) sector, where emissions rose. In general, common factors supporting the reduction in greenhouse gas emissions in most EU-27 countries over the last 30 years, excluding the short-term impacts of the economic downturn in 2020, were the use of less carbon-intensive fuels due to the switch from coal to natural gas, a great increase in the use of RES, as well as significant improvements in energy efficiency.

Looking at the percentage distribution of emissions of the six greenhouse gases in the EU-27 in 2021, carbon dioxide (CO_2) accounts for the largest share (80%, compared with 79% in 1990) and is responsible for the largest reduction in emissions since 1990 (-1,082 $MtCO_2e$). It is followed by methane (CH_4) and nitrogen oxide (N_2O) at 12.6% and 5.6% respectively, down from 14.1% and 6.4% in 1990. Lower methane and nitrogen oxide emissions reflect a decline of mining activities and lower emissions attributed to improved waste management. In 2021, the biggest contributor to greenhouse gas emissions were energy-related activities, accounting for 80.4% or 2,663 $MtCO_2e$ for the EU-27 (as shown in Table X.2). Agriculture followed with

Table X.1 Greenhouse gas emissions[1]

(in million tonnes of CO_2 equivalent)

Country	1990	2021	Change 2020-2021	Change 2021-2022	Change 1990-2021	Change 1990-2022
	(MtCO2e)		(percentage changes)			
Austria	67.7	68.4	-2	-7.3	0.9	-6.4
Belgium	146.1	115.2	4.2	-3.9	-21.1	-24.2
Bulgaria	83.4	45.3	16.1	6	-45.6	-42.4
Croatia	25.6	18.9	2.9	-5.3	-26.1	-30.1
Cyprus	6.2	9.1	5.3	-0.5	45.7	45.1
Czech Republic	192.8	127.8	1.9	-4.3	-33.7	-36.6
Denmark	80.2	47.5	1.3	0.7	-40.7	-40.3
Estonia	36.7	15.6	11.7	11.4	-57.4	-52.6
Finland	46.5	49.2	24.2	-5.5	5.8	0.1
France	531	406.2	7.2	-1.9	-23.5	-24.9
Germany	1,299.40	782.7	4.5	-1.5	-39.8	-40.7
Greece	104.2	74.5	4.4	0.2	-28.5	-28.3
Hungary	92.1	57.4	2.2	-6.1	-37.7	-41.5
Ireland	62.7	70.8	5.2	0.5	12.8	13.4
Italy	522.3	395.1	10.9	0.2	-24.4	-24.2
Latvia	13.9	13.4	16.5	9.8	-3.8	5.6
Lithouania	43.2	14.4	4.8	-6.5	-66.7	-68.9
Luxembourg	13.1	10.7	4.3	-11.7	-18.8	-28.3
Malta	2.8	2.4	2.9	7.3	-15.4	-9.2
Netherlands	233.6	179.3	2.1	-6.3	-23.2	-28.1
Poland	447	382.3	7.9	-4.2	-14.5	-18.1
Portugal	68.2	52.5	-4.6	4.1	-23	-19.9
Romania	229.3	66.4	7.5	-13.8	-71	-75
Slovakia	64.6	33.7	13.8	-10.8	-47.8	-53.5
Slovenia	14.5	13	1.3	2.2	-9.9	-7.9
Spain	258.6	252.6	7.7	4.6	-2.3	2.2
Sweden	26.5	7.1	21.1	-24.7	-73.2	-79.8
EU-27	**4,712.30**	**3,311.50**	**6.2**	**-1.9**	**-29.7**	**-31.1**

Sources: European Environment Agency, *Annual European Union greenhouse gas inventory 1990-2021 and inventory report 2023*, April 2023. For 2022: European Environment Agency, *Approximated EU greenhouse gas inventory - Proxy GHG emission estimates for 2022*, ETC CM Report 2023/05, October 2023.
1 Total GHG emissions, including land use, land use changes and forestry, and international aviation.

11.4% or 378 $MtCO_2e$, while industrial processes and waste had shares of 9.6% (318 $MtCO_2e$) and 3.3% (109 $MtCO_2e$), respectively.

In Greece, greenhouse gas emissions (excluding land use, land use changes and forestry) totalled 77.5 $MtCO_2e$ in 2021, reflecting a decrease of 25.5% compared to 1990 levels. If land use, land use changes and forestry, and international aviation are included, emissions amount to 74.5 $MtCO_2e$, down by 28.5% compared to 1990 levels.[42] In 2021, carbon dioxide emissions, excluding land use, land use changes and forestry, accounted for 74.3% of total greenhouse

42 It should be noted that: (a) according to the Guidelines of the Intergovernmental Panel on Climate Change (IPCC), estimates of the emissions from international aviation and shipping are not included in national sums, however they are reported separately as data to be taken into account; and (b) the emissions of the sector that includes forestry are negative.

Table X.2 Greenhouse gas emissions by source category in the EU-27 and Greece

(in million tonnes of CO_2 equivalent)

	1990	1995	2000	2005	2010	2015	2020	2021
EU-27								
Energy	3,747	3,521	3,454	3,569	3,305	2,967	2,500	2,663
Industrial processes	445	427	409	425	358	340	307	318
Agriculture	485	419	409	389	376	384	382	378
Land use, land use changes and forestry	-209	-316	-304	-342	-353	-322	-241	-230
Waste	184	188	174	154	137	118	111	109
Other	0	0	0	0	0	0	0	0
Indirect CO_2 emissions	6	6	5	5	4	3	3	3
International aviation	54	66	85	96	100	109	56	70
***Total*[1]**	***4,712***	***4,310***	***4,233***	***4,296***	***3,929***	***3,599***	***3,119***	***3,311***
***Total*[2]**	***4,867***	***4,560***	***4,452***	***4,542***	***4,181***	***3,812***	***3,304***	***3,472***
Greece								
Energy	77	81	97	107	93	71	52	54
Industrial processes	11	13	14	15	11	12	10	10
Agriculture	11	10	10	9	9	8	8	8
Land use, land use changes and forestry	-2	-3	-3	-4	-3	-4	-5	-5
Waste	5	6	6	5	5	5	5	6
International aviation	2	3	3	3	3	3	1	3
***Total*[1]**	***104.2***	***109.2***	***126.7***	***135.8***	***118.4***	***94.6***	***71.4***	***74.5***
***Total*[2]**	***104.0***	***109,6***	***126.7***	***136.7***	***119.2***	***96.0***	***75.5***	***77.5***

Sources: European Environment Agency, *Annual European Union greenhouse gas inventory 1990-2021 and inventory report 2023*, April 2023. For Greece: Ministry of Environment and Energy, *Climate Change Emissions Inventory*, April 2023.
1 Total GHG emissions, including land use, land use changes and forestry, and international aviation.
2 Total GHG emissions, excluding land use, land use changes and forestry, and international aviation.

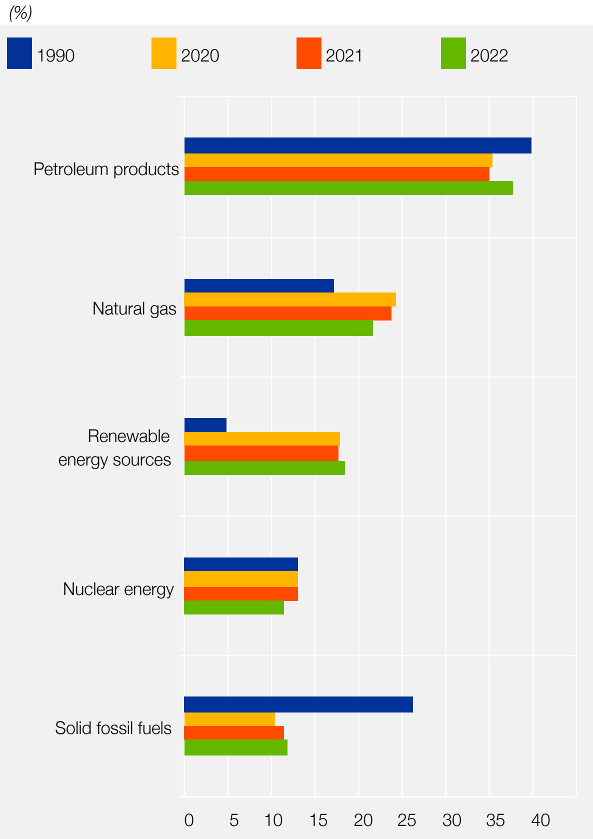
gas emissions and were by 31% lower than in 1990. Methane and nitrogen oxide emissions accounted for 14.6% and 4.9% of total emissions, respectively, having decreased by 9.6% and 44.3%, respectively, compared to 1990. Finally, the emissions of fluorinated greenhouse gases in 2021 represented 6% of total emissions.

The decrease in emissions in Greece primarily resulted from energy-related activities. In 2021, energy emissions accounted for 69.2% of total greenhouse gas emissions (excluding land use, land use changes and forestry), down by almost 30.5% compared to 1990.[43] Higher living standards owing to economic growth, the significant expansion of the services sector and the introduction of natural gas in the Greek energy system constitute the key factors behind the reduction of emissions from the energy sector over the period 1990-2007. Emissions fell by 34.9% during 2008-2019, due to the economic recession at the start of this period, but also due to measures such as the increased share of RES and natural gas in the energy mix, as well as actions for the improvement of energy efficiency. Moreover, the large drop that was observed in 2020 compared to 2019 can be mainly attributed to the decreased operation of lignite-fired plants, which were replaced with a higher percentage of natural gas

43 The energy industry was responsible for the bulk of greenhouse gas emissions from energy in 2021 (48.5%), while the contribution of transport, manufacturing and construction and other sectors is estimated at 31.4%, 9.1% and 10.9%, respectively.

and RES than in past years, as well as to pandemic-related restrictions in the transport sector. Greece's National Energy and Climate Plan (NECP) provided for the gradual elimination of all but one lignite-fired plants by 2023[44] and the transformation of the rest into natural gas units by 2028.[45]

Chart X.1 Shares of energy products in total available energy in the EU-27



Source: Eurostat.

In 2021, emissions from industrial processes in Greece accounted for 12.9% of total emissions (excluding land use, land use changes and forestry), down by 8.6% compared to 1990. Emissions from agriculture accounted for 10.4% of total emissions and were by 23.6% lower compared to 1990 levels, the main reason being the reduction of N_2O emissions from agricultural soils, due to the reduced use of synthetic nitrogen fertilisers and a decline in the livestock population. Reduced use of synthetic nitrogen fertilisers is attributable to an increase in organic farming, high fertiliser prices and the adoption of improved practices in fertiliser use. Emissions from the waste sector (with a share of 7.6% in total emissions) increased by almost 8.7% compared to 1990. Improved living standards led to an increase in produced waste and, consequently, emissions compared to 1990.

For 2022, greenhouse gas emissions for the EU-27 as a whole are estimated at 3,248 $MtCO_2e$. Despite the fact that total emissions decreased by a mere 1.9% compared to 2021,[46] it is encouraging that certain sectors, as estimated, saw remarkable emissions reductions. This is attributed to, among other things, high energy prices caused by Russia's invasion to Ukraine. In the sector of buildings, estimates show a significant 9% decrease in emissions, a development that can be attributed both to the milder winter and to the more limited use of energy associated with consumers' increased awareness and higher energy prices.

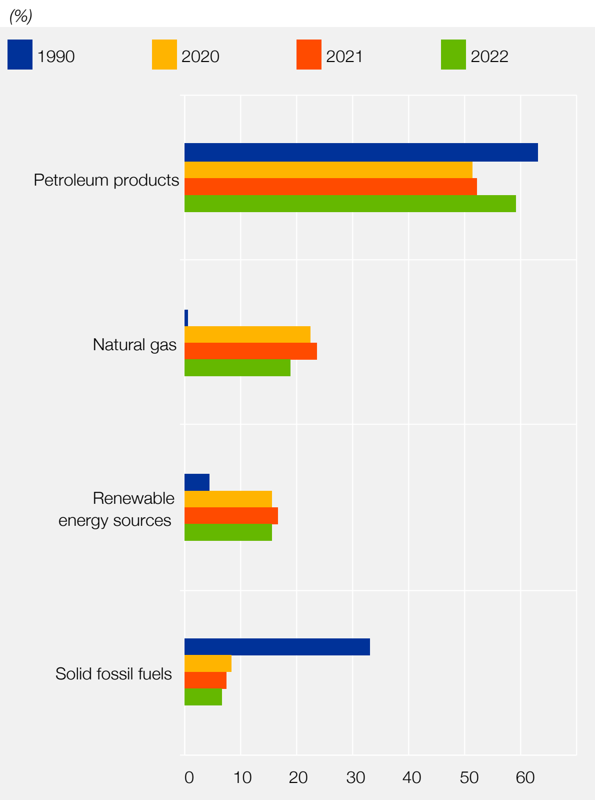
Similarly, the industrial sector presented a significant decrease in greenhouse gas emissions, which is mostly attributable to reduced production by energy-consuming industries due to increased energy costs. Turning to the energy supply sector, it is estimated that greenhouse gas emissions increased by 3% due to the surge in natural gas prices that strengthened the

44 However, the Ministry of Environment and Energy decided to extend their operation until the end of 2025 so as to ensure adequate energy supply and contain prices in the face of the energy crisis.

45 Ministry of Environment and Energy, National Inventory Report of Greece for Greenhouse and other gases for the years 19902021, April 2023.

46 The greatest change in absolute terms took place in the energy sector, where emissions decreased by $MtCO_2e$ (-1.8%). Emissions from industrial processes decreased by 25 $MtCO_2e$, while from agriculture by 7.8 $MtCO_2e$. The downward trend of emissions is also continuing in the waste sector (-1.2 $MtCO_2e$ compared to the previous year). Greenhouse gas emissions decreased in 16 Member States of the EU-27 in 2022. Poland registered the greatest change (15 $MtCO_2e$) in absolute terms, followed by Germany and the Netherlands (-12 and -11 $MtCO_2e$, respectively). By contrast, the greatest absolute increase in emissions (+12 $MtCO_2e$) took place in Spain (European Environment Agency, Approximated EU greenhouse gas inventory – Proxy GHG emission estimates for 2022, ETC CM Report 2023/05, October 2023).

Chart X.2 Shares of energy products in total available energy in Greece



Source: Eurostat.

competitiveness of coal, while there were unexpected nuclear energy and hydroelectric plant stoppages during 2022. However, the parallel strong rise in the use of solar and wind energy played a key role in rebalancing greenhouse gases, with a future prospect of leading to considerable emission decreases in the sector of energy supply.[47]

The analysis of the energy mix in both the EU-27 and Greece in 2022 compared to 1990 highlights the progress already achieved in the penetration of RES. More specifically, in 2022, according to Eurostat data, the energy mix in the EU-27 (see Chart X.1) consisted mainly of five different sources: petroleum products, including crude oil (36.8% of total available energy, against 39% in 1990), natural gas (21.1%, against 16.8% in 1990), renewable energy sources (17.9%, against 4.8% in 1990), nuclear energy (11.1%, against 12.7% in 1990) and solid fossil fuels (11.6%, against 25.7% in 1990). As far as Greece is concerned (see Chart X.2), the respective shares were 58.3% for petroleum products (1990: 62.1%), 18.5% for natural gas (1990: 0.6%), 15.4% for RES (1990: 4.5%) and 6.6% for solid fossil fuels (1990: 32.6%).

3 THE BANK OF GREECE'S SUSTAINABILITY AND CLIMATE ACTIONS IN 2023

Over the past year, the Bank of Greece pushed forward its climate change and sustainability agenda, as outlined in its Annual Financial Report 2023.

As a member of the Eurosystem, the Bank of Greece adopted the Common Stance agreed by the Eurosystem for applying sustainable and responsible investment principles in the management of the non-monetary policy portfolios of central banks. In March 2023, the Bank of Greece published for the first time data on the climate footprint of its euro-denominated portfolios, other than those held for monetary policy purposes,[48] while continuing to release monthly statistics on sustainable debt securities issuance.[49]

In the context of the research activity of the Climate Change Impacts Study Committee (CCISC) and the Bank's participation in the eight-year LIFE-IP AdaptInGR project (2019-2026), on 15 December 2023, the first preliminary results of the update of the report The environmental, economic and social impacts of climate change in Greece were announced. The report was first published in 2011 and formed the basis for the development of the Greek Climate Change Adaptation Strategy in 2015. In particular, new climate models (up until 2100) were presented, along with the estimated impact of climate change on critical sectors, such as agriculture and trans-

47 European Environment Agency, Trends and projections in Europe 2023, EEA Report 07/2023.
48 TCFD_disclosures_2023_EN.pdf (bankofgreece.gr).
49 https://www.bankofgreece.gr/en/statistics/financial-markets-and-interest-rates/securities-issues-by-domestic-residents.

portation, and a first vulnerability assessment of climate change in Greece. By the end of 2024, the updated final report is expected to be released, including, among other things, the expected changes in climate for the next decades, the impacts of climate change on the most vulnerable sectors of economic activity, a vulnerability assessment of the Greek economy from climate change and a cost assessment of climate change in Greece.[50]

Also, in the context of the Bank's contribution to climate change adaptation actions, the findings of a study entitled "Adaptation to climate change: challenges and opportunities for the Greek economy", which was prepared by the Foundation for Economic and Industrial Research (IOBE) with the support of the Bank of Greece, were presented on 14 February 2023. The study refers, among other things, to the challenges that climate change adaptation poses for the Greek economy, as well as to the prospects for increasing the financing of related actions.[51]

During 2023, Bank of Greece staff participated actively in European institutions (such as the ECB and the EBA), the Eurosystem's Climate Change Forum and the NGFS. More specifically, they participated in actions and working groups, as well as in the writing of studies, e.g. about the risks for the economy and the financial system arising from the loss of biodiversity and the degradation of ecosystems (see footnote 33).

As regards the cooperation with national bodies and networks, members of the Bank's staff participated in the Ministry of Finance Working Group on Sustainable Finance in Greece with public policy tools; the Working Group completed its work during 2023 and submitted its report to the Minister of Finance. Moreover, they participated in working groups with a view to supporting the Ministry for Climate Crisis and Civil Protection in the coordination of readiness and mobilisation actions for responding to emergency situations and climate change adaptation.

50 Press Releases (https://www.bankofgreece.gr).
51 Press Releases (bankofgreece.gr) (in Greek).

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