The Greek Economy

Quarterly Bulletin

02/22

FOUNDATION FOR ECONOMIC & INDUSTRIAL RESEARCH

Editorial Policy

The analysis of the Greek Economy is the product of a collective effort by the research staff of the Foundation. The views presented here represent a reached consensus and no individual bears sole responsibility for all or part of it. Furthermore, the views expressed do not necessarily reflect those of other organisations that may support, finance or cooperate with the Foundation.

IOBE

The Foundation for Economic and Industrial Research (IOBE) is a private, non-profit, public benefit research organisation. Its purpose is to promote research on current problems and prospects of the Greek Economy and its sectors and to generate reliable information, analysis and proposals for action that can be of value to policy makers.

ISSN 1108-1198

Sponsor of the Issue

EY

Building a better working world

Foundation for Economic and Industrial Research (IOBE)
11, Tsami Karatassou Street, 117 42 Athens, Tel.: (+30210 921120010), Fax: (+30210 9233977),
URL: www.iobe.gr, Email: info@iobe.gr,

Foreword

IOBE is publishing its second report for 2022, as part of the periodic reviews of the Greek economy, during a period when the developments are driven mainly by the war of Russia in Ukraine. Its impact is currently reflected in the energy crisis and the sharp acceleration of inflation. However, effects are gradually emerging in other areas, such as the cost of capital, as central banks adopt less expansionary monetary policy in order to mitigate inflationary pressures, yet this is a development that inhibits investment. Domestically, there are significant indications since the beginning of the second quarter of a strong increase in international tourism this year, a trend which, if maintained, will support the country's external balance and, more broadly, GDP and employment. Like all IOBE reports, it contains four sections, accompanied by an annex of structural indicators. It is preceded by a text analysing the effects of the Ukrainian crisis and the dramatic change of the conditions. The remaining sections include the following:

The first section contains a brief overview of the report, setting out its main points, analysed in detail in the following sections. The second section outlines the broader economic environment and includes: a) analysis of the international environment in the first quarter of 2022 and the outlook for the rest of 2022, b) presentation of the economic climate in Greece in the second quarter of this year, according to the results of the business and consumer surveys of IOBE, c) assessment of the balance of the State Budget for January-April this year and d) developments in the domestic financial system in March-April 2022.

The third section focuses on the performance of the Greek economy for the most part in the first quarter of 2022. First, it maps the macroeconomic environment in the same quarter and makes forecasts for 2022 as a whole, taking into account all available war impact data, domestically and internationally. It then analyses developments in key production sectors in the first quarter or first four months of this year and presents the export performance of the Greek economy for the same period. After that, it outlines developments in the labour market over the January-March quarter. It then analyses the inflation trends in the first five months of 2022. The section concludes with an assessment of the balance of payments for January-April of the current year.

The fourth section presents a study on the impact of digital health and Real Health World Data in Greece.

This report refers to and is based on data available until 21/06/2022.

IOBE's next quarterly report on the Greek economy will be published in late October 2022.

POSITIVE SIGNS AND SIGNIFICANT THREATS

How is the Greek economy evolving? Reading its course is not simple, as positive developments, at the macro- and micro-economic levels, coexist with delays and significant risks. For this year, real growth rates are expected to be strong, despite exceptionally high inflation. In the medium term, however, there is an urgent need to reverse the twin deficits, i.e. in the fiscal and trade balance, amid particularly high energy prices and wider disruptions in the global economy.

Strong growth rates, despite very high inflation

As regards GDP developments in the current year, it is estimated that real growth is gradually slowing down from the particularly high rate of the previous year, following the initially deep recession due to the pandemic, and is estimated to fall to about half of last year's growth. According to the data for the year so far, growth relies to a large extent on an increase in both private and public consumption. Having, of course, a very low base in the previous year, consumption growth is recorded despite high inflation and is partly based on policies of subsidising households. These policies were launched previously to support incomes given the pandemic and its restrictions and are now directed to address high energy market prices.

The strong consumption growth is expected to weaken significantly over the coming months

The strong consumption growth is expected to weaken significantly over the coming months, as the base of comparison will not be as low, and the impact of inflationary pressures is expected to escalate. Of course, for the estimation of the effects on GDP, it is crucial that, given the structure of our economy, a significant part of consumption causes increased imports.

Both for this reason and because consumption dynamics are expected to gradually weaken, to keep growth rates high from next year it is crucial to systematically increase investment and exports.

The reasons why it is crucial to directly support the strengthening of investment and exports, where there is already a positive sign, are on the one hand the risks accumulated in the global economy and, on the other, the long-standing gaps in the production structure of the Greek economy. This combination poses strong challenges to economic policy, in particular because the maintenance of household incomes cannot be further supported by public deficits. In the global context, there are two related sources of problems. High inflation intensifies the tendencies of a sharp reversal of monetary policy, which was particularly supportive, with extreme low interest rates and other actions already before the pandemic and even more throughout its duration. At the same time, geopolitical tensions, especially after the Russian invasion of Ukraine, have kept energy costs and uncertainty particularly high. In this context, there are strong pressures on supply chains, investment plans and budgets for households and states.

The current juncture is critical.

Overall, although the period since 2008 has been characterised by crises and extreme fluctuations, the current juncture is critical for the medium-term course of the Greek economy. Challenges are expressed in many ways. The upsurge in inflation is pressuring consumption and households more broadly. The more expensive money and uncertainties make investors more cautious. The sharp rise in interest rates threatens those with high debt. The generalised slowdown of the economies makes export growth difficult.

Although almost all economies are affected today, ours is at an extremely critical point. The exit from enhanced surveillance, with the recovery of investment grade as a key intermediate target, and in anticipation of further drastic changes in monetary and fiscal policy in Europe, the Greek economy is attempting to set itself on the path of systematic growth. Achieving this is also a necessary condition for the stability of our economy. If it does not grow, there will not only be stagnation, but it will soon lead to a new crisis.

Why is it crucial to set the economy on a growth path in the medium term? After the 10-year crisis and deep recession, the strong fluctuations of the pandemic, and the turmoil from the war in Ukraine, there are wounds, obligations, and imbalances. Public debt will again become an immediate problem if no new income is created, and the same applies to the state's social security and other liabilities. The demographic dynamics are already negative. If the expectations are not positive, investment will be low, and thus productivity as well. Households will be weak, they will not be able to support the most vulnerable, and many young people will once again take their chances abroad.

Inflation problem

The problem of inflation is of particular importance. The war in Ukraine was the spark that triggered it, but it found a tinder to flame up in the previous state of the economy. After all, there were strong pressures on the world economy before the Russian invasion. In our country, rents and house prices increased at least a year ago, while the tourism offering was significantly more expensive as early as last summer. Inflation cannot be attributed only to rising costs in energy and various commodities due to the war, although this is a factor that weighs on the problem. By analogy, the solution to the problem will not be simple.

A significant part of the global economy has been in imbalance since the financial crisis more than a decade ago. European and other central banks supported economies with expansionary policies for a long time, trying to steer them between debt management and growth, but investment and prices were low. When the pandemic came, it hit the economy twofold, with a direct restriction of consumption in many sectors, but also with severe disruptions in production and international trade chains. The sharp decline in demand initially prevailed over the decline in supply, and led most economies to a deep recession, along with a fall in the prices of many products.

Against this background, the invasion of Ukraine had a destabilising impact, causing a sharp increase in the cost of energy and critical commodities. At the same time, it derailed expectations and increased risks. Instead of growing, production declined further. Central banks are vacillating between policies that will harness prices but can push economies into recession, without having many tools available. Inflation in most Western economies has already gained strong momentum, with self-fulfilling price-wage spirals. In Greece, inflation is now faster than the European average.

The end of the war in Ukraine would certainly help to reduce prices, but by itself it would not be enough and it does not seem to be coming soon. At the same time, economies such as ours, with chronic structural lags, cannot be considered to address the problem of inflation mainly through extensive subsidy policies. Such policies may even prolong and exacerbate the problem, ultimately affecting the households. In the medium term, prices cannot fall as long as demand does not decline compared to the increase in supply.

At the same time that measures to support the most vulnerable households and policies to adapt regulation in key markets such as electricity are necessary, it is urgent to support production, notably through simplification of procedures and rules, as well as reforms to increase competition in product markets. This would have a direct double benefit, increasing supply domestically and thus reducing prices and increasing exports and thus real incomes. It would also have an indirect but very significant benefit as it would strengthen the overall creditworthiness of the economy by removing scenarios of a future crisis, and thus reducing the cost of financing, which has recently started to rise alarmingly.

Large increase in the cost of financing of Greece

The large increase in the cost of financing of Greece, as well as the distance from the average in the Euro area, is crucial, and should be a cause of deep concern. An increase in interest rates was expected after the pandemic, as monetary policy would necessarily change course. The plentiful money supply, at almost zero cost, by central banks and the support of households and businesses by governments with transfers and other measures, mitigated the recession and the effects of the pandemic in general but led to new public deficits, and had to be gradually reversed. The spike in inflation, however, and the crisis in Ukraine are leading more quickly and vigorously to conditions of expensive money and a threat of recession. Are there conditions for a new financial crisis, such as the one that marked the beginning of the 10-year crisis?

The situation is not the same as in 2010, neither within the country nor in the European context. The public debt restructuring has shifted most of its burden further in the future. Policies in Europe, through the Recovery Fund and beyond, signal that there is no intention of letting weak economies face the risks alone. The very availability of resources, as subsidies and loans on favourable terms, can help our economy to plan for a significant reduction in the investment gap over the next three years. Tourism is recovering strongly, while manufacturing niches are increasingly successful in exports. Overall, the short-term economic growth trends are more positive than the average in Europe.

The risks to our economy are not, therefore, immediate — but they are very strong. The window of opportunity that is outlined for the next two or three years can be used to strengthen the production structure, i.e. the necessary modernisation of both the state and the enterprises. If this happens, funding will then not be a problem and growth will be strong. But if our economy simply exhausts fiscal space and the resources are used to support its current structure, the outlook will become strongly negative in a new crisis. The sharp rise in interest rates today is already hampering the necessary increase in investment and must be a clear signal for vigilance.

At this crossroads, Greek businesses have great opportunities but face ongoing and new challenges. It is important that a growing part of the country's manufacturing companies are now achieving good export performance, not limited to Europe but covering a wide range of markets. The products exported often, although not always, have significant innovation content and rising quality. Many of these companies are not large when judged on an international scale, but their size is important for Greek measures. They are flexible to diagnose and meet the evolving needs of their customers, even for exceptionally large enterprises in the global economy. At the same time, a growing part of the tourism sector is turning to the supply of high-value services and even faced with the challenges of the pandemic and high travel costs, the country's attractiveness and revenues remain high.

Good export performance

These very important and promising trends, supported also by growing funding to dynamic enterprises, cannot hide the overall picture of the Greek economy which remains largely inward-looking, with emphasis on sectors of low innovation and added value and weak competitiveness compared to the euro area average. The question is whether structural changes, capable of reversing the challenges posed over a medium-term horizon, can be implemented more quickly.

Crucial window of opportunity

Despite the risks posed by the global economy, the Greek economy is facing a window of opportunity. To take advantage of this opportunity, however, it is necessary to intensify changes in the state, in the markets, and in the relationship between them. In particular, there is some road to cover until we achieve a stable and simple regulatory and fiscal framework, which should be an immediate priority. Modernising education and linking its tertiary level with production and international cutting-edge research is also crucial. Finally, over-reliance on regulations, complex secondary legislation and the low speed of justice are at odds with productive investment in both natural and human capital. Progress in these areas is essential for growth in the medium term. Small improvements, similar to those that all countries are already making, are not enough. Our challenges are bigger and more complex.

1 BRIEF OVERVIEW

Slowdown of the recovery in the first quarter of 2022, under the initial impact of the war in Ukraine

The global economy continued to recover in early 2022, albeit at a lower rate than in the previous three quarters, which is considered to reflect the initial effects of the war on Ukraine. The OECD economies grew 4.4% in the first quarter of 2022, after a 4.9% GDP increase in the previous quarter and a marginal contraction of 0.2% in the first quarter of 2021. The annual rate of GDP change in the major developed economies (G7) stood at 3.8%, compared with 4.5% in the previous quarter and a recession of 0.5% in the same quarter of 2021. The 20 largest OECD economies grew at 4.5% in the first quarter of 2022, unchanged from the previous quarter, against growth of 3.7% in the corresponding quarter of 2021. Therefore, the slowdown in growth compared to late 2021 was mainly driven by the major developed economies. At the country level, the strongest growth acceleration quarter-on-quarter in the first quarter of 2022 among the major developed economies was recorded in the United Kingdom (+8.7% from +6.6%) and Germany (+3.8% from +1.8%). By contrast, the sharpest deceleration occurred in the US (+3.5% from +5.5%), France (+4.5% from +4.9%) and Canada (+2.9% from +3.2%). Among the major Asian developing economies, China grew in the first quarter of this year by 4.8% from 4.0% a quarter earlier. This is the first time since the first quarter of 2021 that growth in the country accelerated. India's economy recovered by 4.1% from 4.7% in the fourth quarter of 2021. In Latin America, the economies of Argentina and Brazil expanded by 6.1% and 1.5% respectively, from growth of 8.7% and 1.6% in the previous quarter.

From the above individual trends in countries of different economic regions at the beginning of 2022, it appears that both some of the most developed and some developing countries were affected by the new outbreak of the pandemic, with the Omicron variant, as well as the first disruptions caused by the war in Ukraine, in the supply of energy products and raw materials. The effects of the war will escalate from the next quarter, mainly through the energy crisis and the sharp rise in energy prices, following their increase in the second half of last year, from the recovery of the global economy.

The disruptions in the supply chains of energy products and basic food are hitting the poorest countries the most, in Europe and elsewhere. The outbreak of a food crisis is expected to be one of the consequences of the war in countries with high dependence on food imports and limited economic potential. Additional inflationary pressures on real income from the war, the new heightening of uncertainty, combined with rising interest rates, pose new challenges for policymakers, who were already faced with a significant burden on public finances due to the pandemic and imbalances along the path of recovery from it. That said, high inflation contributes to debt reduction, both private and public.

Especially in Europe, the effort of many countries to get rid of Russian energy products is difficult to achieve in a short period of time. In the short term, however, as many countries face extremely high energy costs, the main aim is to diversify energy sources, even with the greater use of certain polluting technologies, such as lignite. In addition, efforts are ongoing to find appropriately designed and targeted fiscal interventions to support households and businesses in order to limit the negative impact on growth, without significantly burdening countries' fiscal balances. Despite the efforts made, Europe is now facing high uncertainty due to ever-increasing prices and some possible shortages in the coming winter.

The strengthening of inflation to levels not seen in many years and low unemployment in many countries are leading monetary policy to gradually withdraw its support and transform its stance into a less expansionary one. As the rise in inflation is due to supply-side constraints, which monetary policy cannot affect, most central banks worldwide are turning to less expansionary policies, targeting the demand side, thus making clear their intention to tame high inflation before it settles. Although the intention of the central banks of the major economies is to "smoothly land" demand, the planned further interventions on their key interest rates make the risk of recession at some point in the medium term visible if inflation does not subside.

In the light of the above, mostly negative effects on the global economy, restraining pressures will appear on the course of its recovery. Prior to the war, the forecasts of international organisations for this year ranged in the region of 4.0-4.5%. They have now been revised by around 1.0-1.5 percentage points (e.g. IMF, April 2022, -0.8 points, OECD, June 2022, -1.4 points).

Mild slowdown of recovery in Greece in the first quarter of 2022

The recovery of the Greek economy slowed slightly quarter on quarter in the first quarter of 2022. In particular, GDP grew in January - March of this year at a rate of 7.0%, from 8.1% in the previous quarter, while a year earlier it was falling by 1.7%.

In terms of the developments in GDP components in the first quarter of this year, domestic consumption increased by 10.5%, while a year earlier it had declined by 2.8%. The boost came almost exclusively from strong growth in private consumption (+11.6%), which more than offset its decline a year ago (-4.9%). Government consumption expenditure rose mildly (+1.8%), significantly slower than last year (+5.1%).

Investment increased by 9.2%, as in all 2021, faster than a year earlier (+3.5%). As in the first quarter of last year, the increase this year came exclusively from the expansion of fixed capital formation, by 9.6%, compared with a faster rise of 14.4% a year ago. Stock formation declined in the January-March quarter of this year, mitigating the investment growth.

The trends were positive in four out of seven categories of fixed capital in early 2022. Other machinery and equipment - Weapons systems recorded the largest increase in absolute terms (+€539 million or +39.1%), reflecting the impact of the procurement of defence systems, followed by Other buildings and structures (+€206.8 million or +15.9%). Next in absolute terms came Dwellings (+€104.1 million or +18.6%), while the lowest increase in absolute terms was posted by Other products, by €52.8 million (+5.18%). By contrast, the stronger decline in investment occurred in ICT equipment, by €231,4 million or 37.2%. Much weaker was the decline in Transport equipment (-€11.6 million or -2.6%) and in Cultivated biological resources (-€1.3 million or -6.3%, from +7.0%).

In terms of developments in the external balance of the economy, the absence of restrictions on international travel and economic activity in the first quarter of this year, as opposed to one year earlier, led to a strong annual expansion of international tourism flows (+298.6%) and international transport, and thus of exports of services (+23.0%), against their decline of 15.4% in the first quarter of 2021. Perhaps this increase was mitigated by the countervailing effects of the war in Ukraine, as international tourism continued to fall significantly short of its 2019 level (-45.1% in the first quarter). The exports of goods continued to expand for the seventh quarter in the January-March period, but at the lowest speed since the start of this growth streak (+2.5% against +9.0% last year). This development is likely due to the continued sharp rise in commodity prices since the third quarter of last year and the impact of the war in Ukraine on international supply chains. Overall, exports expanded by 9.6%, while a year ago they were falling by 2.0%.

Stronger than exports was the growth of imports in the January-March quarter, by 17.5%, against their decline of 5.3% in early 2021. In contrast to exports, the rise in imports was higher in goods rather than services (+17.8% vs. 15.5%), even though in the same period of 2021 the imports of services had fallen stronger (-30.0% compared to -17.6%). The deficit of the external balance in national accounting terms widened year on year by €1.39 billion or +212%, to €2.04 billion.

Significant recovery in Greece in 2022, slightly stronger than projected at the start of the war in Ukraine

The war in Ukraine has continued for more than four months after Russia invaded the country. In addition, negotiations between the two countries have stalled and sanctions to and from Russia are escalating, keeping at a high level the uncertainty about the duration and dimensions that hostilities can take. Combined with the so far strong upward effects on prices mainly of energy products, but also of certain raw materials and food, as well as the turbulence it has caused in the operation of supply chains, the war will be the most decisive factor in economic and geopolitical developments at least during this year. It is quite likely that its effects will extend to the coming years.

The recent developments regarding the pandemic have limited its relevance for the economic developments. Domestically, despite the lifting of almost all measures to protect public health as of 1 May, with the exception of the mandatory wearing of masks in indoor areas from 1 June, with few exceptions, the trend in key indicators of the pandemic has been negative throughout most of the second quarter. The number of cases and deaths per day fell in late April to early May below the level recorded before the spread of the Omicron variant, while the number of intubations had remained at these levels since March and has now been close to the minimal levels of September 2020. In contrast to these downward trends, the number of cases has been moving up since the beginning of June, not only domestically, but also internationally, which is probably related to the start of the summer tourist season. No measures to protect public health have been reintroduced at the moment. But the current escalation over the summer, in climatic conditions that are not conducive to the spread of the coronavirus, makes possible a stronger outbreak from the autumn. Such a development may lead to a deterioration of all epidemiological indicators and the reintroduction of more measures to protect public health.

With regard to recent price developments, the inflationary pressures escalated sharply in April-June, due to global difficulties in supplying certain energy products, consumer goods (e.g. sunflower oil), and raw materials (e.g. metals extracted in Russia and Ukraine), due to the war, but also the continued recovery of the global economy, albeit at a milder pace than in 2021. In May, the average price of Brent oil rose month on month by 8.4%, to $113.3/barrel, 65.4% higher than it was a year ago. The average Dutch TTF gas price stood at €88/MWh, 13.3% lower than in April this year, but 252% higher than in April last year. The latest developments in this regard include the imposition at the beginning of June of the sixth set of sanctions by the EU on Russia and Belarus, including a ban on imports of crude oil and refined petroleum products from Russia, with limited exceptions and the exclusion from the SWIFT system for three additional Russian banks and one additional Belarusian bank. Meanwhile, Gazprom reduced its gas exports to Europe via Ukraine twice in June and, as a result, they reached 41.4 million cubic meters, from 42.1 million at the end of May. While Russia's energy exports to Europe have been severely limited, they are on the rise to strong Asian developing economies such as China and India. In addition, the prices of these exports are much higher than before the war. Russia continues to export cereals, without restrictions, as there is a need to replace Ukraine's production, also at much higher prices. As a result of these developments, coupled with the withdrawal of large multinational groups from the country, which has curtailed imports, its surplus more than tripled in the first four months of 2022, reaching almost $96 billion.

These developments hamper the easing of the prices of energy and other commodities, slowing down the global economic recovery. The high prices are partly sustained by measures to mitigate the effects of the energy crisis on developed economies, which props up a large part of the energy demand. The long duration and intensity of the increase in prices result in their diffusion into industries in the production process of which the importance of expensive commodities as raw materials is high. For example, domestically in recent months, there has been a strong price increase in the manufacture of food and non-alcoholic beverage and in hotels-coffee-restaurants.

By contrast, there are positive economic developments domestically in the second quarter of 2022, and namely: a) significant growth of tourism flows in relation to one year before the war, which limits the gap from the 2019 levels, and b) the disbursement of the first tranche of €3.6 billion from the Recovery and Resilience Fund, with a delay of about two months compared to the plan in the budget, while the inclusion of projects of the National Recovery and Resilience Plan (Greece 2.0) in the NSRF continues rapidly.

Regarding international tourism in particular, despite the strong escalation of global uncertainty from Russia's invasion of Ukraine and the effects of the war, tourism flows continued to grow and strengthen year on year in the March-May quarter. The average shortfall in international arrivals at the country's airports in this period compared to their 2019 level was 9.4%, compared with an average gap of 40.2% in the previous quarter, i.e. during the winter. Indeed, in May, for the first time since the start of the pandemic, international arrivals at all airports had an increase, albeit small, compared to the corresponding period of 2019 (+3.2%). These trends are considered to be a clear indication of the positive momentum that tourism has developed for this summer.

In the area of monetary policy, following continued high inflation growth until May, broadening the basis of inflationary pressures, the Eurosystem experts have significantly revised upwards the baseline of their inflation projections. Assessing these and other developments, such as the impact of the war on Ukraine, as well as the dynamics of the euro area economy, the Governing Council of the ECB decided in early June to halt net asset purchases under the APP from 1 July 2022, at least a quarter earlier than expected. The most important decision taken by the Governing Council of the ECB concerned its key interest rates. First, it announced that it would increase them by 25 basis points at the July monetary policy meeting, thus moving away from the expansionary monetary policy stance after almost three years, since September 2019. In addition, the ECB expects to increase them again in September, depending on the updated medium-term inflation outlook. More broadly, the Governing Council predicts that the appropriate path will be a series of gradual but continuous further increases in interest rates. The ECB's recent decisions are expected to limit liquidity in the euro area. Especially for the public sector, they will contribute to the further rise in borrowing costs in place since January. As a result, the average yield on the ten-year government bond has reached since May its highest level in a decade.

The IOBE macroeconomic forecasts are based on assumptions for factors that are deemed to affect the underlying macroeconomic variables from a given point in time and in the medium term. The most important factors in the previous two years have been the evolution of the health crisis in Greece and internationally, especially in the Eurozone, as well as the magnitude of policy interventions to contain its impact. Following Russia's invasion of Ukraine, the evolution of the war and its geopolitical and economic effects are among the defining parameters for the course of economic activity, not only domestically but also globally. Considering that the war does not seem to end soon, coupled with escalating sanctions on and by Russia, related developments will be the most important determinants of GDP this year, and possibly in the coming year. The parameters of the forecasts include from previous years the cost of energy, which has been strongly affected by the war, as it is a key production factor for businesses, mainly in Industry, while many services used by the households rely on it. Its strong upward trend in the recent period has increased the importance and impact of energy costs on the forecasting process. An additional factor compared to previous years for the course of economic activity in 2022 is the pace of implementation of projects under the recovery fund.

Given the above parameters that enter the macroeconomic forecasts, the assumptions about the 2022 forecast scenario are as follows: the war is likely to continue for most of the second half, probably throughout its duration. As a result, energy costs will remain at a particularly high level for a long period of time, from escalating sanctions, a general reluctance to import from Russia and the inability of energy supply chains to adapt quickly to such a major disruption. As a result, the price of Brent oil is expected to be on average higher by about 50-55% than last year. In response to this price dynamics, extensive measures will be implemented to subsidise energy consumption and support the income of households and businesses, propping up economic activity.

On the health issue, a new significant outbreak of the pandemic is likely from the end of the summer or in early autumn. However, no generalised restrictive measures are expected, while many of the restrictions that were in place last autumn and this winter may be gradually reintroduced by the end of summer. The strong positive trend in international tourism in the March-May quarter this year reflects, first, the early start of the tourist season, as predicted in previous IOBE reports on the Greek economy, and second, a strong recovery momentum. In view of this, revenues from international tourism services are likely to increase significantly compared to 2021, reaching about 90% of their 2019 level, taking also into account their nominal growth due to inflation. The war will have a significant impact on the recovery in the euro area, which is expected to be 1.0 to 1.5 percentage points lower than the Commission's most recent pre-war forecast of 2.5-3.0% growth. As regards the utilisation of the RRF, the targets for expenditure (€3.2 billion) and lending (€586 million) are projected to be achieved, yet with a more backloaded allocation within the year compared to the initial planning, due to delays in the disbursement of the first tranche. That said, a gradual increase in the interest rates, after two years of historically low levels, will discourage the taking of investment risk by a part of planned or future investments.

In detail as to the expected conditions in the Greek, European and global economy in the second half of this year, as it is now considered likely that the war will continue in most of the second half, energy costs will remain at a particularly high level, even in the summer season, when they usually decline, while much of the energy supplies for next winter are agreed. In addition, there will continue to be significant disruptions in supply chains as it will not be possible to produce or trade, due to sanctions, certain internationally traded goods from Russia and Ukraine, in which they hold significant shares in the relevant global division of labour (e.g. raw materials, food). These negative effects will depend on the strength of the economic sanctions. At the same time, global oil demand is up from last year, according to the International Energy Agency, while the increase in the global capacity of refineries is lagging behind the expansion of demand. That said, as long as the war continues, more and more supply chains will be restructured to meet needs that before the war were served by the two countries and more broadly through networks that no longer work. Furthermore, economic activity in developed countries will be boosted for the third consecutive year by government interventions supporting businesses and households. After two years of pandemic conditions, the developing economies have little potential to react to a new crisis, of energy this time. As a result, the intensity of the recovery will differ significantly across the world regions and will overall be weaker than anticipated before the geopolitical turmoil.

In order to halt price increases in energy, successive packages of measures have been announced since the beginning of January. The most important of these are subsidies for the consumption of electricity and gas to households and businesses, the compensation of 60% of the extra charges to households (power pass), the subsidy for the consumption of petrol and diesel for individuals (fuel pass) and the new compensation mechanism for power plants, with the aim of decoupling the compensation from the wholesale energy price, which is affected by the international price of natural gas. The current measures are expected to continue, probably by adding some adjustments to existing ones, as long as energy prices remain high. New interventions will largely replace last year's extensive measures, which contributed to the high pace of recovery. However, unlike the previous two years, many businesses will receive support while in operation rather than in suspension. Therefore, in addition to supporting the real income of households and their consumption, the smooth operation of businesses will be supported in the adverse conditions of war, helping them to maintain their jobs and meet their current obligations. That said, the new interventions will not affect the formation of fixed capital, as was the case in the previous two years, e.g. by accounting certain support measures in the PIP.

The limited measures to protect public health during the summer period allow the economy to function smoothly, internally and in terms of international travel. Note that the abolition of public health restrictions on international travel allows travel domestically and from residents of countries other than the European Union, the Schengen Agreement, and certain third countries, which participate in the EU Digital Covid Certificate (EUDCC). The number of these countries last April, before the lifting of the restrictions, was significantly higher than it was a year ago (37 against 21). However, since the beginning of May, travel to Greece has been allowed from all countries, which is expected to give further impetus to tourism in the country this year. Stronger positive effects than in 2021 are also expected to come from cruises. Besides, the period of their operation will be extended, which last year started on 14 May, while this year the first cruise took place on 3 April. The increase in the cost of travel brought about by the war (transport, accommodation, etc.) through the rapid rise in energy costs, as well as the general increase in prices, will moderate the favourable effects of the mentioned developments in tourism.

As estimated in previous IOBE reports on the Greek economy, the availability of investment funds from the public sector to businesses will be boosted in 2022 compared to last year mainly with resources of the European recovery fund (NextGenerationEU), primarily under its Resilience and Recovery Facility. In August 2021, €4 billion were disbursed from the fund, as an advance of the country's allocations. In late December, operational agreements were signed between the Ministry of Finance and six credit institutions to utilise part of the recovery fund's loan resources, amounting to €970 million. At the beginning of April, the European Commission disbursed the first tranche, of €3.56 billion, out of which €1.72 billion are grants and €1.84 billion loans, with Greece becoming the third country to receive it. About 230 projects were progressively integrated into the recovery fund, with a budget of €10.2 billion. In mid-June, a guarantee programme was announced for the provision of working capital and investment loans to small and medium-sized enterprises, starting from 2023, totalling €2.5 billion, with the assistance of funds from the Invest EU fund and €500 million from national resources.

The budget projection for grants in 2022 totals €3.2 billion. In the first five months of the year, there was a significant shortfall from the target, with grants not exceeding €35 million, against a target of €436 million. This is largely due to the disbursement of the first tranche from the recovery and resilience fund in April, later than expected when the budget was drawn up. A shortfall is likely to occur on the revenue side, following the delay in the disbursement of the first tranche. If it happens, it will affect RRF funding next year, as the funds from the advance and the first tranche are sufficient to meet the objectives for grants and loans this year.

As regards the regular state financing of investments by the Greek State, through the Public Investment Programme, for 2022, the preliminary draft state budget earmarked €7.8 billion through the PIP. They did not include emergency interventions due to the health crisis. With the additional budget tabled at the beginning of April, the grants foreseen through the co-financed part of the PIP were raised by €600 million, so its budget totalled €8.4 billion. In the first four months of this year, support through the programme reached €3.15 billion, while excluding pandemic interventions, it amounted to €2.88 billion. This level is much higher compared to last year, when the PIP expenditure mainly concerned anti-pandemic measures (€2.1 billion out of €3.56 billion) and compared to the expenditure target for the two-month period (€2.37 billion). These spending trends are seen as signs of widening support for investment activity from the PIP compared to 2021, when the programme grants totalled €5.8 billion.

Regarding the developments in funding that can play a key role in investment activity, the domestic banks have made particular use of the possibilities offered by the ECB to raise liquidity in response to the exceptional circumstances of the pandemic. In the context of the Pandemic Emergency Purchase Programme, by the end of March, when net purchases of securities from all countries under this programme were ended, the ECB had purchased securities worth €1.72 billion in total since the start of the programme. The net purchases from Greece, in particular, reached €38.7 billion at the end of March. Other liquidity facilities by the ECB to contain the impact of the pandemic include the non-targeted pandemic emergency longer-term refinancing operations (PELTRO). In addition, the terms of the targeted longer-term refinancing operations (TLTRO III) gradually eased, resulting in the eligible loans of Greek banks from the programme to reach €92 billion, while their borrowing limit gradually increased from 30% to 55%. Against this background of financing possibilities, the liquidity that Greek banks raised from the Eurosystem, with the exception of the PEPP, reached €38.5 billion in the period April 2020-February 2022, totalling €50.84 billion at its end. Since then and until at least April 2022, the raised liquidity has remained unchanged. Therefore, the availability of funds of the banking system raised from the ECB, among other objectives, to provide financing to enterprises, is high.

The possibility of granting loans has been supported since the beginning of 2019 by the continued growth of private sector deposits (households and non-financial corporations), at a high pace. Following their expansion in 2020 on average by 9.7% or €13.0 billion, private deposits rose faster last year, at an average annual rate of 13.0% or by €19.3 billion. In the recent period of March-April, the expansion of deposits slowed to 7.0% or €11.8 billion, compared to 9.9% or €15.8 billion in the preceding December-February quarter.

While the ample liquidity from the ECB, the strong positive trend in private deposits over the past two years, as well as the activation of the loan arm of the recovery fund, are conducive to credit growth by the banks this year, there are also some factors that mitigate this momentum. The most important impediments are the suspension of payments of bank loan instalments until the end of 2021 and the continued subsidy in the first quarter of 2022 of a percentage of the loan instalment (GEFYRA II programme), which mask the real dynamics in non-performing loans (NPLs). Moreover, the very strong inflationary pressures following the war in Ukraine and the uncertainty it causes about developments in the global economy are expected to lead households and businesses to use part of their deposits, mainly to cover their current expenses, resulting in the reduction of available investment resources.

The resurgence of uncertainty due to the war in Ukraine is also included in the causes that will weaken the demand for capital from businesses and households, compared to its expected level before the war. The gradual increase in the borrowing interest rates by the ECB from July, which most likely will continue in September, in order to mitigate the inflationary pressures, will also dampen the demand for loans. That said, a sustained, vigorous recovery in some sectors (e.g. export-oriented sectors of Industry, Tourism) will stimulate demand for bank credit.

With regard to the development of non-performing loans (NPLs), the latest data refer to the first quarter of 2022. On this basis, after their sharp decline in 2021, their quarter-on-quarter decline in the first quarter of this year was marginal, by just €0.56 million, to €19.4 billion or 11.6% of total loans. A year earlier they had reached €57.9 billion or 32.9% of total loans. The small contraction of NPLs in the January — March quarter came mainly from business loans (-€0.49 million or -3.5%), followed by mortgages (-€0.1 million or -3.1%), while the non-performing consumer loans marginally increased (+€0.032 million or +1.8%). As a result, the level of NPLs reached around €100.5 billion or 84.2% below their March 2016 peak.

In light of the favourable developments for the accumulation of capital from the banking system mentioned above, the supply of bank credit to non-financial corporations has continued to expand. However, its pace weakened further. In particular, credit growth stood at 4.7% in the recent two months of March-April 2022, compared with 7.7% a year earlier. Over the same period, the average rate of credit contraction to households eased slightly compared to a year ago (-2.1% from -2.6%). The private sector as a whole saw credit growth in the recent period March-April at an average rate of 1.7%, compared with 2.4% in the same period a year earlier and 0.6% in the first quarter of this year.

The provision of liquidity to businesses continued to take place on particularly favourable terms at the start of the war in Ukraine, before the announcement of the increase in interest rates by the ECB. The average interest rate for new fixed-term loans to non-financial corporations stood at 3.17% in March-April, higher than in the previous quarter (2.75%), when it was close to a historical low since at least 2010 (2.64%). The average interest rate of the same category of new loans, but to freelancers, was slightly higher quarter-on-quarter, at 5.14% from 4.78%, a short distance from its level a year ago (4.91%). In new consumer loans to households, the corresponding average interest rate stood at 10.14%, lower than a quarter ago (10.57%), but higher than last year (9.24%). Unlike interest rates on loans to non-financial corporations and freelancers, current levels for households are among the highest since the second quarter of 2003, i.e. in the last 19-year period. Following the forthcoming hikes in intervention rates by the ECB mentioned above, a similar trend is expected in lending rates at home. Given this, the current financing conditions for businesses can be considered beneficial.

The low interest rates for bank lending by companies and the self-employed are also related to the strong reduction of the Greek government borrowing rates. As stated in previous IOBE reports, this trend is due to the evolution of Greece's creditworthiness and to the ECB's exceptional monetary policy measures in response to the pandemic. This January, Fitch maintained last year's BB rating, upgrading the country's outlook to positive from stable. This opens the way for an upgrade to BB+, i.e. one notch below the investment grade. In April, the day after the first release of fiscal data for 2021, Standard & Poor's became the first to assess the Greek economy's creditworthiness at BB+, with a stable outlook. The upgrade reflects the company's expectation that the effectiveness of the policies pursued in Greece will continue to improve, while the impact of the war on Ukraine is considered manageable, thanks to significant security reserves in both the private and public sectors.

Despite these clearly positive developments, there is a continuous rise in the yield of the 10-year Greek government bond in the period September 2021-April 2022, strengthening between January and the start of the war in Ukraine. Cumulatively it reached 230 basis points, reaching 2.89%, its highest level in 34 months. At the same time, the corresponding yield on the German bonds rose by 128 basis points to 0.75%. Subsequently, the spread with the Greek bond expanded by 102 points in this eight-month period, reaching 215 points. Under these trends in the yield and developments in its credit rating, in the first half of 2022 the Greek government issued a ten-year bond and reissued a seven-year bond. The first issue was held in January, at a rate significantly higher than that of the previous issue of the same maturity in June, at 1.84% from 0.88%. The issue raised €3 billion, the vast majority from foreign investors (84.5%), with total bids reaching €15 billion. The second issue took place in late April, following the assessment of S & P. It raised €1.5 billion, with an interest rate of 2.5%, and bids reaching €4.8 billion, reflecting the confidence in the medium-term prospects of the Greek economy.

Regarding the developments in the field of privatisations - concessions, the tender procedure for the new concession of Attiki Odos began at the end of January, for 25 years, and four months later, it was announced that eight investment schemes had expressed interest. In mid-March there was an expression of interest from an investment scheme for the concession of the Itea Marina, while in early April eight investment schemes were selected for the next phase for the utilisation of the Heraklion Port Authority. In mid-April, the tender for the concession of the Kalamaria marina was cancelled. In early May, "International Port Investments Kavala" became the preferred investor for the sub-concession of the port "Philippos II" in Kavala. At the end of June, it was announced that four investment schemes had submitted an expression of interest for the mega yacht marina in Corfu. Therefore, HRADF's revenue in the first half for yet another year is very limited. However, there is a potential for a significant increase in the rest of 2022, primarily from the formal completion of the tenders for Egnatia Odos and DEPA Infrastructure.

Taking into account, for the macroeconomic forecasts, recent and possible developments related to the war in Ukraine and its impact, such as the continued strong price rise in energy products, which has spread to other products (e.g. food-drinks, accommodation-food services), the weaker recovery of the global economy, as well as the extensive fiscal interventions to contain these effects, the dynamics of the COVID-19 pandemic, the much larger than expected strengthening of international tourism, as well as the gradual increase in intervention rates in the near future, it is expected that should the pandemic escalate again significantly, e.g. by the end of the summer, the restrictions will be similar as those implemented in the spring, thus strong restrictive measures will not be reintroduced. Therefore, the operation of sectors suspended in previous years with a significant share of private consumption (Retail Trade, Tourism, Food Services, Arts and Entertainment, Transport, etc.) will not be interrupted again, contributing to its growth. Household consumption will also be boosted by the expansion of employment in these sectors compared to a year earlier, especially in Tourism, due to the strong growth of its activity from international tourism. Jobs will also be created by higher investment, e.g. in industries with high export performance, also in Tourism, as well as by the greater contribution of the public sector to investment activity (expansion of the PIP, the recovery fund). Household consumption expenditure will continue to be supported by the rather high savings during the pandemic.

Having said that, the expansion of household consumption spending will be curbed by exceptionally high inflation, primarily due to the war in Ukraine, but also the ongoing significant recovery of the global economy, albeit at a milder pace than expected before the Russian invasion. Inflationary pressures on consumption will be mitigated by household support interventions. As there are no developments or indications that the war will end in the coming period, while sanctions are constantly escalating, it is now considered likely that the measures will be maintained for the remainder of 2022, with adjustments and additions, largely replenishing the emergency support measures due to the pandemic over the previous two years. As these measures support demand, they also sustain part of the strong inflation. Nevertheless, the impact on economic activity and employment will be stronger, coming also from a deterioration in expectations. The real disposable income of a part of the population will be strengthened by the middle of the year by the minimum wage increase. As a result of these effects on employment, disposable real income, and consumer confidence, household consumption is expected to expand in the baseline macroeconomic forecast scenario by 3.0% to 4.0%. In 2023, the stronger investment activity, from the acceleration of the implementation of the recovery fund and investments in major concluded concessions-privatisations (Hellinikon, AIA, DEPA Infrastructure), the positive effects of the extended, much stronger tourist season this year, in an environment without additional challenges from the war in Ukraine, will allow for a new expansion of private consumption, slightly milder than this year. As no additional support measures are expected compared to 2022, this will also contribute to this trend.

On the side of public sector consumption, as already mentioned, the war necessitates the implementation of support measures against the energy crisis throughout this year. As some indicators of the pandemic remained at a relatively high level (intubations, cases) in the first four months of this year, possibly also in the last quarter of 2022, a large part of the relevant needs in materials and equipment will be maintained. An expansion of public sector employment is planned for this year, with 20.6k recruitments and appointments. The employment boost and the extensive war-related support interventions will moderate the reduction in public spending compared to 2021, resulting in a decline in the region of 1.0-2.0%. After three years of high extraordinary spending by the public sector to address the impact of strong global crises (health, energy), a mild reduction in public consumption is expected in 2023. The election cycle will also prevent a more substantial reduction.

With regard to the expected developments in the field of investment, the fact that the war in Ukraine has continued for four months, without indications that it will come to an end soon, in combination with the successive packages of sanctions imposed, mainly on trade in energy products, has altered some of the key investment parameters, probably in the medium-to-long term. Clearly, these relate to the energy costs and the prices of certain other raw materials which came to a significant extent from Russia and Ukraine. Moreover, the disruptions caused in the value chains involving Greek companies, as well as companies from other EU countries that receive supplies from Greek companies, change the prospects of businesses and investment, in a way and to an extent, which is premature to assess. Of course, it is possible that such developments will strengthen the role of certain domestic companies with competitive advantages in activities dominated in the past by companies from Russia and Ukraine.

With regard to other factors that drive investment, the high corporate lending since 2020, which is expected to continue this year at a much lower pace, has created the possibility for a significant part of businesses to make investment, as highlighted in previous IOBE reports on the Greek economy. The implementation of Hercules II and the expected third cycle of this programme since

October can contribute substantially to the coverage of any negative developments in banks' assets from the pandemic, such as an increase of NPLs, but also more broadly, to their extensive reduction, to single digit rates within 2022. Thus, credit growth in 2022 is favoured by this factor as well. The loan arm of the European recovery fund will be an additional source of capital for the banks from this year. Among the sectors that are expected to make use of the available liquidity, companies from manufacturing activities whose demand is either related to or resilient to the health crisis (e.g. medicines, computer manufacturing, plastics) are considered to be the most likely to expand their investment activity. The strong recovery of international tourism in 2021, which will continue stronger this year, will rekindle investment activity in this sector.

The significant weakening in 2022 of the positive effects on the part of the public sector through the pandemic-related exceptional support interventions will be outweighed by the resources available under the Recovery and Resilience Plan (Greece 2.0), together with the domestic resources leveraged for the investment projects selected for support. As mentioned above, 230 projects have already been included in the Recovery and Resilience Fund (RRF), with a total budget of €10.2 billion.

In the other leg of the public sector's support for investment activity, through the PIP, the higher-than-in-2021 target for PIP support this year, which was extended by the supplementary budget by €600 million (to a total of €8.4 billion), the launch of the NSRF 2021-2027, and the experience of implementing the programme in the past, lead to the forecast that the expenditure of the PIP will significantly increase in 2022. It is expected to reach at least €7.5 billion, from €5.8 billion last year (excluding support measures), providing greater support to investment activity.

Taking into account the above expected effects, mainly from the global economic environment shaped by the war in Ukraine, with the particularly high energy costs and rising interest rates, as well as the continued credit expansion to businesses, the strong upward dynamics of international tourism since the beginning of spring, and the start of the utilisation of RRF resources, it is estimated that investments will expand by 13 to 15% in 2022. As mentioned above, the escalation of the implementation of the recovery fund and investment in significant concluded concessions-privatisations (Hellinikon, AIA, DEPA Infrastructure), and in Tourism, following its emerging strong growth this year, will support investment activity in the coming year. The elevated cost of capital and the high energy costs, which are not expected to decline soon, will act in the opposite direction.

The external sector of the economy was expected to be more negatively affected by the war. However, the emerging slightly less than originally expected impact of the war on the eurozone economy, the main export destination of Greek products, mitigates its negative effects on domestic exports. Far-reaching measures to support households and businesses in Europe will prevent a sharp decline in purchasing power from the unprecedented in at least 25 years inflation. Nevertheless, the slowdown of the recovery across Europe will dampen the demand for Greek exports. The exports of goods are expected to weaken to two other major destinations, the United States, due to a sharp decline in growth since last year, and Turkey, where inflation is galloping, eroding real incomes. Overall, the trend in exports will remain positive, albeit weaker than projected at the beginning of the year.

The loss of momentum on the side of the exports of goods is expected to be more than offset by stronger exports of services. Despite the negative effects of the war on transport costs, the trend of international tourism was strongly positive in the March-May quarter, both in terms of arrivals and revenues, with both figures in the last month of this period exceeding their level in 2019. A new outbreak of the pandemic, either during the summer or — most likely — from its end, will not have a particularly negative impact on tourism, as strict public health protection measures are not expected to be reintroduced. In such a case, they will probably return to the levels of last winter and autumn. However, most of the boost in the exports of services seems to come from international transport receipts, as the war in Ukraine has strongly boosted maritime transport in energy products. As a result of the expected trends in their key drivers, exports are projected to increase by 12-14%. The disruptions in the supply chains due to the war will set a low base for next year, revitalising international trade in 2023. International transport will then receive a boost, but their high costs will remain a deterrent. In the absence of any spill-over of the war, the uncertainty will ease, strengthening international passenger traffic, for business purposes and for tourism, and thus the related receipts.

While the imports of energy products, as well as of some raw materials, will be affected by their highly elevated international prices, the trend in demand is expected to be strongly positive for many of the other product categories, mainly from the expansion of private consumption and to a lesser extent from the rise in investment. On the side of imports of services, domestic demand is particularly strong for transport services, with their level higher than in 2019, as in exports. Meanwhile, travel services will also recover significantly, reaching pre-pandemic levels. Given the above factors, imports are projected to expand by 11% to 13% this year. The expected further expansion of household consumption and investment in the coming year, as well as exports, thanks also to supply chain changes that will have taken place, especially in the absence of war spill-over, will re-invigorate the demand for imports.

From the process of estimating the trends in GDP components in 2022, based on the assumptions of the macroeconomic scenario, in which the war in Ukraine will continue for most of the duration of the current half, possibly for its entire duration, with a strong impact on the recovery of the euro area, primarily through energy prices, while domestically the effects on tourism will be much weaker than anticipated earlier this year, the pandemic is likely to experience a new significant outbreak in late summer-early autumn, but without extensive restrictive measures and finally, the expenditure target of the Recovery and Resilience Fund will be achieved, it is projected that the Greek economy will grow this year at a rate of about 3.5-4.0%.

Regarding next year, the dynamism of investment activity, despite higher interest rates, combined with the expected gradual recovery of international trade and transport, in the absence of any escalation or spillover of the war, and the maintenance of the positive dynamics of household consumption demand from the previous two years, will lead to a continuation of the recovery, probably at a rate well above the long-term average growth rate of the Greek economy. That said, the high correlation of productive investment and private consumption with imports and the decline in public consumption spending after three years of continuous expansion will mitigate the rate of GDP growth.

State Budget 2022: targets met in the January-April period, mainly due to expenditure restraint

According to state budget implementation data, in January-April this year, its deficit reached €3.3 billion, against a deficit target of €5.0 billion for that period and a deficit of €8.8 billion a year ago. The primary balance of the State Budget in the same period was in deficit, by €799 million, in contrast to the deficit of €6.2 billion a year ago and against a deficit target for the same period of €2.45 billion. The target overshot came mainly from the State Budget expenditure. In particular, expenditure was €958 million lower than the target, totalling €17.7 billion. This development is mainly due to the containment of €458 million in the expenditure on fixed assets, due to a postponement of payments of armament programmes. In addition, there was a shortfall in current transfers to EU agencies and states by €149 million and called guarantees by €203 million.

Therefore, the expenditure restraint did not come from saving of resources. The net revenue of the State Budget exceeded the relevant target by €699 million, exclusively from higher tax receipts, by €1.75 billion, mainly from VAT on other revenue and services (+€644 million) and other current taxes (+€366 million) and despite lower proceeds from transfers by €706 million.

Unemployment decline in 2022 from job creation mainly in sectors boosted by household consumption and in export-oriented activities

Under conditions of strong recovery for the fourth consecutive quarter in January-March this year, the unemployment rate in the first quarter of this year stood at 13.8%, 3.3 percentage points lower than in the same quarter last year. The number of unemployed fell by 13.2% or by 98.2k, to 647.2k from 745.4k, while the number of people employed increased by 418.9k, to 4,044.0k from 3,625.1k. Thus, the reduction of the unemployment rate came from strong growth in employment, which reduced significantly the non-active population (-335.7k people).

At the sectoral level, employment increased most year on year in Accommodation-Food Services (+129.9k or +67.3%) and in Wholesale-Retail Trade, where in previous years they had fallen sharply due to the closure of businesses. Next came Manufacturing (+41.1k or +11.2%), Education (+28.8k or +9.3%), and Arts-Entertainment-Recreation, where strong restrictive measures had also been implemented, with particularly strong percentage expansion (+23.5k or +64.7%). By contrast, employment declined in the first quarter of this year only in Financial-insurance activities (-3.8k or -4.9%) and Electricity - gas supply (also by -3.8k or -11.2%).

With regard to the expected trends in employment and unemployment in the rest of 2022, the most decisive factors are expected to be developments in the tourism sector from the summer onwards, the dynamics of household consumption, under strong inflationary pressures due to the war, as well as the related support interventions, the wider effects of the conflict in Ukraine, mainly on the exports of goods, and finally, the investment trend.

In particular, while there are strong pressures on purchasing power from prolonged exceptionally high inflation, widespread interventions against the energy crisis, combined with the use of part of the accumulated savings during the pandemic, support consumer demand and thus employment in certain sectors (Retail trade, Tourism, Food services, Entertainment - Recreation). The operation of these sectors without strong restrictions throughout the year, in contrast to last year, even if the pandemic resurges strongly for some time, contributes to generating income and consumer demand, fuelling job creation. Among these sectors, tourism will play a primary role in boosting employment, due to the apparent sharp increase in international tourism.

The pressures from the war on the eurozone's recovery will, as mentioned above, have a negative impact on domestic exports, mainly of goods. That said, the steady positive dynamics of exports of goods in recent years, which have led to successive historic records, will to some extent stimulate employment, both directly and indirectly, through industrial investment. The increase in investment in export sectors of industry and tourism, but mainly by using the resources of the recovery fund, as well as the start-up of works in significant privatisations, such as in Hellinikon, will significantly boost job creation this year in, among other sectors, Construction.

The public sector will also boost domestic employment in 2022. As mentioned in previous reports, 20.6k recruitments are planned for the current year under the "one recruitment for each withdrawal" rule, based not only on withdrawals last year, but also in previous years.

The change in the minimum wage since 1 May is a development whose impact on employment is difficult to predict. Its effects depend on its extent. Since it has been announced to increase from 6% to 8%, enterprises in sectors where a large share of workers are paid at the minimum wage, e.g. with a high proportion of unskilled labour, will have to cope with both the current strong increase in energy costs and the increase in wage costs. In cases where this is not possible, at least temporarily, during the energy crisis, employment schemes other than full employment, e.g. part-time work, may be selected.

Taking into account the above expected effects on the labour market, the forecast for the unemployment rate is revised down to the region of 12.0-12.4%.

The strong escalation of inflationary pressures continues in 2022, due to high energy costs and stronger demand.

Consumer prices are suffering the strongest direct effects of the turmoil in the world economy as a result of the war. These effects have intensified the sharp price impact of the rapid recovery of the global economy that began a year ago. In January - May 2022, the average rate of change in the domestic Consumer Prices Index (CPI) reached 8.8%, against a decline of 1.0% a year earlier. Inflation in this period has been the highest in 27 years, i.e. since early 1995. As regards the effects of the components of the indicator on its trend, its significant rise in January-May is mainly, but not exclusively, due to the strongly inflationary effect of energy prices, with about five percentage points. Next, at a small distance, comes the strengthening role of domestic demand, with 3.9 percentage points. Indirect taxation had virtually no effect on prices in the January-May period of this year (-0.1 percentage points).

The prices of energy products are expected to rise significantly in the current six months. Despite geopolitical developments, the world economy will continue to recover this year, which will expand the demand for oil. As reported during the presentation of the assumptions of the macroeconomic scenario, the oil price is expected to increase this year on average by 50-55%. The measures to subsidise the consumption of electricity, gas, and fuels will partially mitigate the strong inflationary effect of elevated prices of energy products.

In addition to energy consumption subsidies, the other measures to support vulnerable social groups (the disabled, low-pension beneficiaries, minimum income beneficiaries, etc.) to contain the effects of the energy crisis, will prevent a significant weakening of consumption demand. In addition, depending on the duration of their implementation, they will replenish to some extent the extensive support measures against the pandemic from last year, which are much fewer this year. The weighted average reduction of ENFIA and the increase in the minimum wage from the beginning of May will boost disposable income. The income and consumption of households domestically and subsequently prices will be stimulated by stronger activity and the expansion of employment, in sectors affected in previous years by lockdowns and in which a significant part of domestic consumption takes place (Retail Trade, Food Services, Tourism). Similar developments will be triggered by job creation in export-oriented activities, mainly in Industry, Tourism, and Transport, as well as by higher investment.

In terms of the impact of indirect taxation interventions, the reduction in VAT in force since June 2020 on specific goods and services was recently extended until the end of 2022. However, as one year has passed since its implementation, no further substantial effect on prices is expected. The reduction of the mobile subscriber levy is already restraining price increases, as among the categories of goods and services that are included in the CPI, Communications had the largest drop in prices in the first five months of the year. Food prices are expected to reflect in the near future, first, the reduction in VAT on fertilisers and feedstock from 13% to 6%, and second, the refund to farmers of the excise duty on diesel oil, measures decided before the war in Ukraine.

Taking into account the above possible trends in the key components of the domestic Consumer Price Index, it is projected to increase strongly, by 9.0% to 9.6%, mainly by the exceptionally high increase in the prices of energy products, the notably stronger demand of households since last year and the sharp increase in activity in Tourism.

Special study: Digital Health and Real World Data in Greece: The transformation of the health ecosystem and the impact on the economy

The Real World Data (RWD) are related to health and come from various populations in real life. These are medical records, patient registries, biobanks, administrative data, health research, observation studies, health insurance data, data generated by “smart” applications, etc. By contrast, Real World Evidence (RWE) is the result of the recording, analysis, and appropriate scientific processing of RWDs. Therefore, they can be defined as the clinical evidence of the use and potential benefits or risks of a medical product, arising from the analysis of RWDs. The purpose of this IOBE study is to outline the digital health and real data environment (RWD-RWE) in Greece and to assess the economic impact of their use on the healthcare system and the national economy.

2 ECONOMIC ENVIRONMENT

2.1 Trends and Prospects of the Global Economy

A. The Global Environment

- According to the latest forecasts, the global economy will grow at a pace of about 3% this year and 2.8% next year (OECD), significantly milder than expected at the end of 2021 (4.5% and 3.2% respectively)
- Inflation globally has risen to a maximum of 34 years, driven by strong rises in energy, raw materials and food prices.
- The war in Ukraine has become the major driver of the trends in inflation and economic activity
- A likely long duration of the war is expected to affect mostly the poorest European economies.
- Monetary policy worldwide is gradually becoming less expansionary, weakening its support for economic activity, which makes it possible for a recession to occur in some medium-term period.

While the global economy continued to recover in early 2022, the effects of the war on Ukraine have gradually become more noticeable, worsening the recovery prospects. The OECD economies grew 4.4% in the first quarter of 2022, after a 4.9% GDP increase in the previous quarter and a marginal contraction of 0.2% in the first quarter of 2021. The annual rate of GDP change in the major developed economies (G7) stood at 3.8%, compared with 4.5% in the previous quarter and a recession of 0.5% in the same quarter of 2021. The 20 largest OECD economies grew at 4.5% in the first quarter of 2022, unchanged from the previous quarter, against growth of 3.7% in the corresponding quarter of 2021. Therefore, the slowdown in growth compared to late 2021 was mainly driven by the major developed economies. At the country level, the strongest growth acceleration quarter-on-quarter in the first quarter of 2022 among the major developed economies was recorded in the United Kingdom (+8.7% from +6.6%) and Germany (+3.8% from

+1.8%). By contrast, the sharpest deceleration occurred in the US (+3.5% from +5.5%), France (+4.5% from +4.9%) and Canada (+2.9% from +3.2%). Among the major Asian developing economies, China grew in the first quarter of this year by 4.8% from 4.0% a quarter earlier. This is the first time since the first quarter of 2021 that growth in the country accelerated. India's economy recovered by 4.1% from 4.7% in the fourth quarter of 2021. In Latin America, the economies of Argentina and Brazil expanded by 6.1% and 1.5% respectively, from growth of 8.7% and 1.6% in the previous quarter.

With regard to the recent and most anticipated political and economic developments, the war in Ukraine continues, without any indication that it will end soon, with significant consequences at many levels worldwide. It is now the most important source of uncertainty for the global economy, surpassing the SARS-CoV-2 pandemic. The most important economic consequence of the war on a global scale is the spike in inflation, which in April in the 38 OECD countries reached 9.2%, its peak in 34 years. This is due to the importance of Russia and Ukraine in supplying the world economy with energy products, certain raw materials, and foodstuffs (e.g. cereals). Inflationary pressures are intensifying during the war, as supply chain disruptions widen as it continues, but also because sanctions are gradually escalating between Russia and some of the most developed economies and state unions.

Disruptions in supply chains of energy products and basic food are hitting the poorest countries the most, in Europe and elsewhere. The outbreak of a food crisis is expected to be one of the consequences of the war in countries with high dependence on food imports and limited economic potential. However, as shown above, some of the most developed European economies were slowing down before and at the beginning of the war. Additional inflationary pressures on real income from the war, the new heightening of uncertainty, combined with rising interest rates, pose new challenges for policymakers, who were already faced with a significant burden on public finances due to the pandemic and imbalances along the path of recovery from it. That said, high inflation contributes to debt reduction, both private and public.

Especially in Europe, the effort of many countries to get rid of Russian energy products is difficult to achieve in a short period of time. Achieving energy security by accelerating energy transition investments in cleaner forms of energy is set as a medium-term target. In the short term, however, as many countries face extremely high energy costs, the main aim is to diversify energy sources, even with the greater use of certain polluting technologies, such as lignite, as well as increasing efficiency where possible. In addition, efforts are ongoing to find appropriately designed and targeted fiscal interventions to support households and businesses in order to limit the negative impact on growth, without significantly burdening countries' fiscal balances. Despite the efforts made, Europe is now facing high uncertainty due to ever-increasing prices and some possible shortages in the coming winter.

As regards the developments in the pandemic, the most important recent international events took place in China, where the implemented zero-COVID policy led to strong restrictions on people's movement and business operations in some major cities, such as Shanghai, to closures of factories and ports, etc. These events are expected to lead to a significant slowdown in economic activity in the country in the second quarter at least, with repercussions on global supply.

The strengthening of inflation to levels not seen in many years and low unemployment in many countries are leading monetary policy to gradually withdraw its support and transform its stance into a less expansionary one. As the rise in inflation is due to supply-side constraints, which monetary policy cannot affect, most central banks worldwide are turning to less expansionary policies, targeting the demand side, thus making clear their intention to tame high inflation before it settles. Although the intention of the central banks of the major economies is to "smoothly land" demand, the planned further interventions on their key interest rates make the risk of recession at some point in the medium term visible if inflation does not subside.

Table 2.1

Global Environment (annual % GDP growth, in real terms, unless stated otherwise)

Economy	2021	2022		2023	
		Forecast	Difference from previous forecast *	Forecast	Difference from previous forecast *
World	5.6	3.0	-1.4	2.8	-0.5
USA	5.6	2.5	-1.3	1.2	-1.2
Japan	1.8	1.7	-1.7	1.8	0.7
Canada	4.5	3.8	-0.1	2.6	-0.2
United Kingdom	7.4	3.6	-1.1	0.0	-2.0
Eurozone	5.2	2.6	-1.5	1.6	-0.9
Germany	2.9	1.9	-2.2	1.7	-0.6
France	6.8	2.4	-1.8	1.4	-0.9
Italy	6.6	2.5	-2.1	1.2	-1.4
Turkey	11.0	3.7	0.4	3.0	-0.9
China	8.1	4.4	-0.7	4.9	-0.2
India	9.4	6.9	-1.2	6.2	0.8
Brazil	5.0	0.6	-0.9	1.2	-0.8
World trade	9.3	4.9	0.0	3.9	-0.6

* Difference in percentage points from previous OECD forecasts (OECD Economic Outlook, December 2021)

Source: OECD Economic Outlook, June 2022

The rate of change of global GDP last year stood at 5.8%, while for 2022 growth is now projected at 3% in the recent OECD report, down from 5.6% at the end of 2021. Table 2.1 includes the annual changes in GDP in 2021 and the most recent OECD forecast (June 2022) for the annual changes in 2022 and 2023, in the global economy and in selected developed and developing countries.

Next, we analyse the recent and expected trends in the economies of major states and state groups for the current year and 2023.

Among the major developed economies, the US recorded an annual growth rate of 3.5% in the first quarter of 2022 from 5.5% in the previous quarter and 0.5% in the same quarter of 2021. The slowdown reflects declining investment in inventories, government spending, and exports, with rising imports, which has worsened the external balance. Household consumption expenditure as well as fixed capital investment in buildings and dwellings increased. Inflation stood at 8.6% last May, its peak of 40 years. In order to control inflationary pressures, the Fed raised its base rate by 75 basis points in June to 1.50%-1.75%, after a 25-point increase in March, while preparing for a more aggressive rate increase if needed. In 2022, the US economy is projected to grow at a rate of 2.5%, while a further slowdown is expected next year to 1.2%.

The euro area economy grew by 5.4% in the first quarter of 2022, up from 4.7% in the previous quarter and against a contraction of 0.9% in the same quarter of 2021. Economic activity at the beginning of this year has been boosted mainly by the increase in net exports and the expansion of inventories. Fixed capital investment was virtually unchanged (+0.1%), while both private (-0.7%)

and public consumption (-0.3%) declined. Inflation in the euro area last May climbed to 8.1%, a new historical peak (since 1997). The ECB decided in early June to end bond purchases as of 1 July under the APP, at least a quarter earlier than previously expected, and announced an increase in its base rate by 25 basis points to -0.25% in the same month. It also announced a plan for a new rate increase from September, the size of which will depend on the course of inflation. For 2022 as a whole, the euro area is projected to grow at a rate of 2.6%, from 5.2% last year, while a further slowdown in growth is projected for 2023 to 1.6%.

In the UK, GDP grew by 8.7% in the first quarter of the year, from an increase of 6.6% in the previous quarter and a contraction of 5% a year ago. For the whole of 2022, 3.6% growth is forecast from 7.4% growth in 2021, while stagnation is expected next year.

In Japan, GDP grew by 0.7% in the first quarter of 2022, after a 0.4% increase in the previous quarter and a contraction of 1.7% a year ago. For 2022 as a whole, the Japanese economy is projected to grow by 1.7%, essentially unchanged from 2021 (1.8%), while 1.8% growth is forecast for next year.

The current sub-section presents recent economic trends and economic policy challenges in five developing countries and economic regions, which generate almost a third of global GDP in total.

China's economy grew in the first quarter of 2022 by 4.8%, against 4% in the previous quarter and 18.3% a year earlier. The risk of a sharp slowdown in the coming months is significant amid extensive lockdowns to control the pandemic, prolonged real estate market slump and uncertainty over the war in Ukraine. Overall, 4.4% growth is projected for this year and a slight acceleration to 4.9% in 2023.

India's economy slowed to 4.1% in the first quarter of 2022, from 4.7% growth in the previous quarter and growth of 1.7% a year ago. Increased cases of the Omicron variant, higher energy prices, and ongoing supply chain constraints have limited economic activity. Growth of 6.9% is projected for 2022 as a whole, while growth of 6.2% is forecast for 2023.

Turkey's economy grew by 7.4% year-on-year in the first quarter of 2022 from 8.4% in the previous quarter, compared with a growth of 7.4% a year ago. Annual inflation rose for the twelfth consecutive month last May to 73.5%, the highest level since 1998, and the Turkish lira continues to decline (-48.3% and -41.1% per annum relative to the dollar and the euro respectively in May). However, the country's central bank maintains its key interest rate at 14%. For the whole of 2022, the Turkish economy is projected to grow at a rate of 3.7%, while in 2023 it is expected to stagnate.

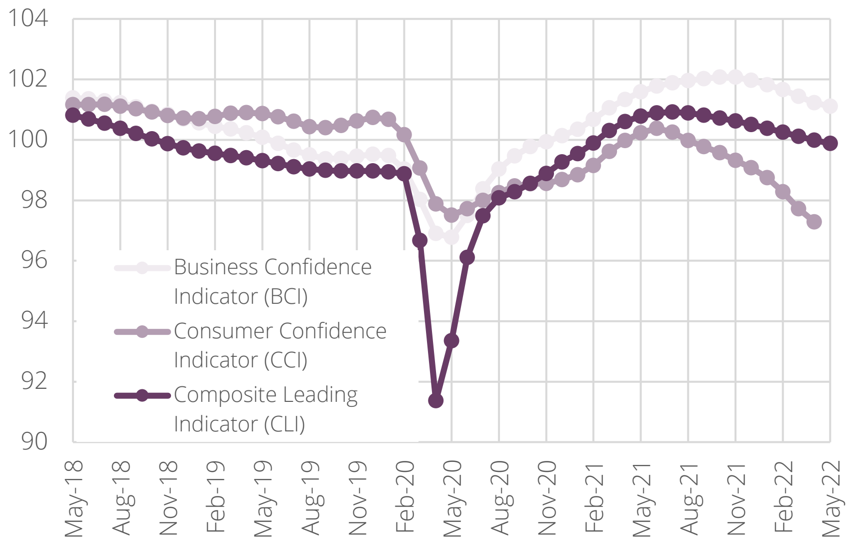
Among the Latin American countries, Brazil's economy grew 1.5% in the first quarter of 2022, up from 1.6% in the previous quarter and 2.6% in the same quarter of 2021. For the whole of this year, GDP is projected to grow by 0.6%, down from 5.0% last year, while for 2023 the growth rate is projected at 1.2%.

The OECD's composite leading indicator for its member countries has been on a falling track since last September, after a 16-month rise and a three-year high in August, and is now marginally below its long-term average. The OECD's business confidence index has been falling since last December, but remains above the long-term average. Consumer confidence remains weak, with the index declining for the tenth consecutive month in April.

Global trade volumes are projected to increase by 4.9% in 2022, as a result of last year's positive momentum, when they increased by 9.3%, but a number of factors, most notably the extensive lockdown in China, the war in Ukraine and the shift in US consumer demand to services, are slowing them down.

Figure 2.1

Economic sentiment indicators and the Composite Leading Indicator for the OECD countries (seasonally adjusted data, long-term average = 100)



Significant deterioration in the consumer confidence index worldwide, while the business confidence index and the leading economic activity indicator declined

Source: OECD. Note: Data on CCI are available until April 2022

B. The Economies of the EU and the Euro area

- Russia's invasion of Ukraine and the economic impact of sanctions on energy efficiency, inflation and growth, are the most important policy challenges in the EU
- Possible need for additional fiscal and monetary measures at the collective level, in addition to those already taken to counter the consequences of the war
- Significant positive growth rates of GDP in the EU and the euro area in the first quarter of 2022, at 5.5% and 5.4% respectively
- Lower growth and higher inflation are now expected for 2022.
- Halting of the ECB's expansionary monetary policy implemented for almost three years, with an earlier conclusion of net asset purchases under the APP and a gradual increase in its key interest rates since July.

Since the start of the war in Ukraine in February 2022, a new socio-economic crisis has begun in Europe, with very strong humanitarian implications, the displacement of millions of people from their homes, and a strong impact on people's lives, especially in neighbouring countries. The war also has many important economic consequences. For Europe, it is mainly related to its energy dependence on Russia. Before the outbreak of the war, a tendency to return to normality had begun to be felt, with the gradual lifting of various restrictive measures in many countries. In addition, the forecasts for the EU economy before the outbreak of the war contributed to the start of a strong expansionary phase, notably through the implementation of the recovery fund. At the economic policy level, the phasing out of extraordinary monetary and fiscal measures in response to the pandemic was expected.

The impact of the 2020-2021 pandemic was strongly felt on demand, supply chains, labour supply, industrial production, prices, trade and capital flows. The impact of the health crisis was exacerbated by the fact that at the onset of the pandemic the European economy was relatively vulnerable to shock, as it had already slowed significantly in 2019, mainly due to some structural problems in its industries. The global supply constraints linked to disruptions in the functioning of economies due to the pandemic and the recovery in demand last year resulted in rising inflation but, before the start of the war, it was expected to begin to ease towards the end of the year. Economic activity would have been boosted through stronger labour market, large accumulated savings, favourable financing conditions and the scaling up of the Recovery and Resilience Facility (RRF).

But the war radically changed the international environment, bringing new disruptions to global supply, putting further pressures on commodity prices, and raising uncertainty again. In particular, Russia and Ukraine are important producers and exporters of certain basic foods, some minerals, and, above all, energy products. In particular, 40% of Western Europe's gas consumption comes from Russia. Coupled with earlier rigidities in production and international trade due to restrictive measures to tackle the pandemic, Europe is heading to a new economic, perhaps food crisis for some of its poorest economies, with gas, oil, and grain prices reaching very high levels. Current trends in the European economy will depend mainly on the evolution of the war and, secondarily, on the emergence of SARS CoV-2 mutations with a strong spread among the population, which could exacerbate the health conditions.

To mitigate the impact of the health crisis, since its start the European Commission has implemented monetary and fiscal policy interventions. The most important of these are the European recovery fund (NextGenerationEU), with a budget of €1.85 billion, and the reinforced EU budget for 2021-2027, close to €1.05 trillion. The effects of the war, notably on energy supply and rising energy prices, have recently led to significant adjustments to the ECB monetary policy. Recent developments are presented at the end of the current sub-section of the report.

In particular, the trend in economic activity in the first quarter of 2022 in the European Union and the euro area saw an acceleration of growth compared to the previous quarter, to 5.5% and 5.4%, from 4.9% and 4.7% respectively, compared with a 0.7% recession in both the EU and the EA a year earlier. According to the European Commission's latest forecast,[1] growth in the euro area is estimated at 5.4% for 2021, while a recovery of 2.7% is forecast for 2022, similarly for both years and for the European Union.

Growth in the economies of the European Union in January — March 2022 resulted from expansion in domestic demand, with the contribution of investment reaching 1.5% of GDP, almost as much as in the previous quarter (1.6%). The contribution of consumption increased to 3.8%, compared with a smaller contribution in the fourth quarter of 2021 of 3.2 pp. of GDP. The effect of net exports on GDP change in the first quarter of 2022 was negative, at 0.2%, from -0.6% in the previous quarter. The trends in the composition of growth in the euro area economies are similar, with domestic demand being a growth driver (5.4 pp. from -3.5 pp. in the first quarter last year). There was also a positive contribution from investment compared to the first quarter of the previous year (1.1% of GDP), weaker than in the previous quarter (1.5% of GDP), while the impact of consumption was also positive, by 3.8 pp. from a weaker impact of 3.0 percentage points in the fourth quarter.

[1] European Economic Forecasts Spring 2022, European Commission, May 2022

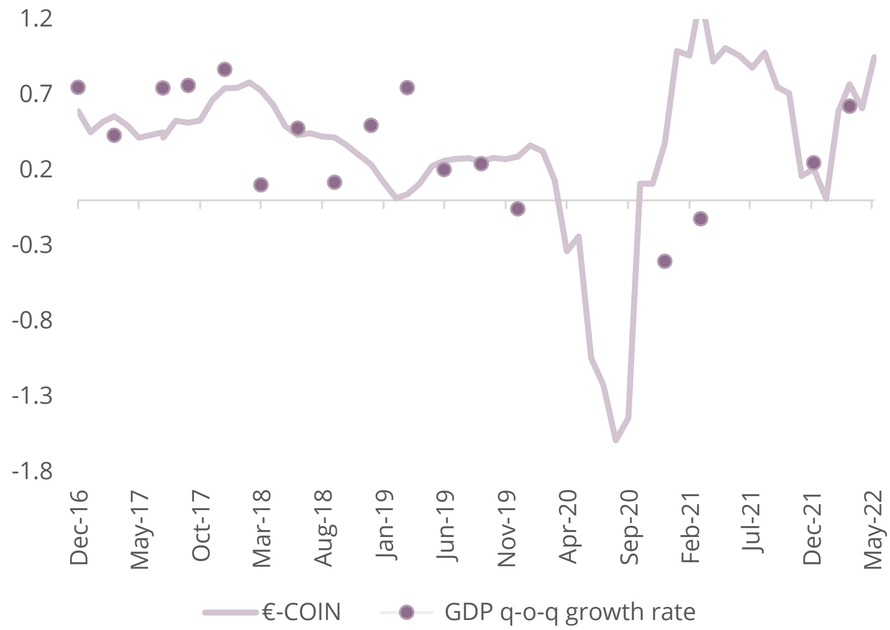
In addition, in that quarter, net exports to the euro area had zero contribution to growth, while a quarter earlier it was slightly negative, at -0.5%.

On the expenditure side, the composition of GDP components remains close in the EU-27 and the euro area, with consumption representing 73.4% and 73.5% of GDP respectively, investment accounting for 23.3% and 22.7% of GDP, exports 53.1% and 51.7% and imports 49.8% and 48.1% of GDP.

The strongest among the EU countries in the first quarter of last year was the growth (annual changes in seasonally adjusted data) in Ireland, where the rate reached 11.3%. Next came Slovenia (9.6%), Poland (9.2%), and Austria (8.2%). The countries with the weakest growth were Slovakia (3.0%), Sweden (3.1%), and Finland (3.8%). On a rolling 12-month basis, Greece had a positive growth rate of 10.5%, well above the average rate in both the EU and EA (7.2%). The country with the weakest growth, on a 12-month basis, was Slovakia (3.9%), followed by Finland (4.3%). By contrast, the country with the strongest positive growth rate on a rolling basis in the EU was Ireland (13.4%), followed by Malta (12.5%) and Croatia (12.1%).

Figure 2.2

Monthly €-COIN Index & Eurozone GDP*



A small increase in the €-COIN index in the first quarter of this year, to 0.46 points, from 0.36 points a quarter ago and 1.10 a year earlier

*The Research Centre of Economic Policy Research in collaboration with the Bank of Italy estimates every month the leading indicator of economic activity €-COIN for the Eurozone. The indicator is a forecast of quarterly GDP growth and is derived from the synthesis of a variety of different data, such as the evolution of industrial production, prices, labour market data, as well as financial data. Source: CEPR and Bank of Italy

In terms of trends in the economic climate and key leading indicators of economic activity in the euro area and the European Union, the €-COIN index increased in the first quarter of 2022 to 0.46 points, from 0.36 points in the previous quarter. However, this level is considerably lower than in the first quarter of the previous year (1.10). In May 2022 in particular, its level, at 0.95 points, is slightly lower than in May last year (1.01), indicating a slight slowdown in GDP growth.

The European Commission's Economic Sentiment Indicator in the EU-27 and the Eurozone declined quarter on quarter in April-June this year, by 6.9 and 7.1 points respectively, while year on year it decreased by 8.7 and 8.5 points accordingly. In particular, the index stood at 103.8 and 104.6 points. In June this year, the economic sentiment indicator stood at 102.5 points in the EU-27 and 104.0 points in the euro area, at a lower level than in the previous month. That said, it was 13.3 and 12.7 points lower than a year ago in EU-27 and EA respectively.

Table 2.2

Economic Sentiment Indicator EU-27 & Euro Area (av. 2000-2020=100)

Month	Jul-20	Aug - 20	Sep - 20	Oct - 20	Nov - 20	Dec - 20	Jan - 21	Feb - 21	Mar - 21	Apr- 21	May - 21	June - 21
EU-27 (2020)	83.7	88.4	91.5	91.7	88.6	91.6	91.1	93.1	99.9	108.8	112.8	115.8
Euro area	84.2	89.1	92.3	92.5	89.3	92.4	91.5	93.4	100.9	109.4	113.4	116.7
Month	Jul-21	Aug- 21	Sep- 21	Oct - 21	Nov - 21	Dec - 21	Jan - 22	Feb - 22	Mar - 22	Apr- 22	May - 22	June - 22
EU-27 (2020)	116.6	115.3	115.3	116.2	115.2	113	111.6	112.8	107.5	104.6	104.2	102.5
Euro area	117.6	116.3	116.4	117.2	116.2	113.8	112.7	113.9	108.5	104.9	105	104

Source: European Commission (DG ECFIN), June 2022

Among the EU's largest economies, in France in the first quarter of this year, the indicator declined from the previous quarter (-6.9 points), while year on year it fell by 6.3 points. A quarter-on-quarter decline was observed in Germany by 5.3 points, similar to the decrease compared to the first quarter of 2021 (5.4%). In Italy, the index decreased by 4.6 points quarter on quarter and by 5.9 points year on year. Finally, in April — June 2022, the Economic Sentiment Indicator in Greece decreased quarter on quarter by 8.0 points, to 105.8 points, which is about 1 point higher than a year earlier (104.8 points).

Further details on changes in the GDP components and other macroeconomic variables in the first quarter of 2022, as well as their anticipated trends, for the euro area and the EU, are provided next in this sub-section. We present forecasts for 2022-2023 for the EU and the euro area, based on the latest forecast report of the European Commission.

In greater detail, according to Eurostat data for the first quarter of 2022 (annual changes in seasonally adjusted data), private consumption in the European Union increased by 7.5%, when in the previous quarter it had increased by 6.1%, while in the same period of 2021 its trend was strongly negative (-4.9%). In the euro area, household consumption grew by 7.5%, from a smaller increase of 5.8% in the previous quarter, while a year earlier it saw a decrease of 5.4%. The European Commission predicted last May household consumption growth in the whole of 2022 in the EU at 3.3% and a slowdown in 2023 to 2.7%. For the euro area, it predicted an increase in private consumption by 3.2% this year and an expansion of 2.6% next year (Table 2.3). At the country level, private consumption in Germany was 8.8% higher in the first quarter of this year, while the previous quarter saw an increase of 3.1%. In France, the increase was much higher (6.0%). In Italy, private consumption grew by 7.1%, from a similar increase of 7.0% a quarter ago, while in

Spain it grew by 4.8% against an increase in the previous quarter of 4.1%. In Greece, private consumption rose by 11.6%, from a similar increase of 11.9% in the previous quarter, while in the same period of 2021 it had fallen by 4.9%.

Table 2.3

Key macroeconomic figures, EU-27 and the Euro area (annual % change in real terms, unless indicated otherwise)

	EU			Eurozone		
	2021	2022	2023	2021	2022	2023
GDP	5.4	2.7	2.3	5.4	2.7	2.3
Private Consumption	3.8	3.3	2.7	3.5	3.2	2.6
Public Consumption	3.8	0.8	0.4	3.9	0.8	0.5
Gross Investment	4.2	3.1	3.6	4.2	3.1	3.5
Exports of Goods and Services	10.7	5	4.6	11	5.1	4.7
Imports of Goods and Services	9.3	5	4.7	8.8	5.1	4.8
Employment	0.7	1.2	0.7	1.1	1.3	0.8
Unemployment (% labour force)	7	6.7	6.5	7.7	7.3	7
Inflation	2.9	6.8	3.2	2.6	6.1	2.7
Balance of General Government (% GDP)	-4.7	-3.6	-2.5	-5.1	-3.7	-2.5
Debt of General Government (% GDP)	89.7	87.1	85.2	97.4	94.7	92.7
Current Account Balance (% GDP)	3.0	2.1	2.6	3.2	2.4	2.9

Source: European Economic Forecasts, Spring 2022, European Commission, May 2022

Public consumption increased in the EU and the euro area in the first quarter of 2022 by 2.2% and 2.3% respectively, from 2.5% in both regions a quarter before. In the same quarter of 2021, public consumption had increased by 2.8% in the EU and 2.9% in the euro area. For 2022, the European Commission expected in May a sharp slowdown in EU public consumption growth compared to 2021, primarily due to fewer measures to address the impact of the health crisis, to 0.8% from 3.8%. The same growth was estimated for the euro area (0.8%, compared with 3.9%). In 2023 the growth of public consumption will weaken to 0.4% and 0.5% in the EU and the EA respectively.

Investment increased in January-March 2022 in the EU by 6.3%, slightly less than in the previous quarter (7.4%). Similarly in the euro area, the rise was 4.6%, compared with a 7.0% increase in the fourth quarter of last year. In the same quarter of 2021, investment had contracted by 4.0% in the EU and by 4.9% in the euro area. The European Commission forecast an increase of 3.1% for 2022 and 3.6% for 2023 in the EU, and of 3.1% and 3.5% in the euro area. In the first quarter of 2022, investment in Germany rose by 3.5% after a stronger 5.4% increase in the previous quarter, while Italy recorded a sharp increase of 12.8%, from an even higher increase of 17.5% in the quarter of October — December 2021. The rate of change in investment in France slightly weakened, to 0.5%, from an increase of 1.4% in the previous quarter.

Significant growth was recorded in the exports of goods and services of the EU (7.7%), and the euro area (8.4%), compared with slightly stronger growth, by 8.4% and 8.9% respectively, in the previous quarter and stagnation in the first quarter of 2021 (0.4% and -0.1%). For 2022, the European

Commission forecast a year-on-year increase in exports of the EU-27 by 5.0% and a weaker increase next year of 4.6%. For the euro area, it expected an expansion of 5.1% for the whole of 2022 and an increase of 4.7% in 2023. At the country level, Germany saw export growth in the first quarter of 2022 by 2.6%, up from a 6.7% increase in the fourth quarter of last year. The exports of France increased in the first quarter of this year by 10.0%, up from 8.0% a quarter ago. Italy saw an increase of 13.0%, from a lower rise of 8.6% a quarter earlier. A strong expansion of exports was recorded in Spain by 18.1%, after a similar rise of 17.9% in the previous quarter, as in Cyprus (11.6%), after an increase of 19.2% in the fourth quarter of 2021.

For another quarter, import growth was strong in the first quarter of 2022 in the EU, at 8.8 %, albeit milder than a quarter ago (10.2%). A similar change was observed in the EA, by 9.1%, from a 10.8% increase in the fourth quarter of 2021. A year earlier, there was a decline of 4.0% and 5.7% respectively. For the years 2022 and 2023, the European Commission has forecast an increase of 5.0% and 4.7% for the EU respectively. For the euro area, it expects a 5.1% increase in 2022 and growth in 2023 by 4.8%. At the country level, in the first quarter of 2022 imports increased to Spain by 11.7%, against a higher rise of 13.1% in the previous quarter. France widened by 7.4%, up from 8.6% a quarter ago, while Italy saw an increase of 15.3% from a 13.1% increase earlier. A significant positive pace was recorded in Germany (7.2%), down from 11.0% in the fourth quarter of 2021.

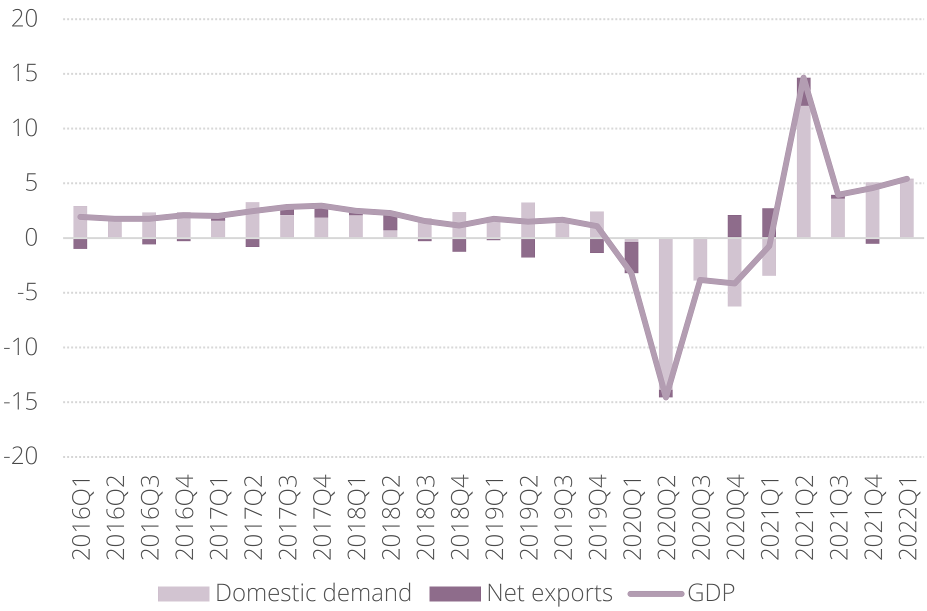
Based on developments in GDP components in the euro area, net exports had zero contribution to growth, compared with a marginal negative effect in the previous quarter (-0.5 %). The zero contribution of net exports in the first quarter of this year came simultaneously from a slight decrease in the contribution of exports, from 4.4% in the fourth quarter to 4.2%, and a countervailing change in imports growth, from 5.0% in the fourth quarter to 4.2% in the next quarter. As already mentioned, the contribution of domestic demand was 5.4% of GDP, from a positive impact of 5.1 percentage points in the previous quarter. Most of the contribution came from private consumption, which had a positive impact in the first quarter of 2022 by 3.8% of GDP, while in the fourth quarter its positive contribution was 3.0 percentage points.

Harmonised inflation rose in the fourth quarter of 2021 in the EU and the euro area, reaching 4.9% and 4.6% from 3.1% and 2.8% respectively a quarter earlier. In the fourth quarter of 2020, harmonised inflation had stood at 0.2% in the EU and -0.3% in the EA respectively. Overall, for 2022, the European Commission recently forecast (May 2022) that inflation will rise sharply in 2022 in the EA to 6.1% from 2.6%, but also in the EU, to 6.8% from 2.9%, while in 2023 it will decline to 2.7% and 3.2% respectively.

Employment increased in the first quarter of 2022 by 2.8% in the EU and 2.9% in the EA, from 2.1% in both regions a quarter earlier, while in the same period of 2021 the number of jobs had fallen by 1.5% and 1.6% respectively. The European Commission forecasts an increase in jobs in the EU for 2022 and 2023, by 1.2%, and 0.7% respectively. For the euro area, it also predicted employment growth this year, by 1.3%, and an increase (0.8%) in 2023. The strongest employment growth in the first quarter of 2022 was recorded in Ireland (12.3%), Greece (8.0%), Denmark (5.9%), and Estonia (5.3%). The weakest employment growth was recorded in Romania (1.4%), Germany, and Czechia (1.5%).

Figure 2.3

Eurozone GDP change – Contribution of components to the real annual rate of change (in percentage points)



Zero contribution of net exports to euro area GDP change in the first quarter of 2022. Positive impact of domestic demand due to higher private consumption year on year.

Source: Eurostat

Unemployment in the fourth quarter of 2021 fell to 6.4% in the EU and 7.1% in the euro area, from 6.7% and 7.4% respectively in the third quarter. In the fourth quarter of last year, it stood at 7.3% in the EU and 8.1% in the EA. For 2021, the European Commission has estimated a year-on-year decline in the unemployment rates in the EU-27 and the euro area, to 6.7% and 7.3%, while for 2023 it expects unemployment rates of 6.5% and 7.0%. Between October and December 2021, the highest unemployment rate was recorded in Spain (13.3%), with Greece (13.2%) and Italy (9.1%) coming next, while in France unemployment stood at 7.6%.

In the area of fiscal performance, the general government deficit in the EU-27 in the fourth quarter of 2021 fell to 2.9% of GDP, from 3.2% in the third quarter of 2021. The European Commission has projected the budget deficit to be at 3.6% and 2.5% of GDP in 2022 and 2023 respectively. The average euro area budget deficit is expected to reach 3.7% of GDP in 2022 and 2.5% in 2023, from 7.1% last year. Public debt reached 95.6% of GDP in the euro area in the fourth quarter of last year, while it is expected to reach 94.7% this year and fall to 92.7% of GDP next year. Government debt, as a percentage of GDP, fell in the fourth quarter of 2021 in many member countries, with its highest level recorded in Greece (193.3%), Italy (150.8%), Portugal (127.4%), Spain (118.4%) and France (113.3%).

Regarding the monetary policy framework, the invasion in Ukraine is a new major turning point for Europe. The ECB intends to ensure smooth liquidity conditions and implement the sanctions decided by the European Union and European governments. In line with its communication of 9 June 2022, [2] all necessary measures will be taken to maintain price stability and safeguard financial stability. With regard to the Asset Purchase Programme (APP), purchases will cease as of 1 July, at

[2] ECB, Monetary policy decisions, Press release, 10 March 2022

least a quarter earlier than expected previously. In addition, it intends to continue to fully reinvest the amounts from repayment of the securities acquired under the APP at maturity, "as long as this is necessary to maintain conditions of ample liquidity and an appropriate monetary policy stance". However, the most important decision of the Governing Council of the ECB concerned its key interest rates. An increase was announced, for the first time in almost three years, by 25 basis points at the July monetary policy meeting. In fact, the rates are expected to be raised again in September, depending on the updated medium-term inflation outlook. The Governing Council anticipates that the appropriate path will be a series of gradual but continuous further increases in interest rates. These ECB decisions constitute a halt to the expansionary monetary policy that has been progressively implemented since September 2019.

In brief, the economy in Europe, and in particular in the euro area, is currently facing a number of challenges. The main ones are:

● Russia's invasion of Ukraine and the economic impact of sanctions on growth and inflation. The war has already led to strong turmoil in the markets for basic food (e.g. cereals), minerals, and energy products; oil, gas, and wheat prices have risen to their highest level in many years.

● Notable effects of the pandemic and the war on global supply chains. Unprecedentedly for the EU economy, demand growth is not covered by sufficient supply in various sectors, in particular in the production of durable and investment goods.

● Rapid increase in inflation and further indications of price pressures in different parts of the production chain. Recent EU forecasts point to lower growth and higher inflation, especially for 2022.

● Possible need for additional fiscal and monetary measures at the community level, in addition to those taken to counter the consequences of the war

● Risk of food crisis in some poor countries due to severe restrictive export interventions

● Managing the COVID-19 pandemic remains a global challenge mainly in tackling mutations

2.1 The Economic Environment in Greece

A. Economic Sentiment

- Mild decline in the Economic Sentiment Indicator in Greece in the second quarter of 2022 compared with the previous quarter (105.8 out of 113.8). Marginal improvement compared to the same quarter last year (105.4 m).
- Business expectations fell quarter on quarter in the recent quarter in all sectors, particularly strongly in Construction and Services
- The Consumer Confidence Indicator weakened markedly quarter on quarter in April - June, to -53.0 (from –43.6) points. At the same time, it is significantly lower than a year earlier (-28.3 points).

The IOBE business and consumer surveys offer significant indications on the developments of the economy in the past few months, from the perspective of both the enterprises and the consumers. In *addition, the indicators used in the surveys constitute leading indicators for various economic variables and can be used to predict near-term developments and even the course of GDP.*[3]

In the second quarter of this year, the Economic Sentiment Indicator declined quarter on quarter by 8.0 points. At the same time, the Consumer Confidence Indicator was significantly lower than in the previous quarter, at -53.0 (from -43.6 points). The deterioration came from a fall in expectations in all sectors, particularly in Construction and Services. The services and retail trade sectors have been hit by rising pressures on disposable income in the recent period due to a further escalation in inflation. The industrial sector, favoured by the significant recovery of the world economy and international trade last year, is now hit by rising prices in energy and other raw materials as a result of the war, as well as difficulties in operating international supply chains. These trends are likely to continue at least in the next quarter, as the war continues and sanctions on Russia escalate, and it will not be possible to complete supply chain restructuring to address current disruptions. In contrast to the decline in the services sector, the strong dynamics of international tourism, which have gradually emerged since the middle of the previous quarter, are expected to come into effect in the third quarter. On the household side, although successive packages of policy interventions have been carried out for the energy crisis, the ever-increasing inflationary pressures create concerns about their economic situation in the near future, based on the relative balance in the surveys. The significant strengthening of the tourism sector can mitigate or even stem the negative trend of consumer confidence, through a significant increase in jobs and domestic income. At present, it is not easy to weigh the impact of health developments in the coming period. It will depend on the state of play of the relevant data, which in the current period is, at least temporarily, deteriorating.

In greater detail, the Economic Sentiment Indicator in Greece in the April-June quarter mildly weakened compared to the previous quarter, to 105.8 out of 113.8 points, while it fluctuated at a level marginally higher than last year's average (105.4 points).

In Europe, the corresponding average was significantly lower quarter on quarter over the considered period both in the EU and in the euro area. In particular, the Economic Sentiment Indicator stood at 103.8 (from 110.9) points in the second quarter of this year in the EU, and 104.6 (from 111.2) points in the euro area.

At the sector level, business expectations in Greece declined in Industry and Retail Trade, while they deteriorated significantly in Services and Construction. On the consumer side, the Consumer Confidence Indicator declined sharply compared with the previous quarter. Compared to the same quarter last year, the indicators increased moderately in Industry, while falling in other sectors, particularly in Retail Trade and less se in Construction and Services. In more detail:

The Consumer Confidence Indicator in Greece in the quarter of April-June of this year stood significantly lower on average than in the first quarter of 2022, at -53.0 from -43.6 points, a level much lower than last year's (-28.3 points). The corresponding average declined markedly in the EU

---

[3] Note that since March 2018, the base period of the series presented in the sectoral business sentiment indicators, i.e. the indicators in Manufacturing, Retail Trade, Services and Construction, has changed. In particular, the 2000-2010 period was designated as a new base (= 100). Until February 2018, the indicator was referenced to average values from the 1996-2006 period. The historical series of the indicators are fully revised, in order to ensure that the data series are comparable. As a result, the indicators with the new base period are overall higher compared with those with the older base period. The change in the base period by IOBE has not affected the overall economic sentiment indicator for Greece or any other country.

to -22.6 points (from -14.6 points) and in the euro area (-22.3 from -13.6 points). These levels are much lower year on year (against -6.8 and -5.6 points, respectively).

The quarter-on-quarter trends in the individual key balances that make up the overall indicator were mainly negative in the second quarter of 2022. Thus, the pessimistic expectations of the consumers in Greece for the financial situation of their households over the next 12 months, as well as those for the country's economic situation, strengthened significantly. At the same time, households' assessment of their current situation deteriorated sharply, while the intention for major purchases in the near future improved marginally.

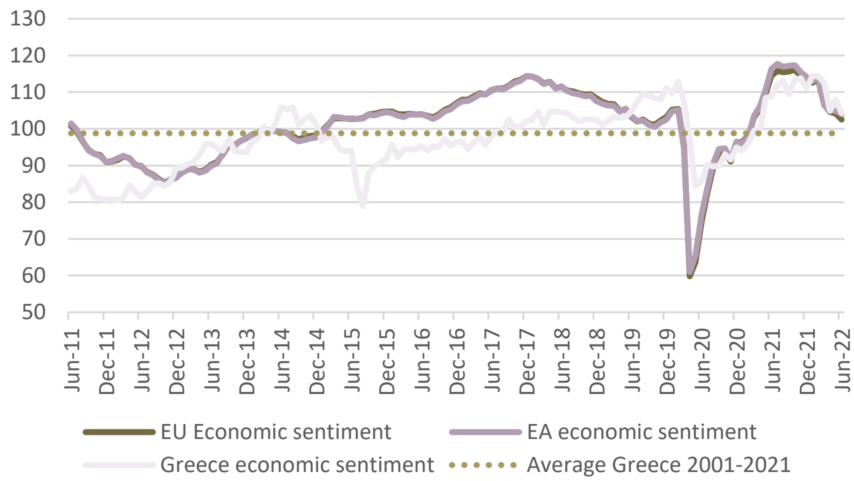
More specifically, the percentage of those who are pessimistic about the financial situation of their household in the next 12 months increased significantly, to 65% (from 56% in the previous quarter), while the percentage of those who state the opposite fell to 3% (from 6%). At the same time, the share of consumers in Greece with pessimistic expectations about the country's economic situation increased to 74% (from 64%), with 6% (from 13%) expecting an improvement. Regarding the intention to save, the share of households that do not see savings as probable over the next 12 months remained at 83%, while the percentage of those who considered it likely fell to 15%. In the forecasts for the course of unemployment, the share of those expecting the situation to deteriorate remained at 54%, with 17% (from 19%) on average expressing the opposite view. The proportion of consumers reporting to be "running into debt" in the second quarter of 2022 remained at 8%, slightly higher than in the corresponding quarter of 2021 (6%). The percentage of respondents who say they save a little also marginally weakened to 18% (from 20% and against 25% in the corresponding quarter of 2021). Finally, the percentage of those who stated that they were just making ends meet rose to 64% (from 60% in the previous quarter) while the percentage of households reporting that they were "drawing from their savings" stood at 9% (from 11%), against only 6% in 2021.

The Business Confidence Indicator in Industry stood at 108.0 in the second quarter of 2022 (from 116.9 in the first quarter of 2022), slightly higher than in 2021 (105.0 points). In the key activity data, the indicator on short-term output expectations declined significantly in the quarter under review and averaged + 24.9 points, from + 31.7 points in the first quarter of 2022. At the same time, the mild positive estimates for the level of orders and demand weakened significantly (to -8.0 from +5.2 points). Estimates for stocks of finished products indicate a mild expansion (at +3.5 from -2.2), while the trends in export variables are negative: the export expectations for the following quarter weakened strongly (+27.8 from +41.5 points), while at the same time the current assessment for the exports of the sector markedly weakened (at +17.1 from +28.4 points), and so did the assessment of orders and foreign demand (-9.9 from +3.2 points). In employment expectations, the relative average quarterly balance declined to +1.4 (from +10.6) points on average. The utilisation rate of plant capacity was, however, higher, at 77.2% (from 74.8%), while the months of secured production of enterprises fell marginally to 4.8 (from 4.9) months on average.

The Retail Trade Business Confidence Indicator was significantly lower than in the previous quarter, at 87.9 points in the examined quarter (from 98.8), a performance lower than in the same quarter of last year (97.9 points). Of the main components of the indicator, the average balance for the assessment of current sales declined sharply to -16 (out of -3) points. Of the companies in the sector, 44% (from 36%) considered their sales in decline, with 29% (from 33 %) stating the opposite. In terms of projected sales, the index declined slightly from +6 to -4 points, with stocks contracting significantly to zero (from -12) points. Of the remaining activity data, the balance of expectations about orders to suppliers decreased to -7 points (from + 6 points), while regarding the sector employment, the average balance of expectations deteriorated significantly, albeit remaining positive at +11 (from + 24) points. Finally, regarding prices, the balance increased strongly (+67 from +59 points), with only 2% of the companies expressing expectations of price decline and 69% (from 61%) predicting a change in the opposite direction. A deterioration in business expectations was recorded in the second quarter of 2022 in all individual retail sectors except for the Food and Drinks sector, where there was a small increase, and in the textiles-clothing and footwear sector, where the boost was significant.

Figure 2.4

Economic Sentiment Indicators: EU-27, Euro area and Greece (2000-2020=100, seasonally adjusted data)



The Economic Sentiment Indicator declined quarter on quarter in the second quarter of 2022 by 8.0 points.

Source: European Commission, DG ECFIN

Business expectations in Construction declined significantly in the second quarter of 2022, with the relative balance standing at 119.6 points on average, down from 137.2 points in the previous quarter, marking the largest change among the main sectors of activity, after that in Services. This performance is at a slightly lower level than in the corresponding quarter of 2021 (121.9 points). Among the key components, the sector's employment expectations declined mildly, with the relative balance falling from +25 points to +16 points, and 33% of the enterprises expecting growth of jobs, against 17% (from 13%) expecting job losses. The firms' negative expectations for planned work deteriorated (to -47 from -32 points), while the assessment of the current level of work marginally improved (to +6 from +4 points).

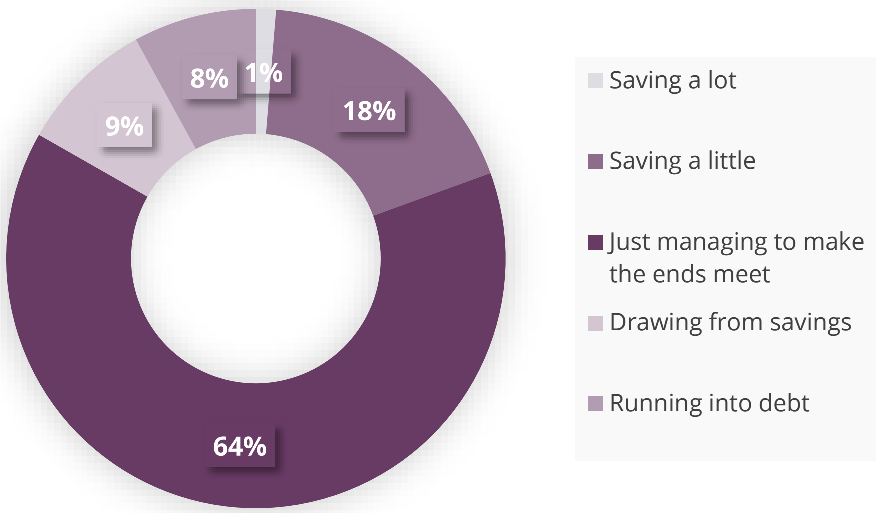
The months of secured activity of companies in the sector weakened slightly to 9.0, while the balance in price forecasts fell sharply to +18 (from + 26) points, with 19% (from 15%) of the enterprises expecting a short-term reduction and 37% (from 41%) an increase. Finally, the percentage of enterprises reporting no obstacles to their operation fell to 11%, while among the rest, 24% (from 34%) reported as the biggest impediments to their operation low demand, 28% (from 17%) insufficient funding, and 10% factors such as the general economic situation of the country, high prices of raw materials, lack of projects, delays in payments by the state, etc. At the sectoral level, business expectations mildly improved in the private construction sector, in contrast to public works where they went down sharply.

The Business Confidence Indicator in Services was significantly lower in the quarter under review than in the previous quarter, at 97.9 points (from 115.7), a lower performance compared to that in the corresponding quarter of 2021 (99.3 points). Regarding the key components, the assessment of current demand declined sharply, with the relative index losing 21 points on average and reaching +8 points. The assessment for the company's current situation (+6 from +32 points) also declined sharply, while the balance in the expectations for short-term business demand fell significantly (+29 from +43 points). Among the remaining activity data, the employment expectations balance marginally improved, growing by 1 point to +24 points, while regarding prices the average expectations rate increased stronger and reached +31 (from 27) points. Finally, the percentage of respondents reporting unhindered business operations increased significantly to 27% on average (from 22%), with 22% indicating insufficient demand as the main obstacle to their operation, 6% the shortfall of working capital, and 27% (out of 32%) other factors linked to the general economic situation, energy prices, the war in Ukraine, etc. Among the examined branches of services, the indicators declined markedly in the second quarter of 2022 in all branches, with the exception of the hotel-restaurant-tourist agency sector where there was a marked improvement.

Figure 2.5

Consumer survey data on the financial situation of households (April - June 2022)

A higher percentage of respondents stating that they are just making ends meet (64 %) in relation to the first quarter of 2022. A small decline in the percentage of those stating that they were drawing from their savings.



Source: IOBE

Table 2.4

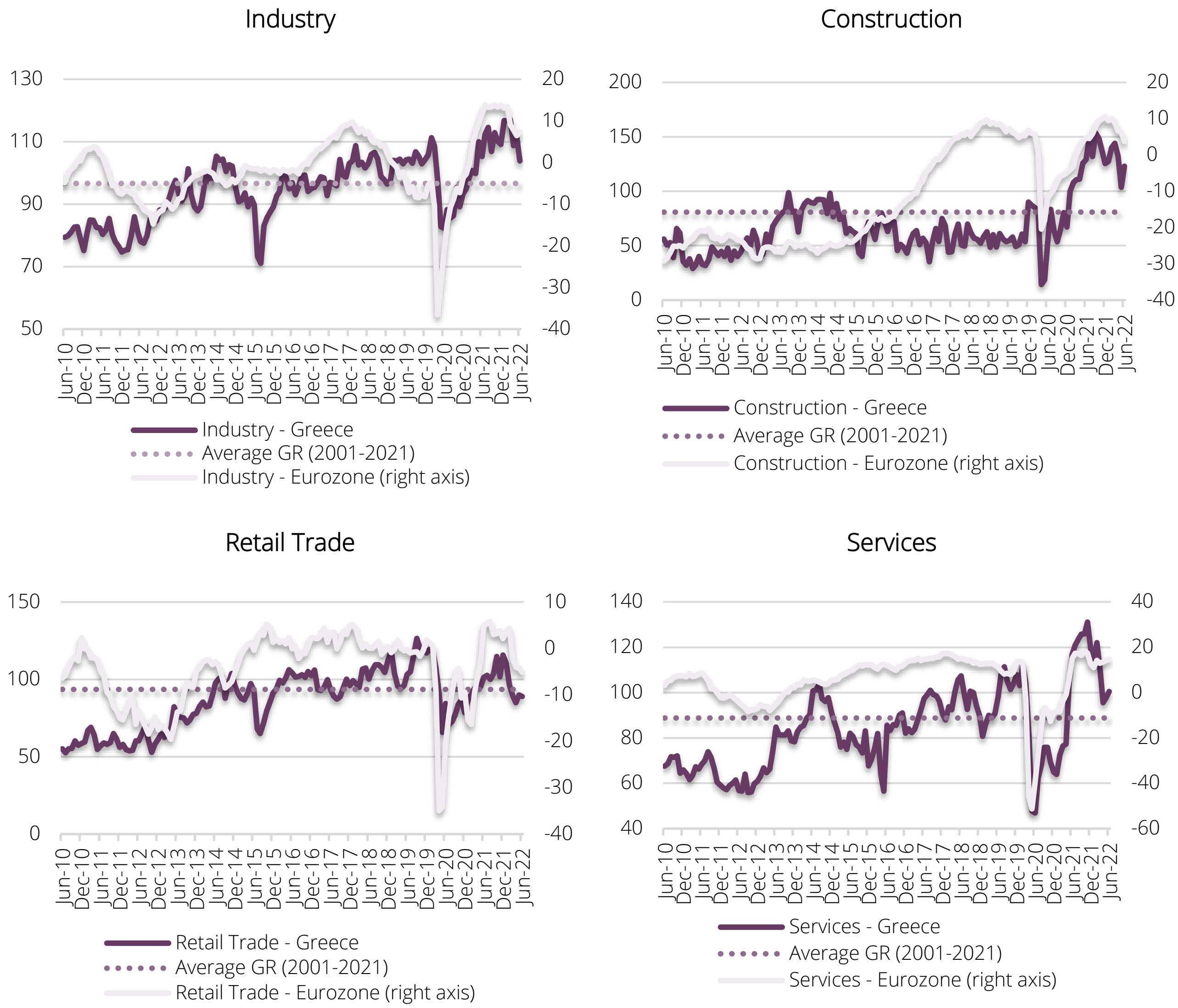
Economic Sentiment Indicators

Time Period	Economic Sentiment Indicator			Business Expectations Index (Greece)				Consumer Confidence Index (Greece)
	EU-27	Eurozone	Greece		EU-27	Eurozone	Greece	
2010	99.3	99.1	86.3	79.9	52.2	61.3	68.1	-56.9
2011	99.8	99.9	84.8	81.1	37.7	60.9	66.1	-70.5
2012	88.0	88.1	83.7	81.4	47.5	59.1	58.8	-73.9
2013	90.8	90.8	93.6	92.6	71.5	72.6	75.3	-69.3
2014	99.6	99.4	102.0	99.7	88.4	92.3	93.3	-52.8
2015	102.9	102.9	91.7	86.3	62.0	83.9	78.2	-50.3
2016	104.2	104.0	94.4	96.1	61.3	101.4	79.3	-62.9
2017	110.4	110.4	98.9	98.1	55.4	94.6	92.7	-58.9
2018	111.5	111.5	103.8	102.8	58.1	104.5	97.0	-44.0
Q1 2019	106.6	106.4	102.6	101.8	56.7	105.8	85.7	-31.1
Q2 2019	104.7	104.4	102.6	103.8	54.8	97.8	92.6	-29.4
Q3 2019	102.8	102.6	108.3	104.8	52.7	115.5	108.2	-11.7
Q4 2019	101.5	101.2	109.0	104.1	68.1	119.1	104.4	-7.1
Q1 2020	101.0	100.8	110.9	108.6	84.9	115.1	106.5	-10.4
Q2 2020	71.4	72.2	92.1	87.6	28.1	80.3	58.6	-31.1
Q3 2020	87.9	88.6	90.6	86.7	67.0	73.5	68.8	-36.9
Q4 2020	90.7	91.4	91.8	92.6	70.7	83.0	70.0	-46.2
Q1 2021	94.7	95.3	93.2	98.2	106.2	90.2	70.9	-43.0
Q2 2021	113.7	114.3	105.1	105.0	121.9	97.9	99.3	-27.5
Q3 2021	115.6	117.3	111.5	111.3	144.7	102.0	123.4	-33.6
Q4 2021	114.8	115.6	112.8	110.7	137.2	110.7	125.4	-38.8
Q1 2022	110.9	111.2	113.8	116.9	137.2	98.8	115.7	-43.6
Q2 2022	103.8	104.6	105.8	107.7	113.3	89.4	99.1	-53.0

Sources: European Commission, DG ECFIN, IOBE

Figure 2.6

Business Confidence Indicators



Source: IOBE

Business expectations deteriorated quarter on quarter in the second quarter of 2022 in all sectors, with a strong decline in Construction and Services

B. Fiscal Developments and Outlook

- General Government Budget Balance 2021: a deficit of 7.3% of GDP, against a deficit target of 6.7% of GDP and a deficit of 10.2% last year. First and foremost, from extraordinary transfers due to the pandemic, despite the increase in revenues. Primary deficit of 4.9% of GDP, against a target of 3.8% of GDP and a deficit of 7.2% in 2020.
- General government debt at 193.3% in 2021, compared with 206.3% in 2020, due to an increase in long-term borrowing
- State Budget Balance, Jan-April 2022: a deficit of €3,316 million against a deficit target of €4,973 million and a deficit of €8.797 million in the corresponding period of 2021.
- Primary balance of the State Budget, Jan-April 2022: a surplus of €799 million against a primary deficit target of €2,453 million and a primary deficit of €6,201 million in the same period last year. The decrease was mainly driven by a reduction in expenditure (-12.2% or -€2.9 billion), but also from an increase in net revenue (+17.0% or +€1.56 billion).

General Government results: 2017-2021

According to the latest national accounting data on General Government (GG) reported to Eurostat last April, its balance in 2021 was negative for a second consecutive year, but less than in 2020. In particular, the deficit stood at 7.3% of GDP, compared to a slightly smaller deficit target in the 2021 budget of 6.7% of GDP. Respectively, the primary deficit stood at 4.9% of GDP, against an initial target of 3.8% of GDP (Table 2.5). Also, according to the enhanced surveillance methodology, in 2021 the primary deficit of General Government was estimated at 4.9% of GDP, while the target was 3.8% of GDP. However, it was smaller than the 2020 primary deficit (3.5% of GDP).

Table 2.5

General Government results* (% of GDP, National Accounting data, ESA 2010)

	2017	2018	2019	2020	2021	
					Initial targets	Actual
General Government Balance	0.6	1.0	1.0	-10.2	-6.7	-7.3
General Government Primary Account	3.7	4.4	4.0	-7.2	-3.8	-4.9
GDP	177,152	179,558	183,250	165,326	171,934	182,830

Sources: Fiscal data 2017-2020 – 1st notification, ELSTAT, April 2022 and 2021 Budget Introductory Report, December 2020, Ministry of Finance

*Without the effects from supporting financial institutions

The high deficit of the general government balance came almost exclusively from the Central Government, which recorded a €15.0 billion deficit, after a deficit of €17.4 billion a year earlier. Meanwhile, the marginal surplus of local government authorities in 2020, amounting to €74 million, was converted to a small deficit one year later, amounting to €169 million. The results of Social Security Funds improved greatly, as their surplus last year more than doubled compared to 2020, from €581 million to €1.6 billion (+157.9%).

The particularly negative result of the Central Government for the second year in a row is primarily due to the deficit in its core accounts, at €14.9 billion (but against €22.8 billion in 2020), despite the surplus from other central government bodies of €2.32 billion (from €3.43 billion in 2020). The high deficit in the Central Government's core accounts is solely due to a new increase in State Budget expenditure after its large increase in the 2020 budget by 3.1% (to €70.8 billion). By contrast, the net revenue of the State Budget mitigated the deficit, as it increased by €3.43 billion or 7.2% to €50.9 billion. The main reason for the revenue rise was the increase in earmarked appropriations, by €910 million or 10.5%, to €9.6 billion to deal with natural disasters and to cover other extraordinary costs. The increase in revenue stemmed primarily from an increase in value-added tax revenues by €1.75 billion or 11.5% to €17.1 billion. These figures reflect, as before, different aspects of the impact of the health crisis on public finances, such as the extraordinary expenditure to deal with it (e.g. health care, development of digital services) and mainly the extensive policy interventions to support businesses and households against restrictive measures to protect public health (e.g. repayable advance, special purpose compensation, coverage of social security contributions, extension of unemployment benefits, rent subsidy). The increase in revenue is partly due to the support measures (extension of deadlines for payment of social security contributions, suspension of collection of obligations and arrears, 25% reduction in social security contributions of self-employed, etc.), as well as the significant contraction of economic activity.

While the pandemic seems to be weakening in recent months, based on indicators such as the number of casualties and the number of intubations, a new, particularly important challenge has emerged for the Greek and global economy due to the war in Ukraine. At present, its impact is mainly related to the strongly increased cost of energy, which in addition to travel and heating/cooling, also affects certain sectors with high indirect energy costs, due to the production inputs they use, such as the food industry (see Box 3.2 of the IOBE report "The Greek Economy 01/22"). These developments have led to new packages of support measures for businesses and households, which put a strain on the fiscal balance, at a time when the anti-pandemic measures had fallen significantly. The energy crisis is likely to affect in the near future other sectors whose production is characterised by high indirect energy costs (e.g. Construction, Food services-Hotels, Metal products). In addition, it is likely to have wider effects, e.g. on the banking system and public finances, due to the increase in intervention rates by central banks. Depending on its duration, the war will again cause supply chain disruptions.

Therefore, the return to primary budget surpluses, such as those achieved in 2016-2019, is not considered possible in 2022 and probably in 2023, due to the effects of the war in Ukraine.

The Greek economy continues to be characterised by another significant imbalance, affecting public finances and potentially affecting them more in the future - the growing debt of the private sector. Overall, the arrears to the tax office approached €113 billion in March 2022 (of which €25.2 billion have been declared irrecoverable by the IAPR),[4] from €109 billion a year earlier, while the arrears to social security funds in the same period reached €42.8 billion. [5] In combination with non-performing loans to banks (€18.8 billion at the end of the first quarter of 2022) and loans managed by credit servicing firms (€79.7 billion at the end of 2021), private sector debt exceeded 139% of GDP in the past year.[6] In addition, repayment of commitments from some of the pandemic support measures, such as the repayable advance, will start in 2022. If the Greek economy does not enter

[4] Without fines and surcharges. Source: IAPR KPIs
[5] Source: Activity progress reports of the social security arrears collection office KEAO
[6] Source: Data on loans, NPLs and CSFs from the Bank of Greece

a steady, dynamic recovery phase in the coming years, these trends will have a significant impact on public finances and its long-term prospects.

Having said that, in its attempt to exit the pandemic crisis and the impact of the war on Ukraine, the Greek economy, like the rest of the European economies, has a powerful funding tool that did not exist in the past - the European recovery facility. The challenges and issues mentioned above make the timely and efficient use of the Fund's resources more urgent.

General Government Debt

Following the strong increase in general government debt in 2020, in absolute terms and as a percentage of GDP, for the first time since 2015, its nominal level continued to rise in 2021, but its ratio to GDP declined. In particular, its absolute size reached €353.4 billion, rising by 3.6% or €12.3 billion compared to 2020, an increase faster than in 2019. Despite this expansion, the particularly strong recovery over the past year, which in nominal terms reached 10.6% of GDP in 2020, resulted in the debt-to-GDP ratio falling from 206.3% last year to 193.3% in 2021 (Table 2.6).

Table 2.6

Consolidated General Government Debt (€ million)

	2015	2016	2017	2018	2019	2020	2021
Consolidated General Government Debt	311,729	315,010	317,481	334,721	331,092	341,133	353,389
% GDP	175.9	178.5	179.2	186.4	180.7	206.3	193.3
GDP	177,258	176,488	177,152	179,558	183,250	165,326	182,830

Sources: Fiscal data 2017-2020 – 1st notification, ELSTAT, April 2022

The increase in the nominal debt of general government compared to 2021 is in the 'long-term securities' category as lending in long-term bonds increased due to the issuance of new fixed-rate bonds. In particular, long-term debt securities increased by €14.1 billion in 2021, or by 25.1%, to €70.1 billion from €56.1 billion a year earlier. By contrast, short-term debt securities declined slightly from €11.1 billion to €10.8 billion. In addition, the cost of borrowing declined, with interest expenditure falling from €4.95 in 2020 to €4.5 billion in 2021.

For 2021, a lower decrease in the debt-to-GDP ratio was set in the budget for that year, to 199.6 %, exclusively from a clearly milder-than-expected recovery (+5.6%), as the absolute level of government debt was anticipated to be well below the actual, at €343.2 billion. According to the Stability Programme 2022-2025, the ratio is projected to decrease to 180.2%, although nominal debt will increase further slightly, to €355.0 billion. This projection, despite a sharp rise in interest rates on Greek bonds following the war in Ukraine, faster than the bonds of countries of the eurozone's core and many in its region, is based on the utilisation of the Greek government's high level of cash reserves, amounting to almost €38 billion at the end of March 2022.[7] These are considered in the Stability Programme to contribute substantially to achieving low financing costs by ensuring that medium-term debt refinancing obligations are met. Note that the Greek State issued a 10-year bond this year before the war, with a nominal value of €3.0 billion and a yield of

[7]2022 Stability Programme, Ministry of Finance, April 2022

1.836%. The issue was highly over-subscribed, with bids exceeding €31 billion, while it was bought mainly by foreign investors.

Implementation of the 2022 budget (January — April)

Inflationary pressures from the recovery of the global economy and difficulties in the functioning of global supply chains in the second half of 2021, manifested primarily by rising energy prices, further escalated following Russia's invasion of Ukraine at the end of February 2022 and the imposition of sanctions on both sides with the most developed economies and coalitions of states (EU). The most important recent development is the sixth set of sanctions from the EU on Russia and Belarus imposed at the beginning of June, which includes a ban on imports of crude oil and refined petroleum products from Russia, with limited exemptions. Under these developments, harmonised inflation in Greece stood at 9.1% in April and 10.7% in May, compared with a deflation of 1.1% and 1.2% respectively a year ago. The recent level is the highest since harmonised inflation is estimated in Greece (1997). In the euro area, these developments are equally unfavourable. The annual price increase in energy products exceeded 39% in May. Overall, inflation in the same month stood at 8.1%, which is also the highest level since harmonised inflation was estimated in 1997.

Under these developments internationally, successive packages of measures have been taken domestically by the Greek government since the beginning of January. They concern the consumption of electricity and natural gas by households, as well as all non-household energy tariffs (farmers, commercial, industrial, professional etc.). An additional discount to households for natural gas is granted by DEPA Commercial. In April, a fuel pass for households with an annual family income of up to €30k was introduced for April-June. Transfers were introduced to vulnerable social groups (low-pension beneficiaries, people with disabilities, beneficiaries of the guaranteed minimum income, etc.). In mid-June, the power pass was activated, through which beneficiaries (households with income of up to €45k) can receive an electricity subsidy of up to €600, for bills of primary or student residences issued from 1 December 2021 to 31 May 2022. A gasoline consumption subsidy will be granted in July-September (fuel pass 2). In addition, farmers are expected to receive a refund of the excise duty for oil, while the adjustment clause in electricity tariffs will be suspended from 1 August 2022 to 1 July 2023, in order to restore the bills to pre-energy crisis levels. With the measures of March and April, it is estimated that the government allocated more than €2.3 billion cumulatively while the total subsidies and discounts from PPC and DEPA Commercial reached €1.26 billion. The budget of the additional support interventions for electricity prices announced in May is about €4 billion on a 12-month basis. Of this, about €2.5 billion will be charged to this year's budget.

Clearly, as long as energy prices remain high, measures to support households and businesses will continue, with adjustments, and possibly with new additions. The burden on the budget balance from any support interventions already implemented or announced will be large, while it is expected to widen. This effect is mitigated by higher-than-expected indirect tax revenues from energy products in the 2022 budget, due to their high prices, as shown by the budget implementation figures analysed below. The biggest boost in fiscal revenue is expected from the strong growth of tourism flows since April, as well as in May, based on international arrivals at the country's international airports (-5.9% and +3.2% compared to the same month in 2019 respectively),[8] despite the war. This trend is now likely to continue in the summer months, probably until the beginning of autumn. The support it will generate will relate mainly to income from indirect taxes, but also from income tax in the sector. If there was no uncertainty due to the war, which prevents households and businesses from taking short and medium-term decisions, taking into account the significant increase in GDP in the first quarter of this year compared to last year (+7.0%), the successful implementation of the State Budget in the first four months and the strong recovery of tourism, the dynamics of economic activity could lead to a slight overshooting of the budget balance target for the whole year.

State Budget Balance and Primary Balance

According to the state budget implementation data, on an amended cash basis, for the period January-April this year, the state budget balance was in a deficit of €3,316 million against a deficit target of €4,973 million in the introductory report to the 2022 budget and a deficit of €8,797 million in the corresponding period of 2021. The primary balance had a deficit of €799 million, against a primary deficit target of €2,453 million and a primary deficit of €6,201 million in the same period of the previous year. The improvement in the SB balance compared to last year is mainly coming from a reduction in expenditure (-12.2% or -€2.9 billion), but also from an increase in net revenue (+17.0% or +€1.56 billion, Table 2.7).

Table 2.7

State Budget execution: January-April 2022* (€ million)

	Jan. – April		% Change 22/21	2021*	2022* Budget	% Change 22E/21
	2021*	2022*				
I. SB NET REVENUE (1+2)	15,125	17,691	17.0	54,878	57,101	4.1
1. Net OB revenue	13,782	15,134	9.8	47,999	47,736	-0.5
OB revenue before tax refunds	15,125	16,815	11.2	53,102	55,172	3.9
Less Tax refunds	1,343	1,681	25.2	5,103	4,957	-2.9
2. PIP revenue +RRF[9]	1,343	2,557	90.4	6,879	7,436	8.1
of which: revenue from EU	-	-	-	4,593	3,800	-17.3
II. SB EXPENDITURE (3+4)	23,922	21,007	-12.2	69,750	67,929	-2.6
3. OB expenditure	21,022	18,438	-12.3	60,749	54,595	-10.1
Primary expenditure OB	18,269	15,910	-12.9	55,876	49,995	-10.5
Interest	2,753	2,528	-8.2	4,873	4,600	-5.6
4. PIP expenditure + RRF[10]	2,900	2,569	-11.4	9,001	10,999	22.2
III. SB Deficit (-)/Surplus (+)	-8,797	-3,316		-14,872	-10,827	
% of GDP	-5.0	-1.8		-8.4	-5.8	
IV. SB Primary Balance	-6,201	-799		-10,327	--6,257	
% of GDP	-3.5	-0.4		-5.8	-3.3	
GDP (at current prices)	177,608	187,278	5.4	177,608	187,278	5.4

Sources: Monthly SB Execution Bulletin April 2022, Ministry of Finance, May 2022.

*On a modified cash basis. According to the new revenue classification in force since 01/01/2019.

[8] Source: Civil Aviation Authority

[9] The PIP category now includes the flows of the Recovery and Resilience Fund for 2021 and 2022

[10] As above

Ordinary budget revenue

The net revenue of the State budget amounted to €17,691 million in the first four months of 2022, exceeding the relevant estimate for this period in the explanatory report of the 2022 Budget by €699 million or 4.1% and higher by 17.0% compared to the corresponding period of 2021. The revenue expansion was achieved despite the lower revenues of the PIP. In April, the total net revenue of the state budget amounted to €5,728 million, higher by €2,049 million compared to the monthly target, mainly due to the collection of the first tranche from the Resilience and Recovery Facility (RRF), amounting to €1,718 million, which was anticipated to be collected last February. Therefore, these are not exceptional, non-budgetary costs. But excluding this amount, net revenue exceeded the target in April by €331 million. Therefore, despite the war and its impact on economic activity and international trade, there was no shortfall on the revenue side during that month.

Overall in the first four months of 2022, receipts increased in most revenue categories compared to last year. The Regular Budget revenue increased by 11.2%, while net revenue increased less, by 9.8%, due to a 25.2% increase in tax refunds. Income tax revenue increased by 12.7% compared to last year, mainly by the increase in corporate tax (+38.4%), while the rise in personal income tax was also significant. Revenue from taxes on goods and services increased by 21.5% year on year, primarily from a 26.3% increase in VAT revenues. In turn, this came mainly from VAT on other goods and services (+€1.09 billion or + 23.8%), but also from VAT on petroleum products (+€290 million or +63.6%). The proceeds from transfers increased significantly (+57.1%) due to the inflow of resources from the RRF mentioned previously, as well as in the revenue from customs duties and import taxes (+57.7%) as well as from sales of goods and services (+23.6% - Table 2.8).

The revenue from taxes also strengthened in relation to the target included in the introductory report to the 2022 Budget. The overshoot is due to a number of factors, including the extension of the deadline for payment of road taxes until the end of February 2022,[11] a better yield of last year's taxes collected in instalments until the end of February 2022, and a better performance of tax collection in the current year.

Ordinary Budget Expenditure

The expenditure of the State Budget in January — April 2022 totalled €21,007 million, lower by €958 million than the target (€21,965 million) in the introductory report of Budget 2022. In addition, it was 12.2% or €2.9 billion down year on year.

In the Ordinary Budget, the target was overshot (i.e. less expenditure) by €1,448 million, mainly due to fewer transfers, by €2.71 billion (-22.1%). The reduction in the Ordinary Budget compared to last year is the same as the reduction in expenditure in the SB (-12.3%). The fall in primary expenditure reached 12.9% while interest expenses fell by 8.2%.

Despite curtailing spending overall, employee benefits and social benefits increased slightly compared to last year, by 1.7% and 1.9%. The largest expansion of expenditure, in both relative and absolute terms, took place in the purchases of goods and services (+€66 million or +23.7%)

[11] a) an extension of the deadline for payment of road taxes until the end of February and (b) an extension of the deadline for payment of tax obligations which were due by 31 January in the areas affected by the 24-January snowfall and frost.

and in the purchases of fixed assets (+€189 million or +15.4%), due to larger procurement of defence equipment (Table 2.9).

As regards payments related to anti-pandemic measures in January-April, the most important ones were: a) the aid to small and micro enterprises affected by COVID-19 in the regions with €153 million from the PIP, b) a public contribution to the repayment of business loans from affected borrowers of €66 million from the PIP, c) a working capital subsidy to tourism enterprises of €42 million from the PIP, d) a special purpose compensation expenditure of €101 million, by the Ministry of Labour and Social Affairs and (e) the additional grant to EOPYY of €60 million and to hospitals and regional health authorities €80 million. Note that their total (€401 million) is much smaller than a year ago (€4.59 billion), which is reflected in the widespread decline in transfers mentioned above.

Table 2.8

State Budget Revenue: January-April 2022* (million €)

	Jan. – April		% Change 22/21	2021*	2022* Budget	% Change 22E/21
	2021*	2022*				
Net SB revenue	15,125	17,691	17.0	54,878	57,101	4.1
Net OB revenue	13,782	15,134	9.8	47,999	47,736	-0.5
Tax refunds	*15,125*	*16,815*	*11.2*	*53,102*	55,172	*3.9*
OB revenue	1,343	1,681	25.2	5,103	*4,957*	-2.9
Income tax, of which:	3,863	4,354	12.7	14,697	15,683	6.7
--Personal	2,950	3,161	7.2	10,173	*10,410*	*2.3*
--Corporate	*572*	*792*	38.4	3,374	*4,076*	*20.8*
Property tax	537	541	0.7	2,652	2,631	-0.8
Taxes on donations, inheritance etc.	63	78	23.8	198	170	-14.1
Tariffs	85	134	57.7	305	297	-2.6
Taxes on goods and services, of which:	7,821	9,504	21.5	26,736	28,462	6.5
--VAT	*5,238*	*6,615*	*26.3*	*17,431*	*18,735*	*7.5*
--Excise duties	*1,869*	*2,042*	*9.3*	*6,659*	*7,065*	*6.1*
Other production taxes	579	626	8.1	1,086	991	-8.7
Other current taxes	990	803	-18.9	2,452	2,209	-9.9
Social contributions	18	19	5.6	55	55	0.0
Transfers	1,555	2,443	57.1	8,690	7,377	-15.1
Sales of goods and services, of which:	191	236	23.6	611	2,104	244.4
Other current revenue	*763*	*631*	*-17.3*	*2,495*	2,067	*-17.2*
Sales of fixed assets	3	4	33.3	4	13	225
PIP Revenue +RRF[12]	1,343	2,557	90.4	6,879	7,436	8.1

Sources: Monthly SB Execution Bulletin April 2022, Ministry of Finance, May 2022.

*On a modified cash basis. According to the new revenue classification in force since 01/01/2019.

The fall in transfers would have been deeper if the exceptional expenditure payments related to interventions in response to the energy crisis had not been made. The main related expenditure by the Central Administration in the period January-April is as follows: a) a grant to OPEKA of €177 million, of which €90 million relates to an additional child benefit payment, €46 million to the

[12] The PIP category includes the flows of the Resilience and Recovery Fund for 2021 and 2022.

payment of higher income support to beneficiaries of the guaranteed minimum income, €33 million to the extraordinary financial assistance to disabled persons, and €7 million to increase of the pension of uninsured elderly people, b) a grant of €131 million to the Information Society to cover the cost of transport fuel consumption, c) a subsidy to OPEKEPE amounting to €50 million to address the consequences for Greek livestock farming from the international developments and d) special purpose compensation to taxi drivers and operators of €4 million.

Table 2.9

State Budget Expenditure: January - April 2022* (million €)

	January- April		% change 22/21	2021*	2022* Budget	% change 22E/21
	2021*	2022*				
SB Expenditure (1+2+3)	*23,922*	*21,007*	-12.2	69,750	67,929	*-2.6*
OB Expenditure (1+2)	21,022	18,438	-12.3	60,749	54,595	-10.1
1.Primary OB Expenditure	18,269	15,910	-12.9	55,876	49,995	-10.5
Compensation of employees	4,388	4,464	1.7	13,494	13,610	0.9
Social benefits	108	110	1.9	281	221	-21.4
Transfers	12,254	9,537	-22.2	37,038	30,583	-17.4
(of which SSFs)	*6,252*	*6,506*	*4.1*	*21,574*	*20,441*	*-5.3*
Purchase of goods and services	278	344	23.7	1,992	1,355	-32.0
Subsidies	1	16	1500.0	346	80	-76.9
Other current expenditure	15	25	66.7	52	101	94.2
Non allocated expenditure	0	0	0.0	0	2,923	-
Purchase of fixed assets	1,225	1,414	15.4	2,672	3,456	29.3
2. Interest (gross basis)	2,753	2,528	-8.2	4,873	4,600	-5.6
3. PIP Expenditure +RRF[13]	2,900	2,569	-11.4	9,001	10,999	22.2

Sources: Monthly SB Execution Bulletin April 2022, Ministry of Finance, May 2022.

*On a modified cash basis. According to the new revenue classification in force since 01/01/2019.

Public Investment Programme (PIP)

The revenues of the Public Investment Programme (PIP) and the revenues of the RRF (measured together according to the new categorisation) totalled €2,557 million, up by 90.4% compared to last year. However, if we ignore the disbursement of the tranche of the RRF, the revenues of the PIP totalled €839 million, i.e. they were down by 37.5% compared to last year. Expenditure reached €2.569 million, down by 11.4% compared to last year, mainly due to deferred payments that were scheduled to be made in the first quarter. But excluding the payments of measures due to the pandemic, the remaining expenditure is higher by 44.4% this year, at €2,318 million. The payments anticipated for the first four months are expected to be executed over the next two months.

[13] The PIP category now includes the flows of the Recovery and Resilience Fund for 2021 and 2022

C. Financial developments

- Non-performing loans (NPLs) on the banks' balance sheets decreased at a slower pace in the first quarter of 2022 to 12.1% of total loans, falling to their lowest level since June 2010.
- Credit growth strengthened to businesses, offsetting the credit contraction to households.
- Private deposits recovered slightly in March-May, but at a slower pace than in the same period last year.
- The cost of new borrowing for the Greek public and private sector rose in the first quarter of 2022, while the spread with other euro-area countries increased.
- The withdrawal of exceptional liquidity support measures by the Eurosystem accelerated, while net purchases from PEPP ended in March.
- The use of the loan component of the National Recovery and Resilience Plan, with the assistance of the banking system, is an opportunity for investment, which is threatened by the heightened uncertainty as a result of the energy crisis.

The forming of expectations that inflationary pressures and geopolitical tensions will last longer than initially expected creates severe economic shocks and new challenges to the financial system. Monetary policy is evolving towards a less expansionary stance, the cost of capital is resurging after a long period of ample liquidity, while the health crisis has receded significantly, but relapses cannot be ruled out. Following the first hike of interest rates by the ECB in 11 years, by 25 basis points in July, markets are now expecting a faster and more frontloaded rise in interest rates over the medium term, with a further increase, likely by 50 bps, expected already in September 2022.

The gradually improving in 2021 investment sentiment towards domestic banks was disrupted following the start of the war in Ukraine. After a period of high volatility, following two successive external shocks (health crisis, war), the banking index at the end of June was about 40% lower than in early 2020 and 30% lower than in mid-February this year, before the outbreak of the war in Ukraine.

Risks and uncertainty about the real economy also affect the outlook of the financial sector, including in terms of asset quality and profitability prospects. Challenges from the past include the high share of Non-Performing Loans (NPLs), which has decreased significantly, a high share of deferred taxation in equity, and weak profitability.

On the monetary policy side, in addition to the first interest rate increase, the ECB completed net new purchases under the extraordinary PEPP securities purchase programme in March 2022 (it will continue reinvestments of maturing related bonds) as well as net purchases under the APP in June 2022. In the case of Greece, which was granted exceptional eligibility in the PEPP, the ECB has announced that there is scope to continue new net purchases in order to continue the smooth monetary policy transition in all Member States. Box 2.1 presents a summary of the PEPP in relation to trends in government bond yields and credit growth rates.

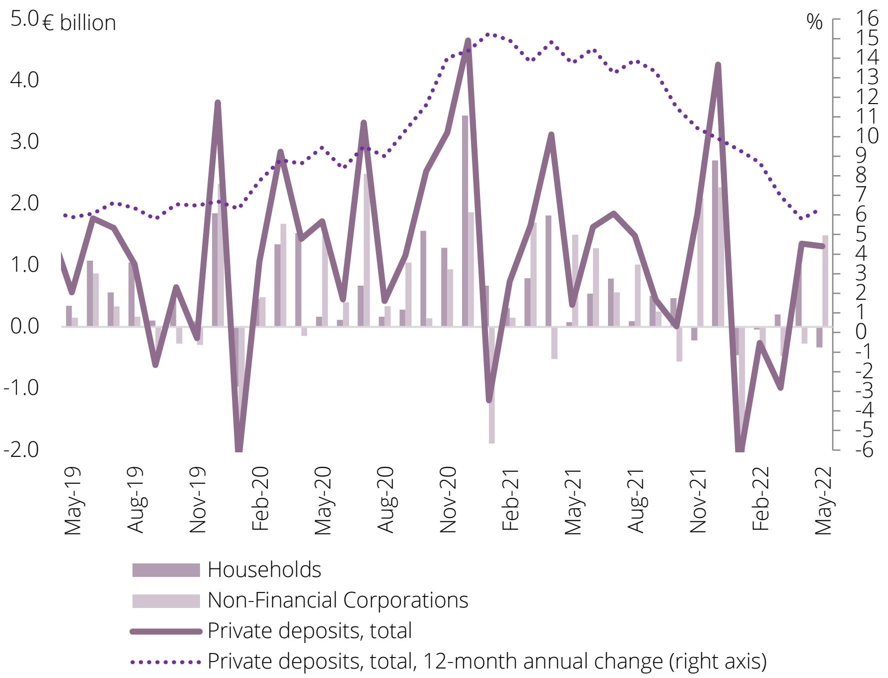
Among the positive trends in bank fundamentals, the reduction of NPLs on the banks' balance sheets continues, private deposits are on the rise, and credit to businesses is still expanding. The timely implementation of the National Recovery and Resilience Plan creates opportunities for stimulating credit for productive investment in the medium term. Banks are invited to have a key co-financing role in the loan arm of the RRF, amounting to €12.7 billion for Greece by 2026. The first tranche of the fund, totalling €3.6 billion, was disbursed in early April, of which €1.84 billion is related to the loan arm.

Among the negative trends, uncertainty due to the war aggravates the broader investment climate, while there has been a significant rise in the cost of new borrowing by both the Greek government and the private sector. Government bond yields exceeded 3.5% in May on average in the case of the 10-year title, which is a three-year high. Similarly, the spread from the corresponding German bond yield widened, exceeding 259 basis points in the case of the 10-year bond. Credit to households continued to contract unabated. At the national level, one-off fiscal measures to support borrowers, payment moratoriums, as well as partial payment programmes, and borrowers' liquidity facilities on behalf of the banks, are gradually coming to an end.

On the banks' liabilities side, private deposits increased in March-May 2022 by €1.7 billion, of which €0.9 billion came from households. The year-on-year rate of change weakened to 6.1%, compared with an average rate of 9.0% over 2020-2021. In the context of the pandemic and with savings expanding, private deposits increased cumulatively in March 2020-December 2021 by €37.8 billion, of which €19.1 billion came from households, signalling depositors' confidence in the banking system.

Figure 2.7

Monthly net flow of private deposits at Greek banks



Private sector deposits recovered by €1.7 billion in Mar-May 2022, but at a significantly slower pace than in the same period last year.

Source: Bank of Greece

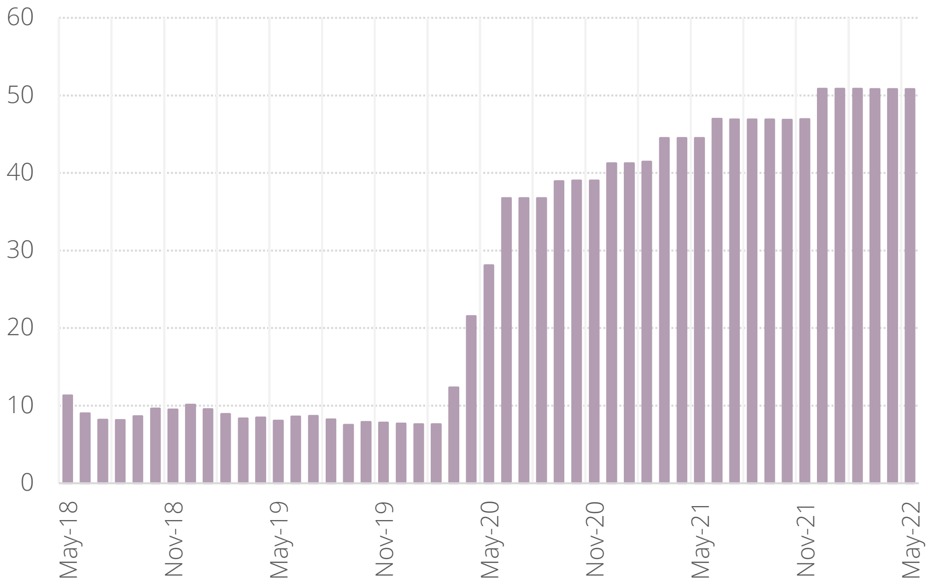
A mild positive trend in private deposits is expected for the second half of 2022, lower than in the previous two years. While the projected economic recovery has a positive impact on the nominal disposable income of households and corporations, it is partly offset by both inflationary pressures reducing real savings rates and the expected increase in the propensity to consume, resulting in a decrease in cumulated savings.

The second part of banks' liabilities relates to funding from the Eurosystem. The Eurosystem's low-cost funding of banks during the pandemic crisis has expanded since February 2020 by at least €43.2 billion (Figure 2.8). Low-cost long-term refinancing operations for banks (e.g. LTROs, PELTROs, TLTROs) provide significant liquidity as they reached €50.8 billion in the first quarter of 2022 or 27.8% of GDP (2021), which is the second highest among euro area member countries (Box 2.1). At the same time, the assets of the domestic banking system accepted by the Eurosystem as collateral for monetary policy operations, as reflected in the financial statements of the Bank of Greece, increased over the same period by around €49.9 billion. The third part of the banks' liabilities relates to financing from capital markets, with bond issuances peaking up place gradually in 2021. However, the outbreak of the war in Ukraine halted the dynamics of financing through the capital markets.

Figure 2.8

Long-term financing of the Greek banks from the Eurosystem (billion €)

The low-cost liquidity from the Eurosystem to Greek banks has stood at €50.8 billion since the beginning of 2022, higher by €43.2 billion since the beginning of the pandemic.



Source: Bank of Greece

On the banks' assets side, the 12-month growth rate of credit to the domestic private sector recovered to 3.0% in April-May 2022. The corresponding rate to non-financial corporations (NFCs) increased to 6.7% over the same period (Figure 2.9). Credit growth to self-employed and sole proprietors remains low, at a rate of less than 1.0%, while credit to households continued to contract, with an annual rate of change of around 2.2%. As a result, the 12-month rate of change in net lending in the private sector as a whole, excluding write-offs, recovered in May to 3.2%, after a systematic decline over the course of last year (Table 2.10).

These trends in private sector financing are both driven by changes in supply and demand for loans, under the influence of the pandemic. On the supply side, the rapid reduction of NPLs and the launch of the Recovery and Resilience Plan have a positive impact on NFCs. On the demand side, the new escalation of uncertainty acts as a deterrent to new investment but it is offset by projects already planned to be included in the Recovery Plan. The Bank of Greece's bank lending survey in the first quarter of 2022 recorded a decline in expectations of demand for new loans, with little boost expected only for short-term loans from large corporations. Credit criteria remained unchanged, with no expectations for them to change in the short term.

Table 2.10

Domestic banking finance per sector (annual % change of 12-month flows*)

Quarter/Year	2/21	3/21	4/21	1/22	Apr-22	May-22
Total private sector	2,3	0,9	1,1	1,3	2,8	3,2
Households & NPIs	-2,5	-2,6	-2,4	-2.2	-2,2	-2,3
Sole proprietors and unincorporated	4,2	2,4	1,8	0,9	0,3	0,8
Non-financial corporations	6,4	3,4	3,3	3,0	6,1	7,3
Interest rates on new loans (period average, %)						
Consumer credit	9,77	10,37	10,3	10,5	10,0	
Mortgage credit	2,80	2,85	2,77	2,83	2,83	
Loans to non-financial corporations	3,12	3,11	2,87	2,88	3,54	

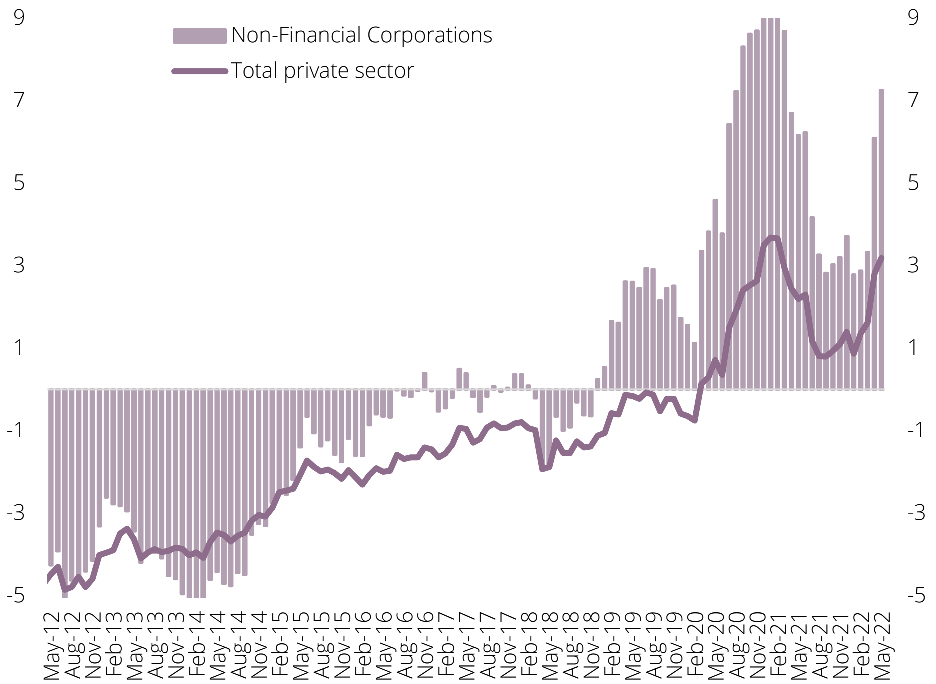
Source: Bank of Greece.

* The flows result from changes of outstanding balances corrected for loan write-offs, re-evaluation of securities, foreign exchange differences and reclassification/transfer of loans.

Figure 2.9

Bank financing of the domestic private sector 2012-2022 (annual % change of flows*)

Credit growth to businesses strengthened, offsetting the credit contraction to households.

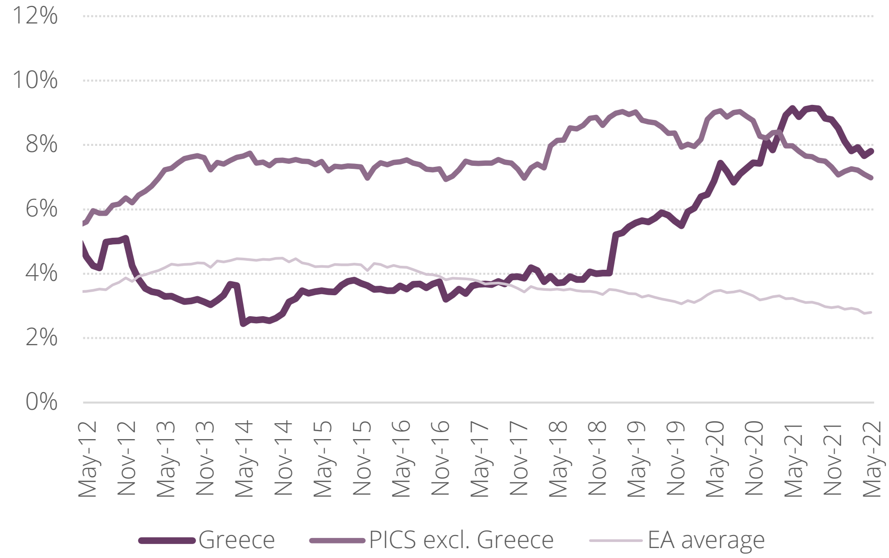


Source: Bank of Greece

* The flows result from changes of outstanding balances corrected for loan write-offs, re-evaluation of securities, foreign exchange differences and reclassification/transfer of loans.

Figure 2.10

Banks' government bond holdings over total assets (%)



Greek banks' exposure to sovereign bonds fell in the first five months of 2022, yet it has remained above the euro area average.

Source: ECB

During the pandemic, the role of the Greek government in absorbing the resources of the domestic banking system strengthened. On the side of new bank financing, the annual rate of credit expansion to the General Government, although significantly decreased, remained high. On a 12-month rolling base, it stood at 15.4% in May, from 72.8% in the same month last year. On side of bank assets, the banks maintained their exposure to sovereign debt in March-May 2022, which totalled €25.6 billion in May 2022 or 7.8% of their total assets. Thus, the share of total assets of Greek banks placed in sovereign bonds is slightly higher than that of the rest of the "south" of the euro area, but significantly higher than the corresponding share for the euro area average (Figure 2.10).

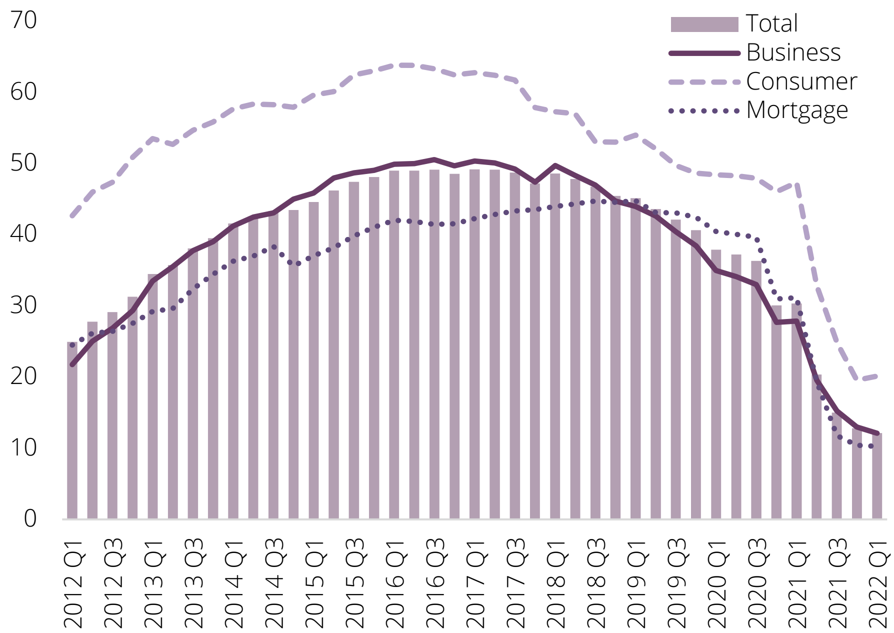
Non-performing loans (NPLs) recorded a further decline, albeit of a weaker intensity, in the first quarter of 2022, by 0.6 percentage points or €0.7 billion, reaching €17.7 billion or 12.1% of total loans in March 2022 (Figure 2.11), a 12-year low. The overall level of NPLs remains higher than in the rest of the European countries, where it is at low single-digit rates. In business credit, the share of NPLs fell in the first quarter of 2022 to 12.1% of related loans, from 12.8% in the previous quarter, with a similar trend in mortgage portfolios, from 10.4% to 10.2%. By contrast, a small increase was recorded in consumer loans, from 19.5% to 20.1%.

Despite the adverse economic conditions of successive external shocks, such as the pandemic, the war in Ukraine, and the energy crisis, banks have made significant progress on the issue of NPLs since early 2020 when the implementation of the securitisation scheme with State guarantees (Hercules) began, dramatically reducing the NPL stock by €50.8 billion or 28.5 pp. However, the stock of non-performing private debt, both on and off the balance sheets of the banking system, remains high. As a result, the successful implementation of reforms in relation to the Bankruptcy Code and the out-of-court debt settlement mechanism is considered key to its management and reduction. The Hercules securitisation programme is expected to remain in place until October 2022.

Figure 2.11

Non-Performing Loans, % of total loans by category*

In the first quarter of 2022, the NPLs declined at a slower pace, by €0.7 billion, to 12.1% of the total loan portfolio. This is the lowest rate since June 2010.



Source: Bank of Greece

* On-balance-sheet loans (before provisions) for all Greek banks on a non-consolidated level.

Over the medium term, the NPLs are expected to continue to decline, driven by further securitisations of portfolios which carry the non-performing loans out of the banks' balance sheets. In the short term, the decline in NPLs is likely to be partially offset by shocks from the impact of the new energy crisis and the high inflation affecting both households and businesses, especially in the energy-intensive sectors. The shocks may also be linked to the effects of the prolonged health crisis affecting mainly businesses in service sectors, but also to the phasing-out of temporary borrower support measures (GEFYRA I, II and termination of payment moratoriums), as well as to an increase in interest rates in the near future on floating-rate loans due to upcoming increases in key ECB interest rates.

In terms of new credit, loans to households are expected to continue to contract, while the inflows from the European recovery fund (€12.7 billion in loans in 2021-2026) and the relevant leverage of private investment are expected to significantly boost credit growth to businesses. The first tranche of €3.6 billion from the Recovery and Resilience Facility (of which €1.84 billion from the loan leg) was disbursed in April, based on progress made towards the reform targets of the domestic recovery plan in the third quarter of 2021. In relation to the debt side of the recovery fund, this initially included in its design at least 30% bank financing, at least 20% own funds, and up to 50% Fund's capital. With a view to making the financing of eligible investment projects more flexible, the Ministry of Finance decided to remove the minimum bank co-financing requirement.

Interest rates for new deposits remained extremely low over March-April 2022, at 0.0% and 0.05% for non-financial corporations (NFCs) and households respectively, from 0.02% and 0.07% respectively in 2021 as a whole. In the same two months, the average new lending interest rate increased to 4.0%, from 3.9% in 2021. It stood at around 4.8% for individuals, 5.3% for the self-employed, and 3.3% for NFCs. The difference in the average interest rate on loans and deposits (interest margin) increased to 4.1% in April, compared to 3.8% in the whole of 2021.

The average cost of new bank financing of private sector NFCs increased to 3.5% in May, the highest level since early 2020 (Figure 2.12). However, the cost remains higher than in the rest of the Eurozone countries. For example, according to the ECB's weighted bank lending cost index, the cost for non-financial corporations in April 2022 stood at 1.5% in the Eurozone, 1.7% in Germany, and 1.9% in the countries of the "south" of the Eurozone (Portugal, Italy, Cyprus, Spain). As a result, the spread of borrowing costs for Greek businesses compared to the average of the Eura area and of other countries in the "south" slightly widened, to 187 bps and 170 bps respectively, from 131 bps and 76 bp. in September 2021. The spread of borrowing costs for Greek businesses compared to the other countries of the "south" remains notably higher in relation to its pre-fiscal crisis level of 2010.

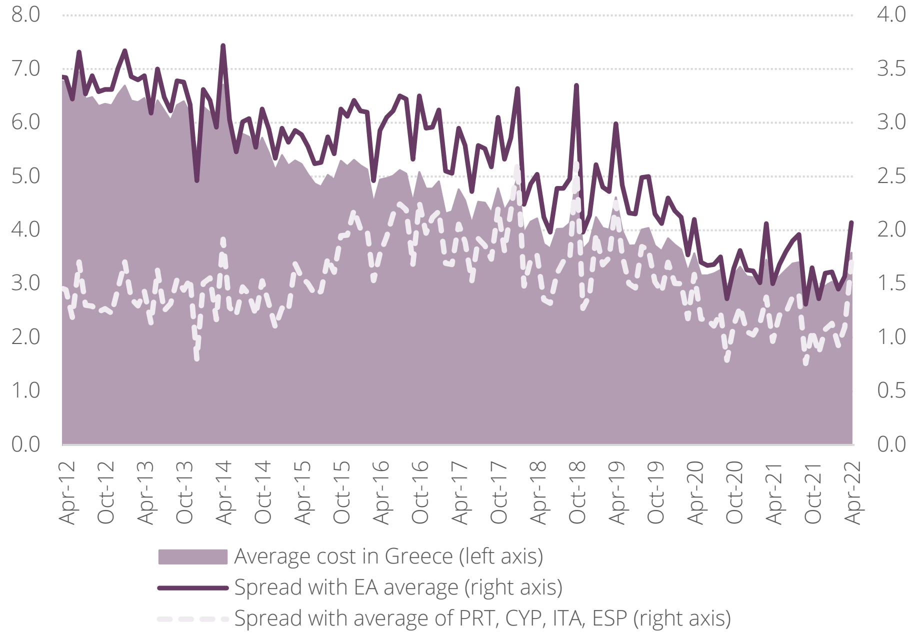
Greek government bond yields increased significantly in early 2022, under the negative impact of the new energy crisis, geopolitical instability, rising inflation, and escalating uncertainty about both the speed of economic recovery and the weakening of liquidity stimulus measures by the ECB. Thus, for the 10-year bonds, the average yield increased to 3.5% in May, which is a three-year high (Figure 2.13). The additional burden on the new 10-year borrowing costs of the Greek government compared to the rest of the Eurozone countries also increased in the first five months of this year. In May, it reached 259 bps and 108 bps relative to the German bond and the average of the countries of the "south" of the Eurozone respectively, from 110 bps and 28 bps in mid-2021. As a result, spreads remain significantly higher than their average levels in the first decade of the country's accession to the Eurozone (54 bps and 2 bps respectively).

Following six successful long-term debt issues in 2021, raising a total of €14 billion, the Greek State sold two issues in the first half of 2022. In January 2022, €3.0 billion were raised at an interest rate of close to 1.8%. In April 2022, following S&P's upgrade of the sovereign credit rating to a level only one notch below the investment grade, a 7-year bond issued in April 2020 was reissued. Around €1.5 billion were raised at an interest rate of close to 2.5%. Following the escalation of geopolitical tensions in eastern Europe, combined with the energy crisis, there has been a systematic and remarkable rise in sovereign bond yields since the beginning of 2022, with a slightly stronger increase in yields for countries in the "periphery", such as Greece. The amount of Greek public debt remains among the highest internationally as a percentage of GDP. Its qualitative characteristics, such as the long average repayment duration, and the large share of fixed and low-interest rate debt to international organisations, which improve its long-term sustainability perspective, countervail this quantitative feature.

Figure 2.12

Composite cost of borrowing for non-financial corporations (%)

The interest rate on new private sector borrowing rose to 3.6% in April, with the spread from the average borrowing costs in the euro area's "south" countries widening to 170 bps.

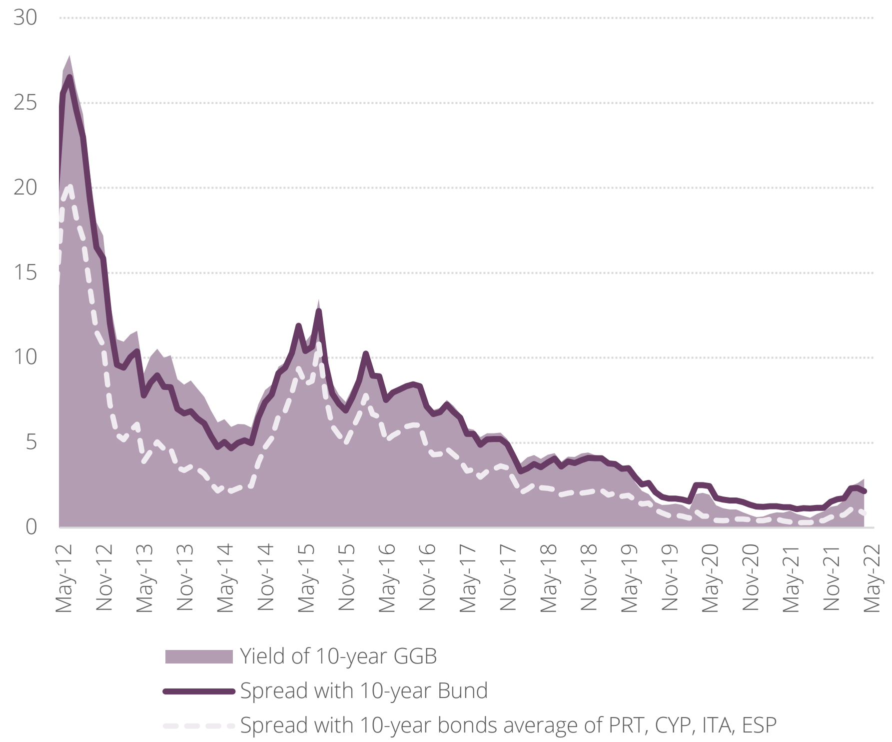


Source: ECB

Figure 2.13

Yield and spread of the 10-year Greek sovereign bond (%)

The average yield of the 10-year government bond rose further in May 2022, to a three-year high of 3.5%, while the average spread widened to close to 259 bps compared to the corresponding German bond.



Source: ECB

Box 2.1

ECB Pandemic Emergency Purchase Programme (PEPP): Net asset purchases for the period March 2020 -March 2022

Following the economic crisis caused by the spread of the COVID-19 pandemic since early 2020, the European Central Bank expanded the use of unconventional monetary policy instruments to stimulate market liquidity. In this context, it launched a Pandemic Emergency Purchase Program (PEPP) in March 2020, targeting both private and sovereign debt securities of euro area member countries. Exclusively for the purposes of this programme, Greek debt securities became eligible for the first time in an ECB's quantitative easing programme, with a waiver of their continued low credit rating.

At the end of 2020, the PEPP programme was intended to cover purchases of securities with a total value of €1.85 trillion (16% of the euro area's annual GDP). As the health crisis declined in intensity during 2021 but at the same time the inflationary pressures intensified mainly due to rising international prices of energy goods, the ECB announced in December 2021 that net purchases of new bonds under the PEPP would end in March 2022. By the end of the first quarter of 2022, the net purchases of securities had cumulated to €1.72 trillion, i.e. about 92.9% of the total budget, of which 96.9% concerned the purchase of government securities and the rest were private securities. As regards the funds from maturing securities purchased under the PEPP scheme, the ECB has announced that they will be reinvested, at least until the end of 2024.

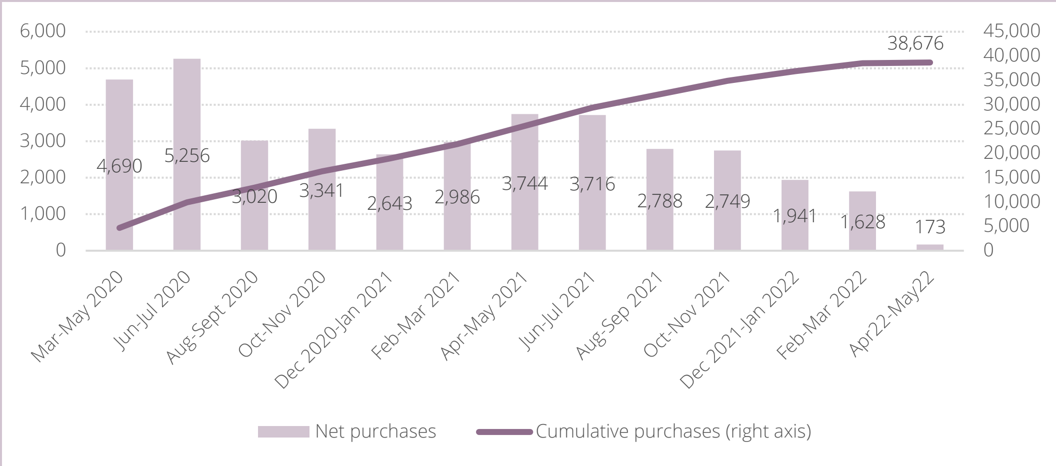
In the case of Greece, the PEPP programme led to purchases of Greek government bonds which in March 2020-March 2022 cumulatively exceeded €38.6 billion (Figure 2.14A). This is equivalent to 21.2% of the country's GDP in 2021, the highest among euro area countries, followed by Portugal, Italy, and Spain, which also scored high rates. In terms of sovereign debt, PEPP purchases from Greece account for 10.9% of this, which is well below the euro area average. During Greece's presence in the PEPP, the average monthly trading volume of Greek government bonds in the Electronic Secondary Securities Market HDAT increased by around €1.6 billion or 0.9% of GDP.

Among a number of factors affecting the demand for sovereign bonds of euro area member countries, the ECB's PEPP has helped to increase their attractiveness and reduce their yield. Countries with a larger PEPP-to-GDP-size recorded on average higher decline in government bond yields compared to pre-pandemic levels (Figure 2.14 B). Among the member countries, Greece stands out as the country with the largest proportional PEPP programme, as well as the largest reduction in its average government bond yield during the pandemic. Indicatively, in 2020-2021, the average yield on 10-year Greek bonds fell to 1.2% from 3.2% in 2018-2019, while the volume of transactions in the secondary market HDAT more than tripled [Figure 2.14C].

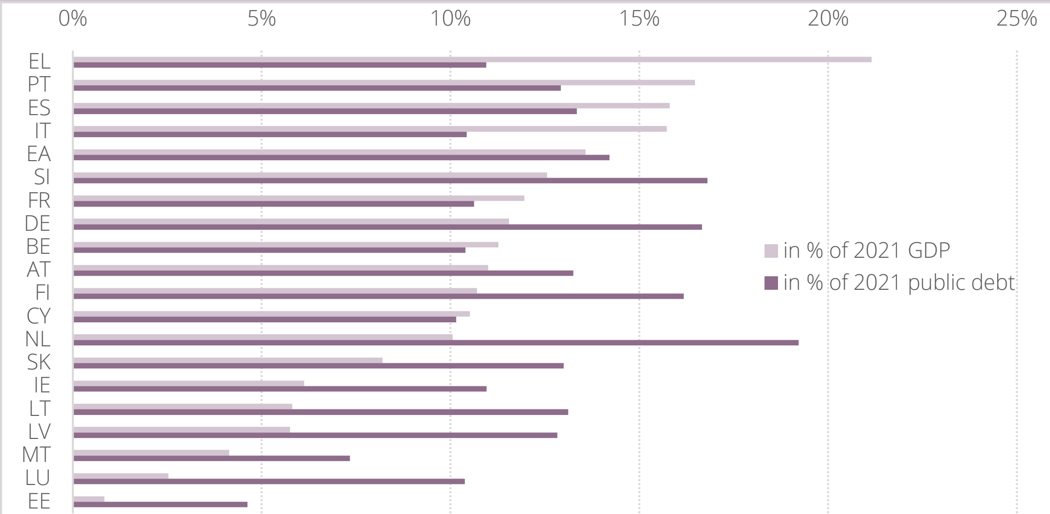
Alongside PEPP, the ECB facilitated the frameworks for the financing of banking institutions. Thus, in early April 2020, the eligibility criteria on the basis of which assets are accepted as collateral for monetary policy operations were relaxed and the valuation haircuts were reduced. This development allowed Greek banks to use long-term refinancing tools at a particularly low cost. The Eurosystem's financing of banks with low-cost loans through LTRO-type monetary policy operations (including TLTROs, PELTROs) increased from €12.3 billion in March 2020 to €50.8 billion in the first quarter of 2022 or to 27.8% of GDP, indicating the second highest use among euro area member countries, while high use was also recorded in Cyprus, Italy, Spain (Figure 2.15.B).

Figure 2.14. Net purchases of sovereign bonds by PEPP, 2020-2022

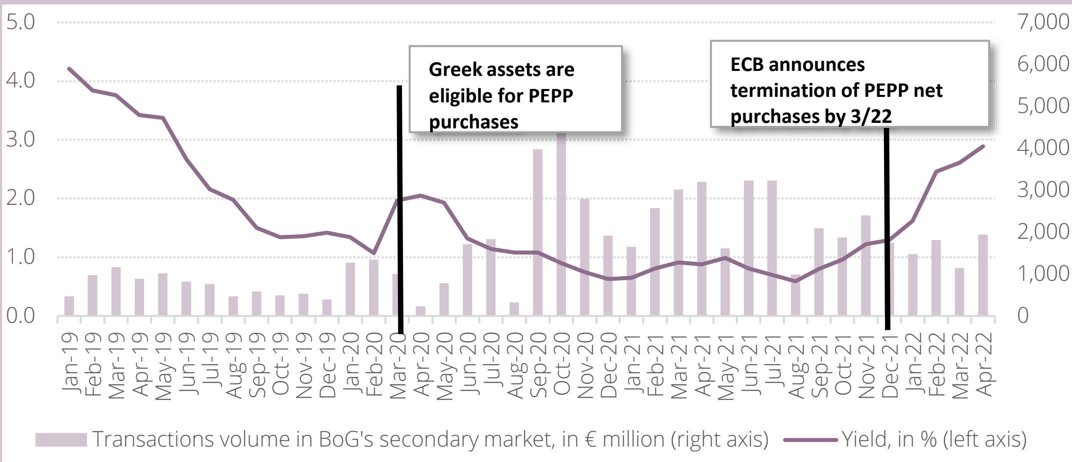
A. Net purchases of Greek sovereign bonds (€ million)



B. Cumulative purchases by euro area country, March 2020 – March 2022



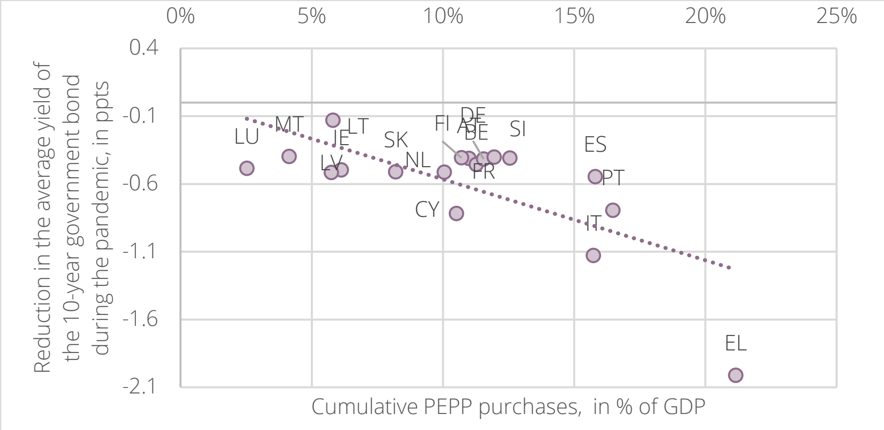
C. Yield and transaction volume of the 10-year Greek Government Bond



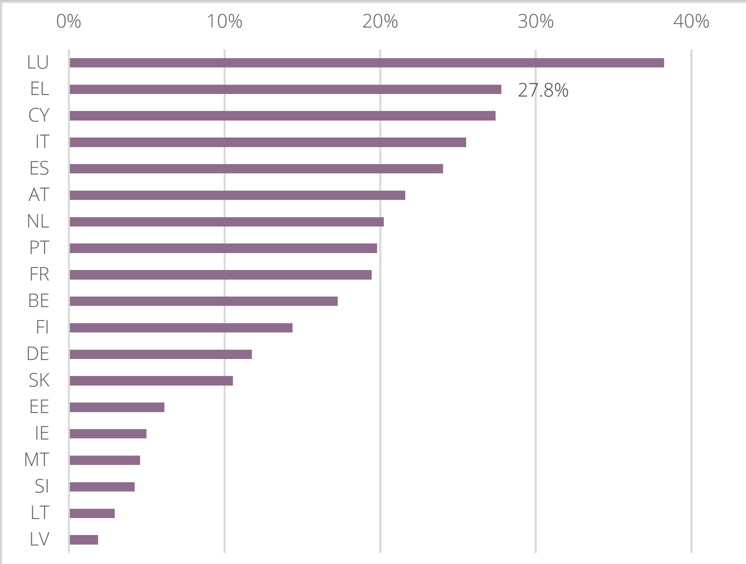
Source: European Central Bank, Eurostat, Data processing IOBE.

Figure 2.15. ECB extraordinary measures, sovereign bond yields and credit expansion

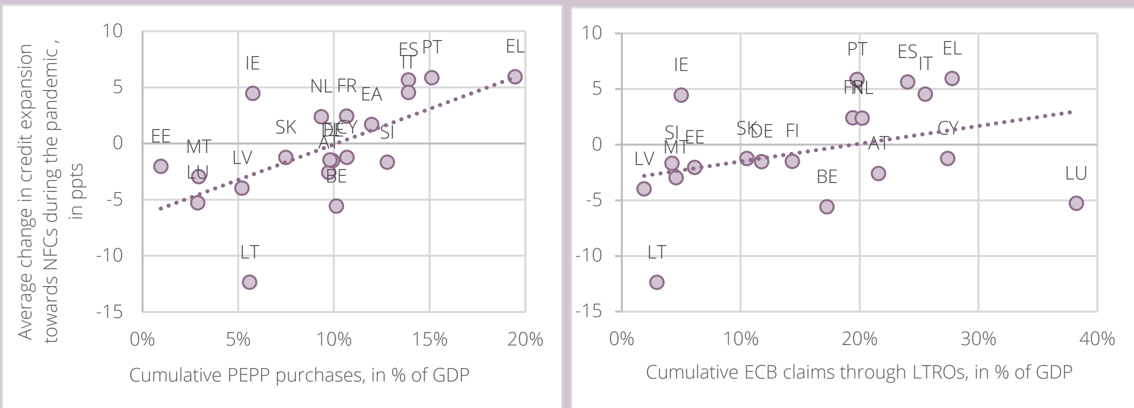
A. Correlation of PEPP figures with the change in sovereign bond yields by country*



B. Total value of LTROs by country, Q1 2022, % of 2021 GDP



C. Correlation between PEPP and LTROs with changes in credit expansion by country*



Source: European Central Bank. Data processing: IOBE. Note: The average change in government bond yield and credit growth relates to the average rate over the two years of application of net PEPP purchases (March 2020 - March 2022), compared to the same rate in 2018-2019.

The ECB's direct liquidity facilities in the banking system through the LTROs, as well as indirectly through PEPP, are expected to have had a positive impact on the credit capacity of European banks as well as on the prospects of credit expansion to the private sector of each Member State. It is observed that countries with a higher proportional size of PEPP recorded on average higher growth in the rate of credit expansion to domestic Non-Financial Corporations (NFCs), compared to pre-pandemic levels (Figure 2.15.C). Among the member countries, Greece stands out as the country with the largest pro rata PEPP as well as the highest positive change in the rate of credit expansion to NFCs in the midst of a pandemic. Similarly, countries, where the ECB has a higher proportional size of LTROs, have recorded on average stronger acceleration of their rate of credit growth as well.

Undoubtedly, both the attractiveness of Greek government bonds and credit expansion to the private sector are affected by a multitude of factors at international and national level, in addition to the ECB policy interventions. For example, domestic reform policies that shape a country's credibility in the international investment community have a crucial role. Moreover, the credit market is also significantly affected by demand factors, both quantitative and qualitative. In addition to these factors, it appears that the exceptional liquidity support measures implemented by the ECB in 2020 have had a positive impact on Member States at least on three levels, they: (a) boosted demand for government bonds, lowering their yields; (b) reduced banks' financing costs; (c) improved the financing prospects of the real economy.

Greece's temporary eligibility, for the first time since the debt crisis, to the ECB's exceptional "unconventional" tools, created a positive environment in relation to the trends in Greek government borrowing costs and the credit market. Moving towards the gradual withdrawal of the ECB's extraordinary instruments amid inflationary pressures and consequently tighter monetary policy, it is crucial to avoid widening the divergence of its borrowing costs from the rest of the eurozone. To this end, it is necessary to strengthen the reform policies that improve the country's credibility and accelerate the prospect of upgrading its credit ratings by the international rating agencies. This will help to shield better the prospects of recovery of the Greek economy in the medium term.

3 PERFORMANCE AND OUTLOOK

3.1 Macroeconomic Developments

- The Greek economy continued to recover strongly in the first quarter of 2022, by 7.0%, yet milder than in the previous quarter (8.1%). A year earlier it was in a downturn of 1.7%.
- The recovery in the first quarter came mainly from the expansion of household consumption (+11.6%), which exceeded the decline in the previous year (-4.9%). Public consumption increased moderately (+1.8%), compared with strong growth a year ago (+5.1%).
- The recovery is secondarily driven by an increase in exports of 9.6%, mainly from a sharp rise in exports of services (+23.0%), while exports of goods continued to expand, but at a mild pace (+2.5%). The increase in exports was lower than the increase in imports (+17.5%), which came mainly from more imports of goods (+17.8%).
- Investment in the first quarter strengthened by 9.2 %, mainly from an expansion of fixed capital formation (+9.6%). One year earlier investment had increased at a slower pace (+3.5%), again coming from growth of fixed capital formation (+14.4%).

Recent macroeconomic developments in Greece

The recovery of the Greek economy slowed slightly quarter on quarter in the first quarter of 2022. In particular, GDP grew in January - March of this year at a rate of 7.0%, from 8.1% in the previous quarter, while a year earlier it was falling by 1.7%. The renewed strong recovery was mainly driven by the expansion of household consumption, with the growth of exports, almost exclusively in services, coming next. Their rise was weaker than in imports, worsening the external balance. The expansion of investment and public consumption had a smaller contribution to GDP growth in the first quarter of this year.

In terms of detailed developments in GDP components in the first quarter of this year, domestic consumption increased by 10.5%, while a year earlier it had declined by 2.8%. The boost came almost exclusively from strong growth in private consumption (+11.6%), which more than offset its decline a year ago (-4.9%). Government consumption expenditure rose mildly (+1.8%), significantly slower than last year (+5.1%).

Investment increased by 9.2%, as in all 2021, faster than a year earlier (+3.5%). As in the first quarter of last year, the increase this year came exclusively from the expansion of fixed capital formation, by 9.6%, compared with a faster rise of 14.4% a year ago. Stock formation declined in the January-March quarter of this year, mitigating the investment growth.

The trends were positive in four out of seven categories of fixed capital in early 2022. Other machinery and equipment - Weapons systems recorded the largest increase in absolute terms (+€539 million or +39.1%), reflecting the impact of the procurement of defence systems, followed by Other buildings and structures (+€206.8 million or +15.9%). A year earlier both categories were growing at a lower rate, by 20.4% and 3.2% respectively. Next in absolute terms came Dwellings (+€104.1 million or +18.6%), which was lower than last year (+27.9%). The lowest increase in absolute terms was posted by Other products, by €52.8 million (+5.18%), following their rise at the beginning of 2021 by 2.6%. By contrast, the stronger decline in investment occurred in ICT equipment, by €231,4 million or 37.2%, almost offsetting their rise by 41.8% a year earlier, which then was the strongest growth among the fixed capital categories. Much weaker was the decline in Transport equipment (-€11.6 million or -2.6%), following last year's 9.3% increase, and in Cultivated biological resources (-€1.3 million or -6.3%, from +7.0%).

In terms of developments in the external balance of the economy, the absence of restrictions on international travel and economic activity in the first quarter of this year, as opposed to one year earlier, led to a strong annual expansion of international tourism flows (+298.6%) and international transport, and thus of exports of services (+23.0%), against their decline of 15.4% in the first quarter of 2021. Perhaps this increase was mitigated by the countervailing effects of the war in Ukraine, as international tourism continued to fall significantly short of its 2019 level (-45.1% in the first quarter). The exports of goods continued to expand for the seventh quarter in the January-March period, but at the lowest speed since the start of this growth streak (+2.5% against +9.0% last year). This development is likely due to the continued sharp rise in commodity prices since the third quarter of last year and the impact of the war in Ukraine on international supply chains. Overall, exports expanded by 9.6%, while a year ago they were falling by 2.0%.

Stronger than exports was the growth of imports in the January-March quarter, by 17.5%, against their decline of 5.3% in early 2021. In contrast to exports, the rise in imports was higher in goods rather than services (+17.8% vs. 15.5%), even though in the same period of 2021 the imports of services had fallen stronger (-30.0% compared to -17.6%). The deficit of the external balance in national accounting terms widened year on year by €1.39 billion or +212%, to €2.04 billion.

On the production side of GDP, domestic gross value added expanded in the first quarter at a slower pace than GDP, by 6.1%, as subsidies on products, which are accounted in GDP but do not constitute domestic production, doubled compared to the first quarter of last year (+100.7%, to €801 million). In six of the ten main sectors of the Greek economy, activity expanded year on year in that period, in three it declined, while in one it remained essentially unchanged. The strongest increase in the January-March quarter, by 57.5%, was recorded for another quarter in Arts-Entertainment-Recreation, a sector that was particularly strongly hit a year earlier by public health protection measures, which is why its value added of production had fallen by 30.3%, more than in any other sector. In 2021, activity in the sector increased on average by 12.5%, partly compensating for its extensive losses in 2020 (-24.5%). The second largest growth in early 2022, by 17.8%, took place in Wholesale — retail trade, transport — storage, hotels — restaurants, primarily reflecting the strong resurgence of household consumption demand, as presented above. A year ago, due to strong restrictive measures, output in this sector had fallen by 10.5%. Next came Construction (+15.7%), under the stimulating effect of higher investment in Dwellings and Other buildings and structures mentioned above, following last year's growth (+7.0%), and Professional — scientific — technical — administrative activities (+8.0%), after a slight decline one year earlier (-1.0%). Industry remained on a growth path for the sixth year in this quarter, posting the best performance among the main sectors of the Greek economy. Its output expanded by 5.7%, following an increase of 6.5% in the same quarter of 2021. Cumulatively since the first quarter of 2015, the output of Industry has increased by 22.3%. The smallest increase was recorded in Public administration-defence-compulsory social security, by 0.6%, milder than in the first quarter of last year (+3.2%). Activity in Real estate management (+0.3%) was stagnant, as it was a year ago (+0.2%).

By contrast, the strongest contraction of output in early 2022 was recorded in Financial and insurance activities, by 19.4%, against a slight increase in the same period last year (+1.1%). Agriculture-Forestry-Fisheries came next, with a decline of 4.2%, continuing the negative trend from the previous quarters, (-7.3% in the first quarter of 2021). The mildest contraction took place in Information-Communication by 1.1%, as opposed to an increase of 6.6% a year earlier.

The positive developments in economic activity continued to be reflected in the labour market, with an unprecedented expansion of employment in the first quarter of this year, by 11.6% or 418.9k people, much higher than in the previous quarter (+4.5% or +174.8k). However, note that this increase is largely due to a positive "base effect", as there was a particularly strong contraction in employment in the January-March quarter of last year, by 227.5k people or 5.9%. This year's rise was mainly driven by a decline in the inactive population (+320.7k or +7.3%), which expanded the workforce (by 76.1% or 42.1k), and secondarily from the decline in unemployment (-98.2k or 13.2%). As a result, the year-on-year decline in the unemployment rate remained particularly strong, reaching 3.3 percentage points, from 3.0 in the previous quarter, resulting in the unemployment rate falling to 13.8%. This level is lower than in the final quarter of 2010, when the economic adjustment process domestically was at its early stages.

At the sectoral level, the employment trends are mostly consistent with those in production mentioned above. Thus, most jobs compared to the first quarter of 2021 were created in Accommodation-Food Services (+129.9k or +67.3%) and in Wholesale-Retail Trade, where in previous years they had fallen sharply due to the closure of businesses. Next came Manufacturing (+41.1k or +11.2%), Education (+28.8k or +9.3%), and Arts-Entertainment-Recreation, where strong restrictive measures had also been implemented, with particularly strong expansion in percentage terms (+23.5k or +64.7%). By contrast, employment decreases in the first quarter only in Financial-insurance activities (-3.8k or -4.9%) and Electricity-gas supply (also -3.8k or -11.2%), while in Mining — Quarrying it remained almost unchanged (+0.1k or +0.9%).

In the field of consumer prices, inflationary pressures escalated significantly in the first quarter of this year, under the effects of the recovery of the global economy and the war in Ukraine. On average in January-March, the Consumer Price Index increased by 7.4%, compared with an increase of 4.5% in the previous quarter and a decline of 1.6% in the same quarter last year. The average rate in the first quarter of this year was the highest in the same quarter since 1997. The strengthening of the inflationary trend is mainly due to higher prices of energy products. The negative impact on inflation from indirect taxes, due to the reduction of VAT from 1/6/2020 on certain products and services, ended one year after the start of the measure's implementation. Prices increased in seven of the 12 categories of products and services included in the domestic CPI, while at four they remained unchanged. The largest price increase was recorded in those categories affected by energy prices. In particular, prices rose in Housing by 26.0% and in Transport services by 12.9%. There was also a strong rise in prices in Food - non-alcoholic beverages, by 6.8%, goods with prices traditionally highly correlated with the prices of energy products, as shown in a previous IOBE report on the Greek economy (report 3/21, box 3.2). Prices in Clothing and footwear (+6.4%) and Durable goods (+ 3.6%) also increased. Prices fell only in Communications (-3.1%), following their similar decline last year (-1.8%).

In summary, the composition of the recovery of the Greek economy changed slightly in the first quarter of this year, with household consumption gaining the leading role, as despite the new outbreak of the pandemic no restrictive measures were applied to the functioning of sectors where a significant share of private consumption takes place. More broadly, the functioning of the economy without any particular constraints for a year has strengthened consumer confidence and the expectations of exiting the health crisis. Of course, as in similar trends in private consumption in the past, the positive impact on GDP was mitigated by the high correlation between household consumption and imports. The further escalation of inflation for the remainder of 2022, mainly due to the effects of the war in Ukraine, will largely halt the expansion of household consumption spending. Besides, as the majority of the restrictive measures on businesses were lifted in the second quarter of last year, the basis for comparison of private consumption one year later will be significantly higher than in the first quarter. The far-reaching measures to address the effects of the energy crisis that have been in place since April will mitigate the slowing of the expansion of consumption. Also, the minimum wage increase is one of the major drivers of consumption spending, as it will boost real income and household expectations.

Higher exports continued to be an important factor in the recovery, mainly due to the strong expansion of the exports of services, while the exports of goods continued to grow, albeit at a moderate pace. Overall, the reliance of the Greek economy on internationally traded goods and services expanded further. As predicted in the previous IOBE report on the Greek economy, international tourism continued to grow in the first quarter of 2022, supported by its trend of last year. The war in Ukraine seems to have had no particularly negative effects on tourist flows in the second quarter, as well as on summer bookings. However, overall, it has negatively affected international transport, through higher transport costs and a sharp rise in commodity prices (energy, metals). High transport costs and disruptions in supply chains worldwide will moderate and even likely halt the rise in the exports of goods.

The external balance (in national accounting terms) improved again in the first quarter of 2022, despite a strong expansion of imports, primarily of goods. This trend is expected to continue over the remainder of this year, with the expansion of the surplus in the services account exceeding the deficit in the goods account. Moreover, the high prices of energy goods, as well as some food and raw materials, mainly due to geopolitical developments, are now likely to weaken the positive dynamics of imports. However, several of the imported products have low demand elasticity, as they are widely used by businesses and households, while their demand was suppressed last year due to the restrictive measures, which will keep imports on the rise.

Table 3.1

Trends in key macroeconomic figures – National Accounts (seasonally adjusted data, 2015 constant prices), provisional data

Quarter	GDP		Final Consumption		Investment		Exports		Imports	
	million €	Annual rate of change	million €	Annual rate of change	million €	Annual rate of change	million €	Annual rate of change	million €	Annual rate of change
2010	226,122	-5.4%	207,014	-5.9%	38,613	-10.6%	49,959	4.5%	69,241	-3.4%
2011	194,462	-13.9%	175,798	-15.0%	25,607	-33.4%	48,026	-4.2%	56,076	-19.7%
2012	180,416	-7.2%	163,346	-7.2%	20,222	-20.7%	48,968	2.2%	52,850	-5.5%
2013	175,958	-2.6%	156,892	-4.1%	19,587	-3.4%	49,843	2.0%	50,627	-3.3%
2014	176,953	0.7%	156,792	0.1%	20,438	4.2%	53,954	7.5%	54,052	6.8%
2015	176,412	-0.7%	156,610	-0.3%	21,374	4.3%	56,661	5.1%	58,306	7.7%
2016	175,578	-0.5%	156,071	-0.4%	22,776	5.9%	56,426	0.2%	59,958	2.1%
2017	177,434	1.3%	158,952	1.6%	21,640	-2.0%	61,229	8.1%	64,519	7.5%
Q1 2018	44,979	2.1%	40,229	2.1%	5,330	-9.2%	16,019	8.5%	16,445	4.6%
Q2 2018	45,042	1.7%	39,768	0.2%	6,136	16.2%	16,778	7.8%	17,270	8.4%
Q3 2018	44,920	0.4%	39,909	0.2%	5,525	-0.8%	16,968	6.7%	17,804	8.9%
Q4 2018	45,221	2.0%	39,885	-0.4%	6,316	28.5%	17,047	13.7%	17,646	6.8%
2018	180,161	1.5%	159,792	0.5%	23,307	7.7%	66,812	9.1%	69,164	7.2%
Q1 2019	45,513	1.2%	40,321	0.2%	6,108	14.6%	17,080	6.6%	17,839	8.5%
Q2 2019	46,009	2.1%	40,628	2.2%	5,407	-11.9%	17,594	4.9%	17,735	2.7%
Q3 2019	45,966	2.3%	40,112	0.5%	5,117	-7.4%	18,336	8.1%	17,942	0.8%
Q4 2019	45,841	1.4%	40,867	2.5%	5,946	-5.9%	17,066	0.1%	17,765	0.7%
2019	183,328	1.8%	161,928	1.3%	22,577	-3.1%	70,076	4.9%	71,281	3.1%
Q1 2020	44,881	-1.4%	40,572	0.6%	6,425	5.2%	16,627	-2.7%	17,896	0.3%
Q2 2020	38,885	-15.5%	36,007	-11.4%	5,760	6.5%	11,845	-32.7%	15,254	-14.0%
Q3 2020	40,994	-10.8%	38,321	-4.5%	7,260	41.9%	11,567	-36.9%	16,705	-6.9%
Q4 2020	42,669	-6.9%	38,623	-5.5%	5,489	-7.7%	14,939	-12.5%	15,816	-11.0%
2020	167,429	-8.7%	153,522	-5.2%	24,934	10.4%	54,978	-21.5%	65,670	-7.9%
Q1 2021	44,136	-1.7%	39,435	-2.8%	6,647	3.5%	16,297	-2.0%	16,951	-5.3%
Q2 2021	44,730	15.0%	40,791	13.3%	6,934	20.4%	14,918	25.9%	18,439	20.9%
Q3 2021	45,772	11.7%	41,475	8.2%	6,276	-13.6%	17,287	49.4%	19,957	19.5%
Q4 2021	46,142	8.1%	42,520	10.1%	7,371	34.3%	18,539	24.1%	21,082	33.3%
2021	180,779	8.0%	164,222	7.0%	27,228	9.2%	67,040	21.9%	76,429	16.4%
Q1 2022	47,226	10.5%	43,587	10.5%	7,261	9.2%	17,869	9.6%	19,912	17.5%

* provisional data

Source: Quarterly National Accounts, ELSTAT, June 2022

Regarding investment, the significant increase in fixed capital formation in the January-March quarter came again mainly from its strong growth in Other machinery - equipment - weapon systems. The source of this change is unknown. It may be due to a significant extent to the acquisition of new fighter jets, therefore, while it is beneficial for national security, this does not enhance the production capacity of the Greek economy. Among the other categories of fixed capital, there was a substantial increase in the categories related to Construction (dwellings and other buildings and structures). By contrast, investment in ICT has declined extensively. Therefore, the overall picture of the dynamics in investment categories in early 2022 does not show that their rise serves mainly productive purposes. That said, the positive trend can strengthen later this year, with a more productive content, by the use of capital resources from the Resilience and Recovery Facility (RRF) that have flowed to Greece, through the investment projects under the 'Greece 2.0' plan that have been activated. In the next sub-section, we present in detail the medium-term macroeconomic forecasts.

Medium-term outlook

- The war in Ukraine and its effects (strong increase in the prices of energy - raw materials, a slowdown in the Eurozone, additional fiscal interventions, rising interest rates), the tourism sector activity, and the use of the recovery fund are the major drivers of GDP change in 2022 and probably in 2023.
- Growth rate of 3.5-4.0% this year, mainly from expansion of exports (+12-14%), primarily of services, and higher household consumption (3.0-4.0%).
- Deteriorating external balance from higher in absolute terms expansion of imports (+11-13%).
- Significant reinforcement of Investment (+13-15%), despite the increase in capital costs, from investments in Tourism, implementation of the recovery fund, and acceleration of the NSRF
- Mild reduction of public consumption (-1.0% to -2.0%) due to widening public sector employment and interventions to ease the energy crisis

The war in Ukraine has continued for more than four months after Russia invaded the country. In addition, negotiations between the two countries have stalled and sanctions to and from Russia are escalating, keeping at a high level the uncertainty about the duration and dimensions that hostilities can take. Combined with the so far strong upward effects on prices mainly of energy products, but also of certain raw materials and food, as well as the turbulence it has caused in the operation of supply chains, the war will be the most decisive factor in economic and geopolitical developments at least during this year. It is quite likely that its effects will extend to the coming years.

In parallel with the dramatic course of the war, recent developments regarding the pandemic have limited its relevance for the economic developments. Domestically, despite the lifting of almost all measures to protect public health as of 1 May, with the exception of the mandatory wearing of masks in indoor areas from 1 June, with few exceptions, the trend in key indicators of the pandemic has been negative throughout most of the second quarter. The number of cases and deaths per day fell in late April to early May below the level recorded before the spread of the Omicron variant, while the number of intubations had remained at these levels since March and has now been close to the minimal levels of September 2020. In contrast to these downward trends, the number of cases has been moving up since the beginning of June, not only domestically, but also internationally, which is probably related to the start of the summer tourist season. No measures to protect public health have been reintroduced at the moment. But the current escalation over the summer, in climatic conditions that are not conducive to the spread of the coronavirus, makes possible a stronger outbreak from the autumn. Such a development may lead to a deterioration of all epidemiological indicators and the reintroduction of more measures to protect public health.

With regard to recent price developments, the inflationary pressures escalated sharply in April-June, due to global difficulties in supplying certain energy products, consumer goods (e.g. sunflower oil), and raw materials (e.g. metals extracted in Russia and Ukraine), due to the war, but also the continued recovery of the global economy, albeit at a milder pace than in 2021. In May, the average price of Brent oil rose month on month by 8.4%, to $113.3/barrel, 65.4% higher than it was a year ago. The average Dutch TTF gas price stood at €88/MWh, 13.3% lower than in April this year, but 252% higher than in April last year. The latest developments in this regard include the imposition at the beginning of June of the sixth set of sanctions by the EU on Russia and Belarus, including a ban on imports of crude oil and refined petroleum products from Russia, with limited exceptions and the exclusion from the SWIFT system for three additional Russian banks and one additional Belarusian bank. Meanwhile, Gazprom reduced its gas exports to Europe via Ukraine twice in June and, as a result, they reached 41.4 million cubic meters, from 42.1 million at the end of May. While Russia's energy exports to Europe have been severely limited, they are on the rise to strong Asian developing economies such as China and India. In addition, the prices of these exports are much higher than before the war. According to the International Energy Agency, Russia's oil export revenues have increased by 50% this year compared to 2021. In addition, it continues to export cereals, without restrictions, as there is a need to replace Ukraine's production, also at much higher prices. These developments are reflected in Russia's current account. Coupled with the withdrawal of large multinational groups from the country, which has curtailed imports, its surplus more than tripled in the first four months of 2022, reaching almost $96 billion, supporting domestic liquidity.

These developments hamper the easing of the prices of energy and other commodities, slowing down the global economic recovery. The high prices are partly sustained by measures to mitigate the effects of the energy crisis on developed economies, which props up a large part of the energy demand. The long duration and intensity of the increase in prices result in their diffusion into industries in the production process of which the importance of expensive commodities as raw materials is high. For example, domestically in recent months, there has been a strong price increase in the manufacture of food and non-alcoholic beverage and in hotels-coffee-restaurants.

By contrast, there are positive economic developments domestically in the second quarter of 2022, and namely: a) significant growth of tourism flows in relation to one year before the war, which limits the gap from the 2019 levels, and b) the disbursement of the first tranche of €3.6 billion from the Recovery and Resilience Fund, while the inclusion of projects of the National Recovery and Resilience Plan (Greece 2.0) in the NSRF continues rapidly.

More specifically with regard to the recent developments related to the pandemic, as no generalised restrictive measures were reinstated in the winter due to the new outbreak of the pandemic, major sectors of the economy, suspended in the first quarter of last year, were in operation a year later, with few restrictions (e.g. Retail trade, Tourism, Food services). This fact is considered to have supported their activity during this period, while also boosting the expectations of businesses in these sectors for the following quarter, despite geopolitical developments. As a result, expectations were on average only slightly weaker than they were a year ago. Especially in

Industry, the average index of expectations in the April-June quarter was slightly higher than in the same period of 2021. But household expectations have been clearly deteriorating since last year, reaching their lowest levels in 4.5 years, mainly reflecting concerns about the impact of the war in Ukraine on their purchasing power and the country's economic situation next year.

As no generalised restrictive measures were reinstated, there was also no need for extensive relevant interventions to support businesses and households. However, successive packages of measures were implemented, with the most important package introduced in early April, in order to address the effects of higher energy costs. The most recent relevant interventions are presented below. Support interventions instated prior to the last variant, which continued in the second quarter of this year, include the programme to cover 100% of social security contributions for six months, which has expanded by 50,000 places since the beginning of the new year. In late March, the SYN-ERGASIA programme was extended for another two months, until the end of May. For this period, people who were full-time employees on 31 October 2021 have the right to join the programme. The budget for this year included the postponement of the payment of the first of the 60 interest-free instalments of the repayable advance from 31/01/22 to 30/06/22. In June, it was postponed further to 29/07/22, so companies will soon start meeting their specific obligation. Last October, the repayment rate of all repayable advances was lowered, depending on the decline in the gross revenue of each company. It has also been possible to repay the full repayable amount by 29/07/22 with a 15% discount, while in the context of the measures to address the high energy costs taken in April, the repayment period was extended to 96 months. Until 30/06/22 the maturity period of the credits issued under the fixed expenditure subsidy programme had been extended. Therefore, in addition to the small extension of certain programmes, in some of them, this was also accompanied by a relaxation of the conditions for the repayment of the liabilities.

As mentioned above, successive packages of measures were announced to halt the energy price increases since the beginning of January. They relate to household electricity consumption of up to a certain level per month (300 KWh) and to their total monthly gas consumption. An additional discount to households for natural gas is granted by DEPA Commercial. The subsidy for non-household tariffs (agricultural, commercial, industrial, professional etc.) concerns the total consumption of electricity and natural gas and is common to all. The payment of universal service charges for businesses connected to the mid-voltage grid has been suspended since last November.

In April, electricity subsidies were broadened for all types of tariffs largely under the influence of a sharp increase in oil prices: €72 to households and €130 to businesses. Micro and small and medium-sized enterprises with a capacity of up to 25kVA and bakeries were granted an additional subsidy of €100/MWh, as well as a retroactive subsidy for the January-March quarter. In addition, a fuel pass was introduced for individuals with family income up to €30k, for the April-June period. The car subsidy covers 60 litres of fuel per month and equals 22 cents per litre, so for the three months it reaches €40, while for a motorcycle it totals €35. The excise duty for the diesel of farmers is expected to be refunded soon. In May and June, the average support for household electricity consumption totalled €56.6, with the aim of covering 86% of the increase in electricity costs. For professional consumers, the subsidy was set at €120/MWh. Micro and small and medium-sized enterprises, with capacity up to 35kVA, and all bakeries regardless of supply capacity, were granted an additional subsidy of €50/MWh. The subsidies for the natural gas consumption of households and non-household tariffs remained unchanged.

The total budget of the energy interventions announced in the first half of this year, which includes transfers to vulnerable social groups (low-pension beneficiaries, people with disabilities, beneficiaries of minimum income, etc.) reached €2.86 billion. Understandably, as the prices of energy products remain high, it is expected that the measures to support households and businesses will continue to be in place.

Since July, a new mechanism to compensate power plants is in place on the basis of their actual operating costs, with the aim of decoupling their compensation from the wholesale energy price, which is affected by the international gas price. The aim of this change is to recover excess revenues from electricity producers and the RES special account, which for the current half of 2022 have been estimated at €1.63 billion. Overall, together with subsidies from the budget and the Energy Transition Fund, the government has estimated that the total financial support for electricity bills in the second half of this year will be close to €3.2 billion.

The prolongation of some policy interventions due to the pandemic, and in particular the relaxation of the servicing obligations resulting therefrom, are considered to have propped up the operation of a large part of businesses in the first half of this year. However, as the interventions expire, the current costs of businesses will increase. The budget for pandemic interventions for 2022 was €3.3 billion. This does not include the measures for the Entertainment-Food services sectors that took place during the first two months of this year. However, much more important for achieving the budget's objectives is the fact that it does not include most of the measures taken so far to ease the pressure from high energy costs. As long as it is necessary to extend these measures or to take additional measures, the related costs will expand further. Therefore, expenditure on support interventions as a whole is expected to be well above the target in the 2022 budget, resulting in a significant overrun and a burden on the budget balance, as it happened in the previous two years.

In the area of monetary policy, the ECB ended the net purchases under the Pandemic Emergency Purchase Programme (PEPP) in late March. This decision was probably related to the aim to avoid "overheating" of the EU economy and to ease the inflationary pressures from the provision of excess liquidity. The same decision extended the time horizon for reinvesting the funds from the repayment of securities acquired under the PEPP scheme until at least the end of 2024. Following the conflict in Ukraine, the ECB decided in mid-March that in case of new fragmentation in the markets related to the pandemic, PEPP reinvestments can at any time be flexibly adjusted in terms of time, asset classes, and countries. The decision then concerned Greece. This flexibility could include the purchase of bonds issued by the Hellenic Republic on top of the value of the bonds reinvested at maturity, in order to avoid a disruption of markets in the country, which could negatively affect the transmission of monetary policy to the Greek economy, while it continues to recover from the effects of the pandemic. The focus on Greek government securities is estimated to be due to the fact that, due to their credit rating, which remains slightly below the investment grade, they are excluded from support through the APP. Therefore, Greece may receive additional liquidity support from the ECB than other countries under the PEPP, which strengthens confidence in the financing of the domestic economy and its prospects.

Following continued high inflation growth until May, broadening the basis of inflationary pressures, the Eurosystem experts have significantly revised upwards the baseline of their inflation projections. In line with these projections, inflation will remain at undesirably elevated levels for a certain period of time. [14] Assessing these and other developments, such as the impact of the war on Ukraine, as well as the dynamics of the euro area economy, the Governing Council of the ECB decided in early June to halt net asset purchases under the APP from 1 July 2022, at least a quarter earlier than expected. It also intends to continue to fully reinvest the amounts from the repayment of the securities acquired under the APP at maturity as long as this is necessary to maintain conditions of ample liquidity and the appropriate monetary policy stance. The most important decision taken by the Governing Council of the ECB on 9 June concerned its key interest rates. First, it announced that it would increase them by 25 basis points at the July monetary policy meeting, thus moving away from the expansionary monetary policy stance after almost three years, since September 2019. In addition, the ECB expects to increase them again in September, depending on the updated medium-term inflation outlook. The Governing Council predicts that the appropriate path will be a series of gradual but continuous further increases in interest rates. The previous decision to end the third series of targeted longer-term refinancing operations (TLTRO III) in June 2022 was not revised at the June meeting.

The ECB's recent decisions are expected to limit liquidity in the euro area. Especially for the public sector, they will contribute to the further rise in borrowing costs in place since January. As a result, the average yield on the ten-year government bond has reached since May its highest level in a decade.

In the external sector of the Greek economy, despite the strong escalation of global uncertainty from Russia's invasion of Ukraine and the current and potential effects of the war, tourism flows continued to grow and strengthen year on year in the March-May quarter. According to the latest data, the average shortfall in international arrivals at the country's airports in this period compared to their 2019 level was 9.4%, compared with an average gap of 40.2% in the previous quarter, i.e. during the winter. Indeed, in May, for the first time since the start of the pandemic, international arrivals at all airports had an increase, albeit small, compared to the corresponding period of 2019 (+3.2%, Figure 3.1). It came mainly from the regional airports, as in the same month international arrivals at AIA remained fewer compared to 2019. These trends are considered to be a clear indication of the positive momentum that tourism has developed for this summer.

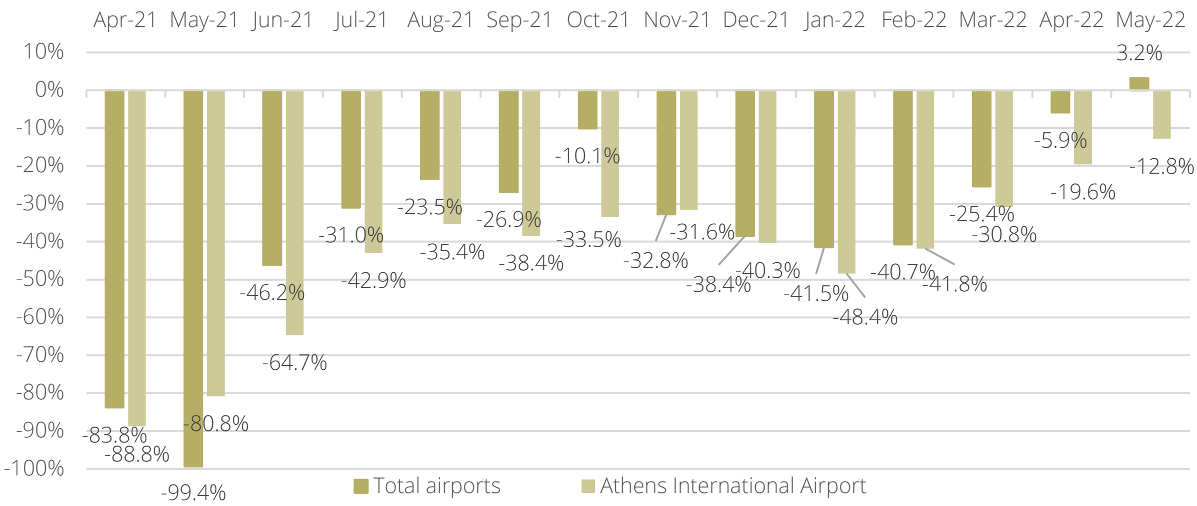
The macroeconomic forecasts are based on (alternative) assumptions for factors that are deemed to affect the underlying macroeconomic variables from a given point in time and in the medium term. The most important factors in the previous two years have been the evolution of the health crisis in Greece and internationally, especially in the Eurozone, as well as the magnitude of policy interventions to contain its impact. Following Russia's invasion of Ukraine, the evolution of the war and its geopolitical and economic effects are among the defining parameters for the course of economic activity, not only domestically but also globally. Considering that the war does not seem to end soon, coupled with escalating sanctions on and by Russia, related developments will be the most important determinants of GDP this year, and possibly in the coming year. The parameters of the forecasts include from previous years the cost of energy, which has been strongly affected by the war, as it is a key production factor for businesses, mainly in Industry, while many services used by the households rely on it. Its strong upward trend in the recent period has increased the importance and impact of energy costs on the forecasting process. An additional factor compared

[14] ECB governing council press release, 09/06/2022

to previous years for the course of economic activity in 2022 is the pace of implementation of projects under the recovery fund.

Figure 3.1

International arrivals at airports*



*Change in relation to the arrivals in the same month of 2019

Sources: Civil Aviation Authority, Athens International Airport

Therefore, the macroeconomic scenarios should take into account, in the form of relevant assumptions, possible developments in the above factors. As there might be a significant correlation between some of these factors, e.g. the evolution of the war and energy costs, their likely projected developments per scenario should be consistent. Given the above, and as half of this year has already passed, one scenario was formed for the macroeconomic developments of this year.

Under this approach for making macroeconomic forecasts, the factors whose changes are expected to affect the macroeconomic figures of the Greek economy are as follows:

Box 3.1

Factors whose changes will affect the macroeconomic forecasts

- The evolution of the war in Ukraine and its corresponding geopolitical - economic effects
- The level of policy interventions in Greece and the Eurozone to deal with the effects of the war and secondarily of the health crisis
- The fluctuation of energy prices determining inflationary pressures
- Activity in the tourism sector
- The trend of the COVID-19 pandemic in Greece and in the euro area
- The shift to less expansionary monetary policy — interest rate hikes
- The implementation of the Recovery and Resilience Plan (Greece 2.0)

Given the above parameters in the macroeconomic forecasts, the assumptions about the war relate to its duration and the extent of the sanctions to be imposed by the geopolitically warring sides, namely Russia on the one hand, and the European Union countries, the United Kingdom, the United Kingdom, the USA, Canada and some other countries on the other. As for the duration of the war, it is highly likely that it will continue for most of the second half, probably throughout its duration. This assumption was made in the baseline scenario of the previous IOBE report on the Greek economy. As a result, energy costs will remain at a particularly high level, even in the summer season, when they usually decline, while much of the energy supplies for next winter are agreed. In addition, there will continue to be significant disruptions in supply chains as it will not be possible to produce or trade, due to sanctions, certain internationally traded goods from Russia and Ukraine, in which they hold significant shares in the relevant global division of labour (e.g. raw materials, food). Obviously, these negative effects will depend on the strength of the economic sanctions. At the same time, global oil demand is up from last year, according to the International Energy Agency, while the increase in the global capacity of refineries is lagging behind the expansion of demand.[15] That said, as long as the war continues, more and more supply chains will be restructured to meet needs that before the war were served by the two countries and more broadly through networks that no longer work. The most striking example is the decision to expand Europe's supply of natural gas from the US.

As mentioned above, the better epidemiological conditions compared to previous pandemic 'waves' in terms of ICU hospitalisations and deaths allowed the gradual lifting of almost all public health protection measures. In particular, the compulsory presentation of a vaccination or disease certificate for access to indoor and outdoor spaces was abolished as of 1 May. The lifting of this measure will last until at least 31/08. At the same time, the operation of all sites at 100% of their capacity was restored for the same period. In the workplace, the minimum rate of teleworking was abolished and the mandatory rapid test for unvaccinated workers was reduced to one per week. However, teleworking is allowed, with the agreement between the employers and the employees. Regular self-testing for students and teachers was also abolished. Regarding international travel, all health restrictions on domestic and international flights have been lifted. However, the use of masks remained mandatory for indoor spaces. This protective measure was then suspended from 01/06 until at least 15/09, in the vast majority of indoor and outdoor spaces, including aeroplanes and intercity transport with numbered seats, such as trains and buses. The mask mandate was maintained in hospitals and in urban public transport (buses, metro, trolleybuses, and trams).

The limited measures to protect public health during the summer period allow the economy to function smoothly, internally and in terms of international travel. Note that the abolition of public health restrictions on international travel allows travel domestically and from residents of countries other than the European Union, the Schengen Agreement, and certain third countries, which participate in the EU Digital Covid Certificate (EUDCC). The number of these countries last April, before the lifting of the restrictions, was significantly higher than it was a year ago (37 against 21). However, since the beginning of May, travel to Greece has been allowed from all countries, which is expected to give further impetus to tourism in the country this year. Stronger positive effects than in 2021 are also expected to come from cruises. Besides, the period of their operation will be extended, which last year started on 14 May, while this year the first cruise took place on 3 April. The increase in the cost of travel brought about by the war (transport, accommodation, etc.)

[15] Oil Market Report - June 2022, International Energy Agency

through the rapid rise in energy costs, as well as the general increase in prices, will moderate the favourable effects of the mentioned developments in tourism.

Beyond the above very positive developments for economic activity during the summer months, if the trend of rising cases in the current period continues, as already pointed out, accompanied by an increase in hospitalisations and deaths, it is now possible that the measures that have been suspended and some which have been abolished will be reintroduced from autumn. However, in this case too, the imposition of generalised restrictive measures, such as in the autumn of 2020 and the winter of 2021, is not very likely, and it is now expected that they will be restored to the levels of last autumn and this winter (e.g. restrictions on the number of people indoors, mandate for vaccination/disease certificate or rapid test for entry, mandatory use of protective masks).

The extended support interventions to address significantly increased energy costs and more broadly high inflation were presented previously. They are expected to continue, probably by adding some adjustments to existing ones, as long as energy prices remain high. New interventions will largely replace last year's extensive measures, which contributed to the high pace of recovery. However, unlike the previous two years, many businesses will receive support while in operation rather than in suspension. Therefore, in addition to supporting the real income of households and their consumption, the smooth operation of businesses will be supported in the adverse conditions of war, helping them to maintain their jobs and meet their current obligations. That said, the new interventions will not affect the formation of fixed capital, as was the case in the previous two years, e.g. by accounting certain support measures in the PIP.

As estimated in previous IOBE reports on the Greek economy, the availability of investment funds from the public sector to businesses will be boosted in 2022 compared to last year mainly with resources of the European recovery fund (NextGenerationEU), primarily under its Resilience and Recovery Facility. In August 2021, €4 billion were disbursed from the fund, as an advance of the country's allocations (13% of their total). In late December, a request for payment was made for the first instalment from the recovery and resilience fund to the European Commission of €3.56 billion. In the same period, operational agreements were signed between the Ministry of Finance and six credit institutions to utilise part of the recovery fund's loan resources, amounting to €970 million. At the beginning of April, the European Commission disbursed the first tranche, with Greece becoming the third country to receive it. About 230 projects were progressively integrated into the recovery fund, with a budget of €10.2 billion. In mid-June, a guarantee programme was announced for the provision of working capital and investment loans to small and medium-sized enterprises, starting from 2023, totalling €2.5 billion, with the assistance of funds from the Invest EU fund and €500 million from national resources.

The budget projection for grants in 2022 totals €3.2 billion. In the first five months of the year, there was a significant shortfall from the target, with grants not exceeding €35 million, against a target of €436 million. This is largely due to the disbursement of the first tranche from the recovery and resilience fund in April, later than expected when the budget was drawn up. A shortfall is likely to occur on the revenue side, following the delay in the disbursement of the first tranche. If it happens, it will affect RRF funding next year, as the funds from the advance and the first tranche are sufficient to meet the objectives for grants and loans this year.

Regarding the expected developments in the prices of energy products internationally, in addition to the possible effects of the war on Russia's exports, they will depend on the actions of the remaining producer countries. According to the latest reports, the average global daily demand this year will be 1.8 million barrels higher than last year, approaching 100 million barrels per day (99.4 million).[16] On the demand side, at the beginning of March, members of the International Energy Organisation (IEA), including the United States, decided to release 60 million barrels from their strategic reserves totalling 1.5 billion barrels. One month later, the members of the IEA decided to release a further quantity of their strategic stocks, without specifying the amount in their decision. In its latest report, the IEA forecasts an average of 1.9 million barrels of daily production from non-OPEC+ countries this year, and a continuation of the increase in 2023 to 1.8 million barrels per day.[17] However, one million barrels per day will come from the United States, following the government's decision at the end of March to release that quantity over the next six months. The broader goal of the U.S. administration is to increase production by the country's oil companies, which will lead to a drop in gasoline prices in the U.S. below $4.0 per gallon, with the average price at this time significantly higher in the $5.0 region.

Despite the unprecedented in decades for Europe geopolitical developments and their strong existing and potential effects on energy supply and prices, the OPEC+ member countries decided in early March to continue the moderate expansion of their daily production in April by 400k barrels. In March, the production of the cartel expanded by only 57k barrels per day, which was well below the target of an increase of 253k barrels. For May, the target set was at 432k barrels per day, but it was still not achieved due to a 900k barrels drop in production in Russia, resulting in the cartel's total production dropping by 1.06 million barrels per day. The downward trend continued in May, at a milder pace as daily production declined further, by 390k barrels. For June, the production target was set again at 432k barrels, while the targets for July and August were revised strongly up to 648k barrels. In view of the significant shortfalls over the previous months, the achievement of the targets for the next few months is particularly uncertain. Even if they are achieved, the OPEC+ countries' daily output at the end of the eight months of 2022 compared to the beginning of the year will be at 39.3 million barrels, lagging extensively behind the target of increase by approximately 2.35 million barrels. This shortfall in supply is partly offset by the higher output in non-OPEC+ countries mentioned above, yet the higher year-on-year demand for oil does not appear to be met this year. The current deficit is likely to expand by the implementation of the May EU summit decision to gradually reduce the EU's dependence on Russian oil by 90% by the end of 2022. Therefore, as long as the war continues and OPEC+ countries are not rapidly expanding their production, oil prices are not expected to decline significantly.

The current high oil prices are affecting demand and economic recovery. That said, economic activity in developed countries will be boosted for the third consecutive year by government interventions supporting businesses and households. After two years of pandemic conditions, the developing economies have little potential to react to a new crisis, of energy this time. As a result, the intensity of the recovery will differ significantly across the world regions and will overall be weaker than anticipated before the geopolitical turmoil. Based on the latest IMF forecast, the recovery rate this year will average 3.6% in the developed countries and will be marginally higher

[16] Oil Market Report, - June 2022, International Energy Agency
[17] Oil Market Report, - June 2022, International Energy Agency

(3.8%) in the emerging-developing countries, with the revision of the pre-war forecasts higher in the latter group of countries (-1.0 against -0.8 percentage points of GDP).[18]

Taking into account the above, in the macroeconomic scenario for the second half of this year, in which the war will continue at least for most of its duration, with a possible new outbreak of the pandemic by the end of summer, the price of oil is projected to increase on average this year by around 50-55%.

The assumptions of the 2022 forecast scenario were formed taking into account recent developments in the war in Ukraine and their impact, notably the sharp increase in the prices of energy products and certain raw materials, the lack of negotiations, but also the budgetary interventions to halt these effects, the dynamics of the COVID-19 pandemic in Greece and internationally, and the progress in implementing the resilience and recovery plan. In particular, the war, as mentioned above, is expected to continue for most of the duration of the current half of the year, while it is likely not to end this year. Energy costs will then remain at particularly high levels for a long time, from escalating sanctions, a general reluctance to import from Russia, and the inability of energy supply chains to adapt quickly to such a major disruption. The price of Brent oil is expected to be on average higher by about 50-55% than last year. In response to this price dynamics, extensive measures will be implemented to subsidise energy consumption and support the income of households and businesses, propping up economic activity. However, the support for demand through fiscal interventions will result in inflation on average reaching levels not seen in many years.

On the health issue, a new significant outbreak of the pandemic is likely from the end of the summer or in early autumn. However, no generalised restrictive measures are expected, while many of the restrictions that were in place last autumn and this winter may be gradually reintroduced by the end of summer. The strong positive trend in international tourism in the March-May quarter this year reflects, first, the early start of the tourist season, as predicted in previous IOBE reports on the Greek economy, and second, a strong recovery momentum. In view of this, revenues from international tourism services are likely to increase significantly compared to 2021, reaching about 90% of their 2019 level, taking also into account their nominal growth due to inflation. The war will have a significant impact on the recovery in the euro area, which is expected to be 1.0 to 1.5 percentage points lower than the Commission's most recent pre-war forecast[19] of 2.5-3.0% growth. As regards the utilisation of the RRF, the target set in the budget for 2022 (subsidies of €3.4 billion, loans of €1.85 billion) is projected to be achieved and projects already included in the Recovery Fund are expected to be implemented to a large extent, leading to the achievement of the relevant targets for expenditure (€3.2 billion) and lending (€586 million), yet with a more backloaded allocation within the year compared to the initial planning. That said, a gradual increase in the interest rates, after two years of historically low levels, will discourage the taking of investment risk by a part of planned or future investments.

Moving on to developments in funding that can play a key role in investment activity, the domestic banks have made particular use of the possibilities offered by the ECB to raise liquidity in response to the exceptional circumstances of the pandemic. In the context of the Pandemic Emergency

[18] World Economic Outlook, IMF, April 2022

[19] European Economic Forecast, winter 2022, European Commission, February 2022

Purchase Programme, by the end of March, when net purchases of securities from all countries under this programme were ended, the ECB had purchased securities worth €1.72 billion in total since the start of the programme, falling short of the planned total "envelope" of market interventions of €1.85 trillion. The net purchases from Greece, in particular, reached €38.7 billion at the end of March. Recall that the reinvestment of funds from the repayment of securities at maturity has been extended under the PEPP until at least the end of 2024.

Other liquidity facilities by the ECB to contain the impact of the pandemic include the non-targeted pandemic emergency longer-term refinancing operations (PELTRO). In addition, the terms of the targeted longer-term refinancing operations (TLTRO III) gradually eased, resulting in the eligible loans of Greek banks from the programme to reach €92 billion, while their borrowing limit gradually increased from 30% to 55%. Against this background of financing possibilities, the liquidity that Greek banks raised from the Eurosystem, with the exception of the PEPP, reached €38.5 billion in the period April 2020-February 2022, totalling €50.84 billion at its end. Since then and until at least April 2022, the raised liquidity has remained unchanged. Therefore, the availability of funds of the banking system raised from the ECB, among other objectives, to provide financing to enterprises, is high and has been extended significantly in the recent period. The use of these resources can be crucial for the Greek economy to exit the pandemic at a steady, significant pace of recovery.

The possibility of granting loans has been supported since the beginning of 2019 by the continued growth of private sector deposits (households and non-financial corporations), at a high pace. Following their expansion in 2020 on average by 9.7% or €13.0 billion, private deposits rose faster last year, at an average annual rate of 13.0% or by €19.3 billion. In the recent period of March-April, the expansion of deposits slowed to 7.0% or €11.8 billion, compared to 9.9% or €15.8 billion in the preceding December-February quarter. The new increase came mainly from higher household deposits, by €6.4 billion (+4.9% year on year), while businesses contributed €4.85 billion (+14.5%).

While the ample liquidity from the ECB, the strong positive trend in private deposits over the past two years, as well as the activation of the loan arm of the recovery fund, are conducive to credit growth by the banks this year, there are also some factors that mitigate this momentum. The most important impediments are the suspension of payments of bank loan instalments until the end of 2021 and the continued subsidy in the first quarter of 2022 of a percentage of the loan instalment (GEFYRA II programme), which mask the real dynamics in non-performing loans (NPLs). Moreover, the very strong inflationary pressures following the war in Ukraine and the uncertainty it causes about developments in the global economy are expected to lead households and businesses to use part of their deposits, mainly to cover their current expenses, resulting in the reduction of available investment resources. According to the Bank of Greece's Financial Stability Review, the balance of non-performing loans under legal protection in December 2021 was €1.4 billion, or 4.9% of NPLs on the balance sheet of the banks. [20] In the same report, the Bank expressed the view that some of the supported loans (e.g. through programmes such as GEFYRA) are likely to be recorded as NPLs when the facility expires.

The resurgence of uncertainty due to the war in Ukraine is also included in the causes that will weaken the demand for capital from businesses and households, compared to its expected level

[20] Monetary Policy Interim Report 2021, Bank of Greece, December 2021

before the war. The gradual increase in the borrowing interest rates by the ECB from July, which most likely will continue in September, in order to mitigate the inflationary pressures, will also dampen the demand for loans. That said, a sustained, vigorous recovery in some sectors will stimulate demand for bank credit. For example, in Industry, the production index rose sharply last year, on average by 9.9%, after a much milder decline in 2020 (-2.0%). This trend is related to strong growth in the exports of goods, with the increase in non-petroleum products in 2021 reaching 28.0%, highlighting the high competitiveness of certain industrial sectors and facilitating their financing. The recovery of a significant part of the 2020 losses in Tourism in some regions will also contribute to a greater demand for investment funds from the banking system.

With regard to the development of non-performing loans (NPLs), the latest data refer to the first quarter of 2022. On this basis, after their sharp decline in 2021, their quarter-on-quarter decline in the first quarter of this year was marginal, by just €0.56 million, to €19.4 billion or 11.6% of total loans. A year earlier they had reached €57.9 billion or 32.9% of total loans. The small contraction of NPLs in the January — March quarter came mainly from business loans (-€0.49 million or -3.5%), followed by mortgages (-€0.1 million or -3.1%), while the non-performing consumer loans marginally increased (+€0.032 million or +1.8%). As a result, the level of NPLs reached around €100.5 billion or 84.2% below their March 2016 peak.

The NPLs in the January-March quarter remained thus well below the revised target for the end of 2021 (below 20% of loans). However, note once again that, in addition to the outcome of their management, their reduction since the second quarter of 2020 has also come from borrower support interventions. As these expired at the beginning of 2022, the non-performing loans are quite likely to increase within the year. The possible expansion of NPLs highlights the need to make immediate use of all possibilities for their reduction. It should be noted that the current, second phase of the Hercules programme ends in October, thus a new, third phase of the programme is necessary to complete the reduction of NPLs to the desired level.

In the recent period, not much has been done by banking institutions to further reduce NPLs. At the end of June, the deadline for submitting binding offers for the Ariadne portfolio was postponed to 12 July. The portfolio includes non-performing loans with a gross carrying amount of €5.2 billion from banks in special liquidation, with the resulting total claims amounting to almost €14 billion for business, consumer and mortgage loans, the vast majority of which have real estate as collateral. Two investment schemes have passed to the current phase, Ellington and the consortium comprising Bain, Fortress, Davidson Kempner, doValue and Cepal. The Hellenic Bank announced in early April that it has agreed to sell a portfolio of non-performing loans worth approximately €1.32 billion (Starlight portfolio), as well as the platform of APS Debt Servicing Cyprus Ltd ("APS Debt Servicer") to Oxalis Holding S.A.R.L. The transaction is expected to be completed by the end of 2022. Piraeus Bank is expected to proceed with two small-scale securitisations and sales of individual corporate loans, which will reduce the stock of NPEs by around €1.45 billion. Of these, the Sunrise III securitisation, which includes non-performing exposures with a gross carrying amount of approximately €820 million, was expected to be completed in the second quarter of the current financial year. The joint securitisation Solar of Alpha Bank and Eurobank, which includes non-performing exposures from syndicated loans, is expected to be completed towards the end of 2022. Piraeus accounts for loans with a gross book value of €472 million. Finally, the stock of NPLs is reduced by approximately €800 million through organic actions. The process of securitisation of the Frontier II portfolio, with a €0.9 billion loan component, is underway and is expected to be completed in the first half of this year. As far as Alpha Bank is concerned, a binding agreement with Cerberus for the sale of NPLs and real estate in Cyprus with a gross book value of approximately €2.4 billion (project Sky) was signed in mid-February. This portfolio consists of two parts. The first part includes large corporate loans with a gross book value of approximately €0.9 billion. The second includes loans with a gross book value of approximately €1.3 billion. However, this sale has not yet been completed.

In light of the favourable developments for the accumulation of capital from the banking system mentioned above, i.e. the provision of ample liquidity by the ECB due to the pandemic, as well as the strong positive trend in private deposits over the past three years, the supply of bank credit to non-financial corporations has continued to expand. However, its pace weakened sharply in January-September last year and has since been well below that recorded in early 2021. In particular, credit growth stood at 4.7% in the recent two months of March-April 2022, compared with 7.7% a year earlier. Over the same period, the average rate of credit contraction to households eased slightly compared to a year ago (-2.1% from -2.6%). The private sector as a whole saw credit growth in the recent period March-April at an average rate of 1.7%, compared with 2.4% in the same period a year earlier and 0.6% in the first quarter of this year.

The rate of expansion and its slowdown was stronger for non-financial corporations compared to bank financing overall in the economy, as it expanded in the two months of March-April much faster, by 8.4%, from 10.2% a year ago. The significantly lower credit growth in the business sector is mainly related to continued extensive lending to the General Government, with an average growth rate of 22.4% in the recent two months. Although this is particularly high, it is much lower than a year ago when it had reached its highest level in at least 23 years (79.9%). Therefore, the interconnection of the banking system with the government continues to tighten, as noted in a recent report of the Bank of Greece.[21] This continuing trend since the beginning of the pandemic creates uncertainty about the financing priorities of the banks and, more broadly, whether the significant additional liquidity of the last two years is used for productive purposes. The slowdown of credit growth to the business sector is also due to the absence of emergency liquidity programmes to address the effects of the pandemic.

The provision of liquidity to businesses continued to take place on particularly favourable terms at the start of the war in Ukraine, before the announcement of the increase in interest rates by the ECB. The average interest rate for new fixed-term loans to non-financial corporations stood at 3.17% in March-April, higher than in the previous quarter (2.75%), when it was close to a historical low since at least 2010 (2.64%). The average interest rate of the same category of new loans, but to freelancers, was slightly higher quarter-on-quarter, at 5.14% from 4.78%, a short distance from its level a year ago (4.91%). In new consumer loans to households, the corresponding average interest rate stood at 10.14%, lower than a quarter ago (10.57%), but higher than last year (9.24%). Unlike interest rates on loans to non-financial corporations and freelancers, current levels for households are among the highest since the second quarter of 2003, i.e. in the last 19-year period. Following the forthcoming hikes in intervention rates by the ECB mentioned above, a similar trend is expected in lending rates at home. Given this, the current financing conditions for businesses can be considered beneficial.

[21] Governor's Annual Report 2021, Bank of Greece, April 2022

The low interest rates for bank lending by companies and the self-employed are also related to the strong reduction of the Greek government borrowing rates. As stated in previous IOBE reports, this trend is due to the evolution of Greece's creditworthiness and to the ECB's exceptional monetary policy measures in response to the pandemic. In light of these effects and the easing of the pandemic last summer, the 10-year bond rate reached a historic low in August 2021 (0.59 %). At the end of September last year, Moody's did not change Greece's credit rating (Ba3). The rating agency estimated in the same report that the return of the country to significant primary surpluses would significantly reduce the debt burden, although even after the fiscal normalisation it will remain high. However, it did not issue as planned a report on Greek debt in November. This January, Fitch maintained last year's BB rating, upgrading the country's outlook to positive from stable. This opens the way for an upgrade to BB+, i.e. one notch below the investment grade. In April, the day after the first release of fiscal data for 2021, Standard & Poor's became the first to assess the Greek economy's creditworthiness at BB+, with a stable outlook. The upgrade reflects the company's expectation that the effectiveness of the policies pursued in Greece will continue to improve, while the impact of the war on Ukraine is considered manageable, thanks to significant security reserves in both the private and public sectors.

Despite these clearly positive developments, there is a continuous rise in the yield of the 10-year Greek government bond in the period September 2021-April 2022, strengthening between January and the start of the war in Ukraine. Cumulatively it reached 230 basis points, reaching 2.89%, its highest level in 34 months. At the same time, the corresponding yield on the German bonds rose by 128 basis points to 0.75%. Subsequently, the spread with the Greek bond expanded by 102 points in this eight-month period, reaching 215 points. Under these trends in the yield and developments in its credit rating, in the first half of 2022 the Greek government issued a ten-year bond and reissued a seven-year bond. The first issue was held in January, at a rate significantly higher than that of the previous issue of the same maturity in June, at 1.84% from 0.88%. The issue raised €3 billion, the vast majority from foreign investors (84.5%), with total bids reaching €15 billion. The second issue took place in late April, following the assessment of S & P. It raised €1.5 billion, with an interest rate of 2.5%, and bids reaching €4.8 billion, reflecting the confidence in the medium-term prospects of the Greek economy.

In the current period, the yield of Greek government bonds varies in the area of 3.7-3.8%. Its level makes it difficult to meet the Greek government's target borrowing of €12 billion from the markets in 2022. Under these unfavourable conditions in the capital markets, it is possible that part of the cash reserve that the Greek State has gradually developed since 2018 for the possibility of difficulties in accessing capital markets in the post-adjustment period will be utilised. The 2022 Stability Programme states that maintaining the high level of the cash buffer, at almost €38 billion at the end of March 2022, contributes substantially to low financing costs and ensures the fulfilment of medium-term debt obligations, while over the coming years, cash reserves will gradually decrease with a view to repaying the remaining government debt.[22] Therefore, the cash reserve will gradually be used to refinance public debt.

In any case, recall that in previous IOBE reports on the Greek economy, it was repeatedly pointed out that the financing conditions internationally could change and deteriorate, especially when the exceptional liquidity support interventions by the major central banks worldwide would expire or

[22] Stability Programme 2022, Ministry of Finance, April 2022

be greatly reduced. This dynamic appeared in the financing of the Greek state before the war in Ukraine, with the rise of interest rates.

Despite the slowdown in credit growth to businesses, the ECB's financing facilities, the prolonged rapid expansion of deposits and the start-up of the recovery fund's loan arm are projected to contribute to the continuation of credit growth this year, albeit at a low pace. Regarding the impact of the latter factor, reference is made to the operational agreements concluded in December 2021 between the Ministry of Finance and six credit institutions for the utilisation of the fund's loan resources amounting to €970 million. Credit institutions have made public calls for expressions of interest to investors wishing to receive loans from "Greece 2.0" for the implementation of their projects. According to the 2022 budget, a venture capital fund will be set up under the Hellenic Development Bank (HDB), such as Equifund, created by the Greek State and the European Investment Fund (EIF). The extensive restriction of NPLs provides significant degrees of freedom for banks to provide credit this year and in the coming years. Note that the lending resources that have so far been allocated to the banking institutions are those raised last year. This year, additional €1.85 billion are planned to be raised, allowing for more bank credit from domestic and international credit institutions (European Investment Bank, European Bank for Reconstruction and Development), this year and in the coming years.

While these favourable developments are taking place, creating positive prospects for the supply of credit, financing barriers remain on the side of businesses and households. These relate to their existing debt obligations, in particular their arrears. Most important is the fact that access to bank financing, i.e. positive assessment by banks, is a prerequisite across Europe for the inclusion of SMEs in the recovery fund programmes. This financing clause excludes from new resources the highly indebted enterprises domestically. As part of the efforts to address this issue, incentives for mergers and acquisitions of enterprises have been designed, as such corporate transformations between SMEs are included in the five eligibility criteria for accessing the recovery fund loans (draft law on business development initiatives through partnerships and corporate transformations). The war in Ukraine and its impact on energy costs have made some businesses reluctant to implement investment plans. Thus, they are expected to maintain a waiting stance until a ceasefire agreement becomes possible.

Especially for larger non-financial corporations, the possibilities of access to finance outside the banking system, i.e. from the capital markets, and more broadly their prospects, had improved before the war, based on the evolution of the Composite Index (CI) of the Athens Stock Exchange. From mid-April to early January this year, the index fluctuated, with minor corrections, around 900 points, periodically approaching the pre-pandemic area of 920 points. In fact, from mid-January to the beginning of the war, the CI was even higher at 950 points, reaching up to 971,05 points. The conflict dramatically overturned this positive momentum, with the Composite Index dropping by 160 points or 16.9 %, to 789.7 points, from 24 February to 8 March, reaching its lowest level since mid-February 2021. Since then, with the exception of the penultimate week of March, the CI has grown continuously until 20 April, thus recovering all its losses due to the war, reaching 950 units on 21 April. However, in the following period, it lost around 100 units within two weeks due to the worsening international climate from the war, a level around which it fluctuated over the next two weeks. In late May and early June, the CI recovered to 900 units. From this level, it fell following the ECB's announcement of upcoming changes in monetary policy, which primarily affect banks, through rising interest rates and discontinuing bond repurchases from July, falling slightly lower than at the beginning of May in the area of 820-840 points. Since then and until the end of June, the index has fluctuated around these values.

The presented large fluctuations in the Composite Index highlight the remaining strong uncertainty about the effects of the war on energy supply, prices, and investment, mainly at the European level, and the impact they will have on businesses and the economy in Greece in general. As long as the uncertainty surrounding these issues persists, especially until alternatives to Russia's sources of energy supply that Europe needs are secured, stock indexes will be prone to strong fluctuations, mainly from adverse developments in the war and its negotiations. Confidence in the prospects of the Greek economy could be strengthened in the current period by the implementation of the investments and reforms of the recovery fund.

The investor confidence in the medium-term prospects of the largest companies in Greece was reflected before the war in corporate bond issuance activity, which had escalated towards the end of 2021. In September, Eurobank issued a 6.5-year bond of €500 million and a yield of 2.375%, with bids reaching €825 million. In the middle of the same month, Alpha Bank issued a senior preferred bond of €500 million. The interest rate was set at 2.625%, with bids exceeding €1 billion. This was the first issue of such a security by a systemic bank since June 2014, with the aim of meeting the minimum requirements for equity and eligible liabilities (MREL). In mid-November, ELVAL-HALCOR issued a bond of €250 million, with a final yield of 2.45%, which was oversubscribed 2.94 times. In early December, Noval Property's green bond was launched, which raised €120 million at an interest rate of 2.65%, while the issue was over-subscribed 2.8 times. During the same period, Alpha Bank issued a new senior preferred bond of €300 million, with a two-year maturity, a non-call for the first year, and a 3% coupon rate. At the same time, the same amount was raised by GEK-TERNA, with a seven-year bond, yielding 2.3% and 2.3 times oversubscription. No bond issues had taken place in early 2022, before the invasion of Ukraine. This activity remains particularly low during the war, not only because of concerns about the medium-term prospects of the domestic and European economies, but also because interest rates have risen, limiting the ability of companies to raise capital on terms that favour the profitability of their investments, the refinancing of their debts, etc. Recent ECB decisions to tighten monetary policy by raising interest rates are expected to be an additional deterrent at least in the coming period. Recently, at the beginning of June, Eurobank completed the issuance of a senior preferred bond of €500 million, which matures on 9 March 2025, with a yield of 4.375%. About 52% of the issue was bought by foreign investors.

As regards funding opportunities for companies from the public sector, data on the European recovery fund, which will be the most important additional source of investment funds this year and in the coming years, were presented previously in the current subsection. As the rate of allocation of RRF funds is among the factors influencing the macroeconomic scenario for 2022, if the funding under it, in grants and loans, is close to the budget targets for this year, this will contribute to its realisation. Otherwise, their boost to investment will be lower.

As regards the regular state financing of investments by the Greek State, through the Public Investment Programme, for 2022, the preliminary draft state budget earmarked €7.8 billion through the PIP. They did not include emergency interventions due to the health crisis. With the additional budget tabled at the beginning of April, the grants foreseen through the co-financed part of the PIP were raised by €600 million, so its budget totalled €8.4 billion. In the first four months of this year, support through the programme reached €3.15 billion, while excluding pandemic interventions, it amounted to €2.88 billion. This level is much higher compared to last year, when the PIP expenditure mainly concerned anti-pandemic measures (€2.1 billion out of €3.56 billion) and compared to the expenditure target for the two-month period (€2.37 billion). These spending trends are seen as signs of widening support for investment activity from the PIP compared to 2021, when the programme grants totalled €5.8 billion.

As anticipated in IOBE's reports on the Greek economy during 2021, the implementation of the privatisation programme last year, for another year, lagged behind the target, due to the unfavourable investment environment. In the 2021 State Budget introductory report, the privatisation revenue target was set at €1.79 billion. The strong uncertainty about the pandemic dynamics in most of the first half of 2021 had a negative impact on HRADF's activity and investment interest. However, significant tendering procedures were completed during the second half of the year (Egnatia Odos, DEPA Infrastructure) and their pre-contractual audit by the Court of Auditors is pending. In addition, the tenders for the concession of the Kalamaria marina, the ports of Alexandroupolis and Kavala, the area of the natural gas field "South Kavala", the Igoumenitsa Port Authority, the Heraklion Port Authority and the Pylos Marina were launched last year or continued from previous years.

Although several tender procedures are ongoing and two particularly important (Egnatia Odos, DEPA Infrastructure) have been completed, the proceeds from privatisations made last year are those from Hellinikon SA, Golf-North Afantou, and the granting of rights of use for radio frequencies. The 2022 Budget mentioned that they reached €625.7 million, accounting for 42.6% of the target. That said, as the procedures required for the formal completion of the tenders for Egnatia Odos and DEPA Infrastructure will be completed this year, the corresponding payments will also be collected in the current year. These are the most important components of the 2022 privatisation revenue target of €2.151 million (91.7% of the target). Another €178.7 million will come from revenues and tranches of completed transactions of previous years, with the second part of the payment from the sale and transfer of Hellinikon S.A. (€167 million) making the largest contribution. As the expected revenue comes almost exclusively from completed deals, the revenue target for the current year is considered quite likely to be achieved. Given the number of ongoing proceedings since last year, coupled with some new ones planned for this year, it is considered that the target should have been higher.

Regarding the recent work of HRADF, the tender procedure for the new concession of Attiki Odos began at the end of January, for 25 years, and four months later, it was announced that eight investment schemes had expressed interest. In mid-March there was an expression of interest from an investment scheme for the concession of the Itea Marina, while in early April eight investment schemes were selected for the next phase for the utilisation of the Heraklion Port Authority. In mid-April, the tender for the concession of the Kalamaria marina was cancelled. In early May, "International Port Investments Kavala" became the preferred investor for the sub-concession of the port "Philippos II" in Kavala. The financial component of the sub-concession amounts to approximately €33.9 million and the tender file is under pre-contractual audit. At the end of June, it was announced that four investment schemes had submitted an expression of interest for the mega yacht marina in Corfu. Therefore, HRADF's revenue in the first half for yet another year is very limited. However, there is a potential for a significant increase in the rest of

2022, primarily from the formal completion of the tenders for Egnatia Odos and DEPA Infrastructure.

In the external sector of the Greek economy, its operation, as well as of most economies, at the beginning of 2022, without prohibitions and restrictions, on businesses and movements of people, unlike a year earlier, favoured mainly the imports of goods and services and significantly less the exports of goods and services. The continued recovery at a high rate in the fourth quarter of last year and the first quarter of this year, which boosted consumer demand, contributed to the strengthening of imports too. The effect of fuel prices is strong on both sides of the goods account, but it is not the highest among its components. Previously in the current subsection, available data on international tourism flows for the first five months of this year were presented, showing signs of continued strong growth compared to a year earlier, despite the war in Ukraine. In addition, they appear likely to come close to their 2019 level. However, the dynamics of the exports of transport services, the expansion of which is strongly favoured by the absence of restrictive measures this year, and the turmoil in international supply chains by the war in Ukraine, are more decisive for the trend in the services account.

In detail regarding the recent developments in export and import flows of key categories of products and services, according to the latest available balance of payments data of the Bank of Greece, the exports of goods, at current prices, continued to expand strongly in the February-April quarter, by 30.4% (+€2.8 billion), slightly milder than in the November-January period (+38.8%). The increase came for another quarter mainly (56.8%) from exports excluding fuels and ships, up by 22.9% (+€1.6 billion), slightly milder than a quarter earlier (+30.4%). Almost all of the remaining expansion of the exports of goods (42.9%) came from much higher fuel exports (+54.0% or +1.2 billion), mainly due to a large increase in their international prices. However, their rise was milder than in the previous pre-war quarter (+72.1%). The exports of ships, whose weight in total exports of goods is very small, widened by €5.9 million or 26.6%, as opposed to a drop of 1.3% a quarter earlier. Therefore, the particularly significant increase in the exports of goods did not mainly stem from higher prices of energy goods. Despite strong growth in the exports of goods, the stronger boost of imports in February-April (+41.6% or +€6.08 billion), which came primarily (52.0%) from higher imports of goods excluding fuels and ships (+27.5% or +€3.16 billion), and secondarily from imports of fuels (+94.3% or +€2.91 billion), led to a widening of the goods deficit compared to a year earlier by 60.8% or €3.28 billion, to €8.67 billion. This growth was lower than in the November-January quarter (+88.6%).

The widening of the deficit in the goods account in February-April was moderated to a small extent by the widening of the surplus in the services account. The exports of services were up by 47.6% year on year (+€2.53 billion), after a stronger expansion (61.7%) in the previous November-January quarter. Their rise came mainly (63.1%) from the provision of transport services (+€1.6 billion or +41.1%), from stronger growth a quarter earlier (+ 67.8%). Note that the transport receipts during this period significantly exceeded their 2019 level (+40.0%). Travel services contributed 34.4% to the increase in the exports of services, as they widened sharply, by €845.8 million (+646.5%), as strong restrictions on international passenger transport were imposed in the same period a year earlier. In addition, they were 7.8% below their 2019 level. Other services had the lowest share of the growth in the exports of services, amounting to €88.1 million (+6.8%), much less than a quarter earlier (+19.8%).

The demand for imported services also strengthened in the February-April quarter of this year, with less intensity in both relative (+39.5%) and absolute (+€1.79 billion) terms than in the exports of services. In addition, their growth was milder than in the previous quarter (+64.5%). The increase came mainly (78.5%) from higher domestic demand for transport (+46.5% or +€1.4 billion), with tourism services coming next (16.2%) as the restrictive measures from a year ago were no longer present (+254.6% or +€290.4 million). Domestic demand for other services increased slightly (+€94.2 million or +6.7%), less than a quarter earlier (+12.3%). As a result of the changes in the two main components of the services account in the February-April quarter, its surplus expanded sharply, by 95.1% or by €739.0 million, reaching €1.52 billion. Overall, the deficit of the total balance of goods and services over that period increased by 55.0% or €2.54 billion, reaching €7.15 billion.

With regard to the most recent trends in economic activity segments domestically, as well as in short-term economic indicators, at the end of the first and the beginning of the second quarter of 2022, following the outbreak of the war in Ukraine, most positive trends on the production side slowed down. In detail, on the supply side of the economy, the growth of industrial production weakened to 1.7% in March-April, from 2.3% in the previous quarter and after a strong increase of 13.7% a year earlier, during the exit from the last lockdown. At the level of key industrial sectors, the slowdown came mainly from Manufacturing, where the growth rate fell from 5.0% to 1.9%, and secondarily from Mining-Quarrying, the weight of which is much lower in industrial production and where the already large decline intensified, to 18.2% in the recent two months from 12.6% at the beginning of the year. The trend in Water supply changed from marginally positive (1.0 %) to mildly negative (-2.3 %). Electricity generation was the only industrial sector where the production trend improved, from -5.4% to +3.8%. The strong positive trends in international arrivals at airports, which in May exceeded those of 2019, as well as in receipts from international tourism, which highlight the strong growth in activity in the second quarter in this sector, were already mentioned earlier.[23]

Taking into account, for the macroeconomic forecasts, recent and possible developments related to the war in Ukraine and its impact, such as the continued strong price rise in energy products, which has spread to other products (e.g. food-drinks, accommodation-food services), the weaker recovery of the global economy, as well as the extensive fiscal interventions to contain these effects, the dynamics of the COVID-19 pandemic, the much larger than expected strengthening of international tourism, as well as the gradual increase in intervention rates in the near future, it is expected that should the pandemic escalate again significantly, e.g. by the end of the summer, the restrictions will be similar as those implemented in the spring, thus strong restrictive measures will not be reintroduced. Therefore, the operation of sectors suspended in previous years with a significant share of private consumption (Retail Trade, Tourism, Food Services, Arts and Entertainment, Transport, etc.) will not be interrupted again, contributing to its growth. Household consumption will also be boosted by the expansion of employment in these sectors compared to a year earlier, especially in Tourism, due to the strong growth of its activity from international tourism. Jobs will also be created by higher investment, e.g. in industries with high export performance, also in Tourism, as well as by the greater contribution of the public sector to investment activity (expansion of the PIP, the recovery fund). Household consumption expenditure will continue to be supported by the rather high savings during the pandemic.

[23] During the preparation of the report, building activity data were not available for March, as the publication of the relevant bulletin scheduled for the end of June was postponed.

Having said that, the expansion of household consumption spending will be curbed by exceptionally high inflation, primarily due to the war in Ukraine, but also the ongoing significant recovery of the global economy, albeit at a milder pace than expected before the Russian invasion. Inflationary pressures on consumption will be mitigated by household support interventions (subsidy for electricity, gas, and petrol consumption, higher heating allowance, extraordinary transfers to vulnerable social groups, etc.). As there are no developments or indications that the war will end in the coming period, while sanctions are constantly escalating, it is now considered likely that the measures will be maintained for the remainder of 2022, with adjustments and additions, largely replenishing the emergency support measures due to the pandemic over the previous two years. As these measures support demand, they also sustain part of the strong inflation. Should the war spread to other countries, interventions to support households and businesses are also expected at the European level. Nevertheless, the impact on economic activity and employment will be stronger, coming also from a deterioration in expectations. The real disposable income of a part of the population will be strengthened by the middle of the year by the minimum wage increase. As a result of these effects on employment, disposable real income, and consumer confidence, household consumption is expected to expand in the baseline macroeconomic forecast scenario by 3.0% to 4.0%. In 2023, the stronger investment activity, from the acceleration of the implementation of the recovery fund and investments in major concluded concessions-privatisations (Hellinikon, AIA, DEPA Infrastructure), the positive effects of the extended, much stronger tourist season this year, in an environment without additional challenges from the war in Ukraine, will allow for a new expansion of private consumption, slightly milder than this year, as no additional support measures are expected compared to 2022.

On the side of public sector consumption, as already mentioned, the war necessitates the implementation of support measures against the energy crisis throughout this year. As some indicators of the pandemic remained at a relatively high level (intubations, cases) in the first four months of this year, possibly also in the last quarter of 2022, a large part of the relevant needs in materials and equipment will be maintained. An expansion of public sector employment is planned for this year, with 20.6k recruitments and appointments. According to the introductory report of the 2022 Budget, due to the high number of exits from the Ministry of Health in 2020-2022, recruitment in this ministry will account for 29% of the total for the public sector this year. Next in terms of planned hiring come military schools (12%), other central administration bodies (10%), and professional soldiers (8%). Especially in the first half of the year, staff costs will be boosted by the recruitment of 11.7k primary and secondary teachers in the third quarter of last year. The employment boost and the extensive war-related support interventions will moderate the reduction in public spending compared to 2021, resulting in a decline in the region of 1.0-2.0%. After three years of high extraordinary spending by the public sector to address the impact of strong global crises (health, energy), a mild reduction in public consumption is expected in 2023. The election cycle will also prevent a more substantial reduction.

With regard to the expected developments in the field of investment, the fact that the war in Ukraine has continued for four months, without indications that it will come to an end soon, in combination with the successive packages of sanctions imposed, mainly on trade in energy products, has altered some of the key investment parameters, probably in the medium-to-long term. Clearly, these relate to the energy costs and the prices of certain other raw materials which came to a significant extent from Russia and Ukraine, the increase of which has a significant impact on operating costs and subsequently on the profit margin of businesses. Moreover, the disruptions caused in the value chains involving Greek companies, as well as companies from other EU countries that receive supplies from Greek companies, change the prospects of businesses and investment, in a way and to an extent, which is premature to assess. Of course, it is possible that such developments will strengthen the role of certain domestic companies with competitive advantages in activities dominated in the past by Russian companies. The exceptionally high and rising inflation due to increased energy costs and their adverse effects has triggered a gradual increase in intervention rates, which increases the cost of capital for businesses and limits the rate of return on their investments. The duration of the war will be the most decisive factor in the intensity of these effects.

With regard to other factors that drive investment, the high corporate lending since 2020, which is expected to continue this year at a much lower pace, has created the possibility for a significant part of businesses to make investment, as highlighted in previous IOBE reports on the Greek economy. The implementation of Hercules II and the expected third cycle of this programme since October can contribute substantially to the coverage of any negative developments in banks' assets from the pandemic, such as an increase of NPLs, but also more broadly, to their extensive reduction, as already demonstrated by the relevant actions of banking institutions and their outcomes in the second and third quarter of the previous year. Thus, credit growth in 2022 is favoured by this factor as well. As regards deposits, they continued to grow in early 2022, but at a weaker pace, as predicted in the previous IOBE report on the Greek economy. For the remainder of the year, they are now likely to slow down further, with the possible halt of the rise, to cover the higher cost of living due to the high rate of inflation. The loan arm of the European recovery fund will be an additional source of capital for the banks from this year. Among the sectors that are expected to make use of the available liquidity, companies from manufacturing activities whose demand is either related to or resilient to the health crisis (e.g. medicines, computer manufacturing, plastics) are considered to be the most likely to expand their investment activity. The strong recovery of international tourism in 2021, which will continue stronger this year, will rekindle investment activity in this sector. By contrast, the very slow clearing of non-performing loans that are off the banks' balance sheets will dampen credit growth.

As noted in IOBE reports, support from exceptional actions to address the impact of the pandemic on businesses and the self-employed (e.g. repayable advance, corporate guarantee fund, loan and working capital interest subsidies), although not related to investments, was partly reflected in investment expenditure in GDP, as it was allocated under the Public Investment Programme. Overall in 2021, such expenditure totalled €2.9 billion. In the first four months of this year, it was in the order of €251 million, as part of the exceptional support interventions implemented during the initial outbreak of the Omicron variant. However, as all the public health protection measures taken for this purpose and related to businesses were lifted in February — March, the relevant support actions are also expiring. Moreover, as strong restrictive measures are not expected to be reintroduced due to the pandemic, the impact of this factor on investment will be much smaller than last year.

The significant weakening in 2022 of the positive effects on the part of the public sector through the pandemic-related exceptional support interventions will be outweighed by the resources available under the Recovery and Resilience Plan (Greece 2.0), together with the domestic resources leveraged for the investment projects selected for support. As mentioned above, 230 projects have already been included in the Recovery and Resilience Fund (RRF), with a total budget of €10.2 billion. The 2022 Budget envisages that the grants will reach €3.2 billion. The significant shortfall compared to the expenditure target in the first five months mentioned above is considered to be largely due to the disbursement of the first tranche from the Recovery and Resilience Fund in April, later than expected when the budget was drawn up. It is estimated that the implementation of investments under the RRF will accelerate significantly during the rest of this year. However, it is possible that the RRF investments will continue to fall short from the target, to a lesser extent than in the current period.

In the other leg of the public sector's support for investment activity, through the PIP, the higher-than-in-2021 target for PIP support this year, which was extended by the supplementary budget by €600 million (to a total of €8.4 billion), the launch of the NSRF 2021-2027, and the experience of implementing the programme in the past, lead to the forecast that the expenditure of the PIP will significantly increase in 2022. It is expected to reach at least €7.5 billion, from €5.8 billion last year (excluding support measures), providing greater support to investment activity.

The underperformance of the privatisation programme in 2021, due also to the impact of a pandemic, will result in its small contribution to investment activity this year, given the long maturation period required for investments of this scale. Nevertheless, the recent completion of the concessions of Hellinikon, Egnatia Odos, DEPA Infrastructure, and HEDNO creates very significant medium-term prospects for investment, economic activity more broadly, and employment.

As evidenced by previously presented trends in the fixed capital categories of GDP in the first quarter of this year, the construction works strengthened significantly, carrying over their positive momentum from 2021. Investment in the tourism industry, as already mentioned, including the renovation of properties for Airbnb, will boost significantly construction activity this year. The reduction of ENFIA, on the one hand, removes the uncertainty that existed with the relevant decisions pending, and, on the other, it facilitates the planning of investment in real estate.

Taking into account the above expected effects, mainly from the global economic environment shaped by the war in Ukraine, with the particularly high energy costs and rising interest rates, as well as the continued credit expansion to businesses, the strong upward dynamics of international tourism since the beginning of spring, and the start of the utilisation of RRF resources, it is estimated that investments will expand by 13 to 15% in 2022. As mentioned above, the escalation of the implementation of the recovery fund and investment in significant concluded concessions-privatisations (Hellinikon, AIA, DEPA Infrastructure), and in Tourism, following its emerging strong growth this year, will support investment activity in the coming year. The elevated cost of capital and the high energy costs, which are not expected to decline soon, will act in the opposite direction.

The external sector of the economy was expected to be more negatively affected by the war. However, the emerging slightly less than originally expected impact of the war on the eurozone economy, the main export destination of Greek products, mitigates its negative effects on domestic exports. Far-reaching measures to support households and businesses in Europe will prevent a sharp decline in purchasing power from the unprecedented in at least 25 years inflation. Nevertheless, the slowdown of the recovery across Europe will dampen the demand for Greek exports. The exports of goods are expected to weaken to two other major destinations, the United States, due to a sharp decline in growth since last year, and Turkey, where inflation is galloping, eroding real incomes. Overall, the trend in exports will remain positive, albeit weaker than projected at the beginning of the year.

The loss of momentum on the side of the exports of goods is expected to be more than offset by stronger exports of services. Despite the negative effects of the war on transport costs, the trend of international tourism was strongly positive in the March-May quarter, both in terms of arrivals and revenues, with both figures in the last month of this period exceeding their level in 2019. A new outbreak of the pandemic, either during the summer or — most likely — from its end, will not have a particularly negative impact on tourism, as strict public health protection measures are not expected to be reintroduced. In such a case, they will probably return to the levels of last winter and autumn. However, most of the boost in the exports of services seems to come from international transport receipts, as the war in Ukraine has strongly boosted maritime transport in energy products. As a result of the expected trends in their key drivers, exports are projected to increase by 12-14%. The disruptions in the supply chains due to the war will set a low base for next year, revitalising international trade in 2023. International transport will then receive a boost, but their high costs will remain a deterrent. In the absence of any spill-over of the war, the uncertainty will ease, strengthening international passenger traffic, for business purposes and for tourism, and thus the related receipts.

Table 3.2

Domestic Expenditure and Gross Domestic Product – European Commission estimates (at constant 2015 market prices)

	2019	2020	2021	2022
Annual Percentage Change				
Gross Domestic Product	1.8	-9.0	8.3	3.5
Private Consumption	1.8	-7.9	7.8	1.5
Public Consumption	1.7	2.6	3.7	-1.7
Gross Fixed Capital Formation	-3.3	-0.3	19.6	14.7
Exports of Goods and Services	4.9	-21.5	21.9	11.6
Imports of Goods and Services	3.1	-7.6	16.1	7.9
Employment	0.9	-1.2	0.5	1.2
Compensation of Employees per capita	0.6	-0.7	1.4	3.5
Real Unit Labour Cost	-0.5	7.8	-5.9	1.2
Harmonised Index of Consumer Prices	0.5	-1.3	0.6	6.3
Contribution to real GDP growth				
Final Domestic Demand	1.2	-4.9	8.6	2.6
Net Exports	0.6	-5.5	0.7	0.9
Inventories	0.0	1.4	-0.9	0.0
As a percentage of GDP				
General Government Balance	1.1	-10.2	-7.4	-4.3
Current Account Balance	-2.4	-7.9	-8.3	-8.4
General Government Gross Debt	180.7	206.3	193.3	185.7
In percentage terms				
Unemployment (% of labour force)	17.9	17.6	14.7	13.7

Source: European Economic Forecast, spring 2022, European Commission, May 2022

While the imports of energy products, as well as of some raw materials, will be affected by their highly elevated international prices, the trend in demand is expected to be strongly positive for many of the other product categories, mainly from the expansion of private consumption and to a lesser extent from the rise in investment. On the side of imports of services, domestic demand is particularly strong for transport services, with their level higher than in 2019, as in exports.

Meanwhile, travel services will also recover significantly, reaching pre-pandemic levels. Given the above factors, imports are projected to expand by 11% to 13% this year. The expected further expansion of household consumption and investment in the coming year, as well as exports, thanks also to supply chain changes that will have taken place, especially in the absence of war spill-over, will re-invigorate the demand for imports.

From the process of estimating the trends in GDP components in 2022, based on the assumptions of the macroeconomic scenario, in which the war in Ukraine will continue for most of the duration of the current half, possibly for its entire duration, with a strong impact on the recovery of the euro area, primarily through energy prices, while domestically the effects on tourism will be much weaker than anticipated earlier this year, the pandemic is likely to experience a new significant outbreak in late summer-early autumn, but without extensive restrictive measures and finally, the expenditure target of the Recovery and Resilience Fund will be achieved, it is projected that the Greek economy will grow this year at a rate of about 3.5-4.0%.

Table 3.3

Comparison of forecasts for selected economic indicators for the years 2021 – 2022 (at constant market prices, annual % changes)

	MinFin		EU		IOBE		IMF		OECD	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
GDP	6,9	3,1	8,5	3,5	9,0-9,5	3,5-4,0	6,5	3,5	6,7	2,8
Private Consumption	3.3	2,4	3,3	1,5	5,5-6,0	3,0 - 4,0	:	:	2,1	3,5
Public Consumption	4,1	-1,9	4,4	-1,7	5,5-6,0	-1,0 - -2,0	:	:	4,6	-1,5
Gross Fixed Capital Formation	11,7	9,8	15,3	14,7	10-12	13-15	:	:	14,0	9,0
Exports	14,1	5,6	16,2	11,6	19-21	12-14	:	:	4,1	16.5
Imports	6,6	16,1	8,1	7,9	14-16	11–13	:	:	1,7	13,2
Harmonised Index of Consumer Prices (%)	0,6	5,6	0,6	6,3	1,2	9,0– 9,6	-0,1	4,5	0,4	8,8
Unemployment (% of labour force)	15,9	13,9	15,3	13,7	14,9	12,0-12,4	15,8	12,9	14,6	12,4
General Government Balance (% of GDP)	-9,6	-4,4	-9,9	-4,3	:	:	-10,2	-4,8	-9,6	-4,1
Current Account Balance (% GDP)	:	:	-6,3	-8,4	:	:	-7,4	-6,3	-7,2	-7,7

Sources: Stability Programme 2022, Ministry of Finance, April 2022 – European Economic Forecast, spring 2022, European Commission, April 2022 - The Greek Economy 02/22, IOBE, July 2022 – World Economic Outlook, IMF, April 2022 - Fiscal Monitor, IMF, April 2022 - Economic Outlook 111, OECD, June 2022

Regarding next year, the dynamism of investment activity, despite higher interest rates, combined with the expected gradual recovery of international trade and transport, in the absence of any escalation or spillover of the war, and the maintenance of the positive dynamics of household consumption demand from the previous two years, will lead to a continuation of the recovery, probably at a rate well above the long-term average growth rate of the Greek economy. That said, the high correlation of productive investment and private consumption with imports and the decline in public consumption spending after three years of continuous expansion will mitigate the rate of GDP growth.

In the field of employment and unemployment, their major drivers in the rest of 2022 include developments in the tourism sector from the summer onwards, the dynamics of household consumption, under strong inflationary pressures due to the war, as well as the related support interventions, the wider effects of the conflict in Ukraine, mainly on the exports of goods, and finally, the dynamics of investment.

In particular, while there are strong pressures on purchasing power from prolonged exceptionally high inflation, widespread interventions against the energy crisis, combined with the use of part of the accumulated savings during the pandemic, support consumer demand and thus employment in certain sectors (Retail trade, Tourism, Food services, Entertainment - Recreation). The operation of these sectors without strong restrictions throughout the year, in contrast to last year, even if the pandemic resurges strongly for some time, contributes to generating income and consumer demand, fuelling job creation. Among these sectors, Tourism will play a key role in boosting employment domestically, due to the emerging sharp increase in international demand for tourism services. Jobs will also be created by stronger investment in these sectors.

The pressures from the war on the eurozone's recovery will, as mentioned above, have a negative impact on domestic exports, mainly of goods. That said, the steady positive dynamics of exports of goods in recent years, which have led to successive historic records, will to some extent stimulate employment, both directly and indirectly, through industrial investment. The increase in investment in export sectors of industry and tourism, but mainly by using the resources of the recovery fund, as well as the start-up of works in significant privatisations, such as in Hellinikon, will significantly boost job creation this year in, among other sectors, Construction.

The public sector will also boost domestic employment in 2022. As mentioned in previous reports, 20.6k recruitments are planned for the current year under the "one recruitment for each withdrawal" rule, based not only on withdrawals last year, but also in previous years.

The change in the minimum wage since 1 May is a development whose impact on employment is difficult to predict. Its effects depend on its extent. Since it has been announced to increase from 6% to 8%, enterprises in sectors where a large share of workers are paid at the minimum wage, e.g. with a high proportion of unskilled labour, will have to cope with both the current strong increase in energy costs and the increase in wage costs. In cases where this is not possible, at least temporarily, during the energy crisis, employment schemes other than full employment, e.g. part-time work, may be selected.

Taking into account the above expected effects on the labour market, the forecast for the unemployment rate is revised down to the region of 12.0-12.4%.

Prices faced by households continue to suffer most of the turmoil in the global economy due to the war. Prices of energy products are expected to rise significantly in the current six months. Despite geopolitical developments, the world economy will continue to recover this year, which will expand the demand for oil. As reported during the presentation of the assumptions of the macroeconomic scenario, the oil price is expected to increase this year on average by 50-55%. The measures to subsidise the consumption of electricity, gas, and fuels will partially mitigate the strong inflationary effect of elevated prices of energy products.

In addition to energy consumption subsidies, the other measures to support vulnerable social groups (the disabled, low-pension beneficiaries, minimum income beneficiaries, etc.) to contain the effects of the energy crisis, will prevent a significant weakening of consumption demand. In addition, depending on the duration of their implementation, they will replenish to some extent the extensive support measures against the pandemic from last year, which are much fewer this year. The weighted average reduction of ENFIA and the increase in the minimum wage from the beginning of May will boost disposable income. In addition to these support interventions and administrative decisions, the income and consumption of households domestically and subsequently prices will be stimulated by stronger activity and the expansion of employment, in sectors affected in previous years by lockdowns and in which a significant part of domestic consumption takes place (Retail Trade, Food Services, Tourism). Similar developments will be triggered by job creation in export-oriented activities, mainly in Industry, Tourism, and Transport, as well as by higher investment.

In terms of the impact of indirect taxation interventions, the reduction in VAT in force since June 2020 on specific goods and services was recently extended until the end of 2022. However, as one year has passed since its implementation, no further substantial effect on prices is expected. The reduction of the mobile subscriber levy is expected to restrain price increases. Food prices are expected to reflect in the near future, first, the reduction in VAT on fertilisers and feedstock from 13% to 6%, and second, the refund to farmers of the excise duty on diesel oil, measures decided before the war in Ukraine.

Taking into account the above possible trends in the key components of the domestic Consumer Price Index, it is projected to increase strongly, by 9.0% to 9.6%, mainly by the exceptionally high increase in the prices of energy products, the notably stronger demand of households since last year and the sharp increase in activity in Tourism.

3.2 Developments and Prospects in Key Sectors of the Economy

- Industrial production strengthened by 1.9% in the first four months of 2022, against an increase of 8.8% in 2021
- Increase in Construction output by 12.0% against 9.3% contraction in the same period last year
- Strong increase of 10.2% in Retail Trade volume in 2022 against a milder increase of 4.1% in 2021. A slight deterioration of expectations in the first half of 2022.
- Turnover boost in nine of the thirteen branches of services in the first quarter of 2022.

Industry

In the first four months of 2022, the industrial production index increased by 1.9%, against an increase of 8.8% in 2021. In the same period of 2022, the industrial producer price index increased by 40.1% against a milder increase of 4.1% in the corresponding period of 2021. Prices rose both for exports (+40.3%, against an increase of 3.3% last year) and domestic products (+40.1% following an increase of 6.9% in 2021). Similarly, industry turnover in the first four months of 2022 increased by 35.5%, against a contraction of 12.0% in the same period of 2021.

In the euro area, industrial production declined by 0.5% in the same period of 2022, against an expansion by 11.8% in the same period of 2021. In April 2022, industrial production fell by 1.9%, which is believed to be due to the impact of the war on Ukraine.

In the main sectors of Greek industry, production increased in the first quarter of 2022, albeit at almost half the rate from last year, in Manufacturing (+3.4% against 7.5%). By contrast, output fell sharply in Mining—Quarrying (-15.7% against +11.7%) and much milder in Electricity Supply (-1.1%

against +14.9% in 2021). A limited decline was also recorded in the output of Water Supply (-0.7% against an increase of +0.3%).

In the sub-sectors of Mining-Quarrying, production declined sharply in the Mining of Mineral Ores (-28.9% from -0.1% a year ago), and in Other Mining-Quarrying (-9.1% against +17.2%). Output growth, but at a significantly lower rate than last year, was recorded in Coal and Lignite Mining (+11.2% against +130.4%).

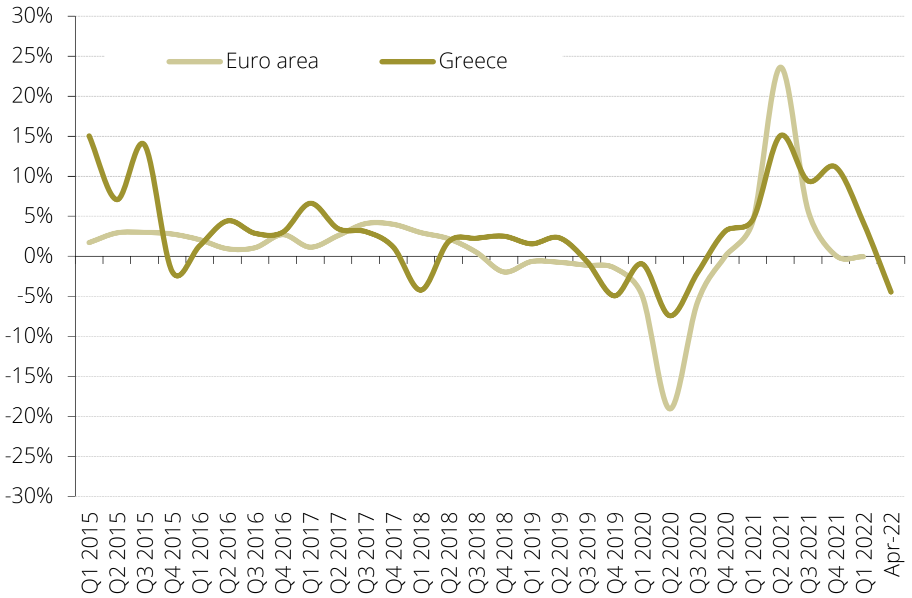
In Manufacturing, output strengthened in 17 out of 24 industries. Among those with particular significance for the Greek economy, output in Pharmaceuticals increased by 10.7% after a similar increase of 10.3% in 2021. Next came Food production (+4.0% against a decrease of 0.1% in the same period last year) and the production of Basic Metals (an increase of 5.5%, after an increase of 8.0% a year ago).

Of the rest of the branches, production increased strongly in the manufacturing of Motor Vehicles (44.3% against -9.4%), Furniture (34.7% against 5.5%), and Wearing Apparel (34.5% against 9.6%). By contrast, output declined in the production of Tobacco (-7.9% against +22.9% a year ago), Other Transport Equipment (-7.6% against +33.6%), and Chemicals (-3.5% against an increase of 4.0% in 2021).

Output strengthened in the first four months this year in three of the five main industrial product groups. In detail, production increased mainly in Durable Consumer Goods (+29.0%, after +9.5% a year ago) and notably milder in Non-Durable Consumer Goods (+5.5% from +6.5%) and Intermediate Goods (+2.1% after +10.2%). A decline was recorded in Energy, where output decreased by 1.9%, against an increase of 9.1% in the same period of 2021.

Figure 3.2

Industrial Production Index in Greece and in the Euro area (year-on-year % change)



Industrial production growth of 1.9% in the first four months of 2022, after an increase of 8.8% in 2021

Sources: ELSTAT, Eurostat

Construction

In 2021 overall, the production index in Construction increased by 6.2%, against a contraction of 9.6 % in 2020. In the first quarter of 2022, the indicator strengthened further, by 12.0% against a decrease of 9.3% in the same period of 2021.

In the individual construction activities in the same period, output in Construction of Buildings increased by 20.8% against a contraction of 16.5% in 2021. The indicator in Civil Engineering increased by 6.5% (against -0.1% in 2021).

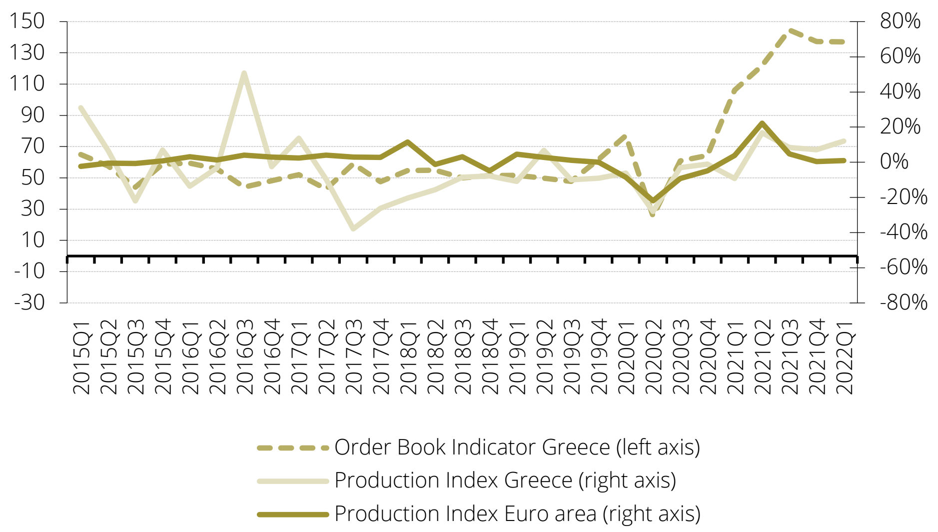
Over the same period in the euro area, the production index in Construction increased marginally (+0.95%) after having increased by 4.0% in the same period of 2021.

Building activity figures show an increase of 9.6% in terms of the number of permits in the first two months of 2022, against a milder increase of 1.7% last year. A stronger increase compared to 2021 was recorded in terms of both surface (+21.0% against +9.6%) and volume (+28.5% then 13.2%) of new buildings.

Figure 3.3

Production Index in Construction and Building Activity Index

Production growth in the first quarter in Construction by 12.0%, offsetting losses by 9.3% in the same period of 2021



Source: ELSTAT

Retail Trade

The volume index in retail trade in the first quarter of 2022 increased by 10.2%, against a milder increase of 4.1% in the same period of 2021. The volume of activity strengthened in 6 out of 8 subsectors.

In particular, the largest increase was recorded in Books — Stationery (+25.2% against +10.2% last year), and Clothing — Footwear, where sales increased by 21.5% against a milder increase of 11.2% in 2020. Next came Pharmaceuticals — Cosmetics (+21.0%, from +20.4% a year ago), Fuel (+14.9% against -7.1% in 2021), and Department Stores (+13.4% against 11.4%). By contrast, the volume of sales sold fell by 4.0% (against +9.3% last year) in Food and by 1.7% (after a decrease of 2.6 % a year ago) in Supermarkets.

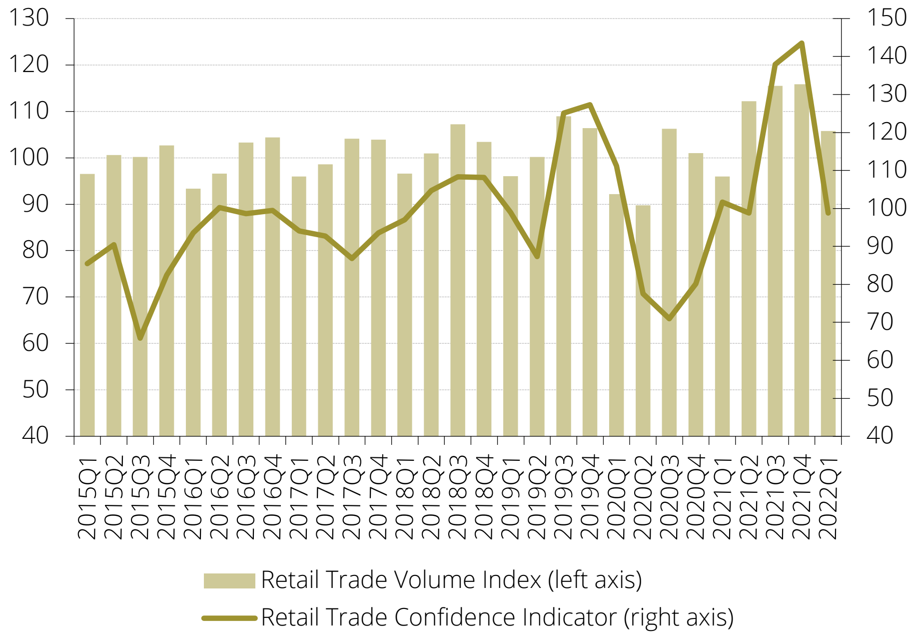
Expectations in the retail trade sector in the first half of 2022, as reflected in the leading indicators of the IOBE Business and Consumer Surveys, declined compared to the same period a year earlier. The relative index declined by 0.7 points, less than the decline of 3.7 points a year earlier.

At the activity level, expectations in the first half of 2022 deteriorated mainly in Food — Beverages — Tobacco (-23.7 points, following a decrease of 33.2 against an increase of 24.2 in 2021).

By contrast, expectations strengthened in Department Stores (+24.5 points against -54.4 last year), Textiles — Clothing — Footwear (+18.0 against +3.4 in 2021), and Household Appliances (+11.7 after an increase of 14.5 points).

Figure 3.4

Volume Index in Retail Trade (2010=100) and Business Confidence Indicator in Retail Trade (1996-2006=100)



An increase of 10.2% in retail trade volume in the first quarter of 2022. A slight deterioration of expectations in the first half of 2022.

Sources: ELSTAT, IOBE

In Motor Vehicles — Parts in particular, the current balance of sales deteriorated significantly, returning to very negative territory, at -45 points, compared to 11 points in 2021, as the percentage of those estimated reduced sales doubled and the companies reporting increased sales dropped sharply. The balance of stocks remains negative, as despite reduced sales estimates, problems in the supply of new vehicles are also recorded. The balance of orders returned to negative territory and stands at -22 points, compared to -23 in 2021, with an increase in those expecting a fall in orders in the coming period. The balance for sales expectations turned negative, at -5 points, compared with +50 in 2021, with an increase in the percentage of businesses expecting a contraction in sales and a decrease in those expecting growth in the coming period. On the employment side, strong signs of stabilisation remain, with more jobs being expected to be added. In terms of prices, 75% of the businesses were expecting hikes in the coming period.

Table 3.4

Volume Index in Retail Trade, annual changes

Category of Retail Trade Stores	Volume Index (2010=100)				
	Q1 2020	Q1 2021	Q1 2022	Change 2020/2019	Change 2021/2020
Overall Index	92.2	96.0	105.8	4.1%	10.2%
Overall Index (excluding automotive fuels and lubricants)	94.2	99.8	107.0	5.9%	7.2%
Store Categories					
Supermarkets	112.3	109.4	107.5	-2.6%	-1.7%
Department Stores	69.8	77.7	88.2	11.4%	13.4%
Automotive Fuels	82.4	76.5	87.9	-7.1%	14.9%
Food – Drink – Tobacco	70.2	76.7	73.7	9.3%	-4.0%
Pharmaceuticals – Cosmetics	102.6	123.4	149.3	20.4%	21.0%
Clothing – Footwear	71.5	79.5	96.6	11.2%	21.5%
Furniture – Electric Equipment – H. Appliances	87.3	104.9	119.6	20.1%	14.0%
Books – Stationary	101.9	112.6	141.0	10.5%	25.2%

Source: ELSTAT

Table 3.5

K Business Expectations Indices in Retail Trade (1996-2006=100)

	H1 2020	H1 2021	H1 2022	Change 2021/2020	Change 2022/2021
Food-Drinks-Tobacco	115.7	82.5	58.8	-33.2	-23.7
Textiles - Clothing – Footwear	61.4	64.8	82.8	3.4	18.0
Household Appliances	71.8	86.3	98.0	14.5	11.7
Vehicles-Spare Parts	87.5	111.7	106.8	24.2	-4.9
Department Stores	120.5	66.1	90.6	-54.4	24.5
Total Retail Trade	97.7	94.0	93.3	-3.7	-0.7

Source: IOBE

Wholesale Trade

In the first quarter of 2022, the wholesale turnover index increased by 19.2% against a milder increase of 3.0% last year.

Services

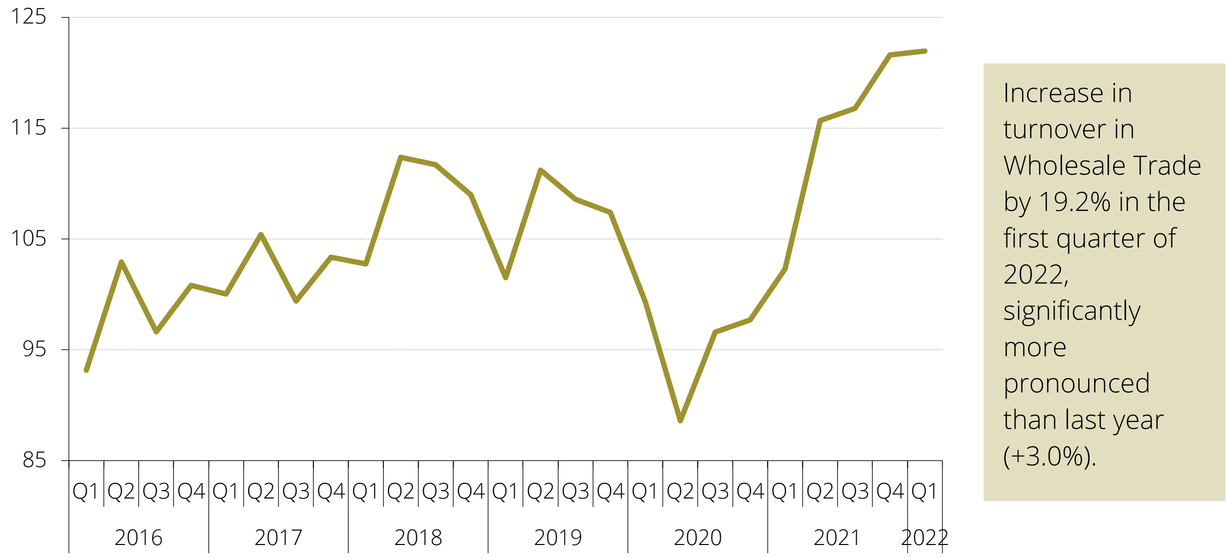
In the first quarter of 2022, turnover in services declined in four out of 13 branches compared to 2021.

The largest increase occurred in the consulting and accounting services sector (+25.3% after an increase of 20.3% in 2021), cleaning services (+22.8% from +6.8%), and services of other professional and scientific specialties (+16.4% against +9.2% a year ago). Next come, at a distance, the employment-related services (+6.6% against +10.2%), services related to security and investigation (+4.6%, from +6.7% last year), advertising services (+2.4%, from +12.0%) and IT services (+2.4% against +13.1%).

By contrast, activity deteriorated since last year in Architects - Engineers (-7.7% against an increase of 21.7% in 2021), Office Administrative Services (-3.8% compared to an increase of 12.8% a year ago), Courier services (-1.7% against -0.9%) and Telecommunications (-1.1% instead of +7.3%).

Figure 3.5

Turnover Index in Wholesale Trade



Source: ELSTAT

Table 3.6

Turnover Index in Services (2010=100)

Branch of service activities	Q1 2021	Q1 2022
Publishing activities	8.9%	0.9%
Architects and Engineers	21.7%	-7.7%
Data and Information service activities	26.7%	1.5%
Security and investigation activities	6.7%	4.6%
Telecommunications	7.3%	-1.1%
Advertising and market research	12.0%	2.4%
Postal and courier activities	-0.9%	-1.7%
Computer programming, consultancy and related activities	13.1%	2.4%
Other professional, scientific and technical activities	9.2%	16.4%
Legal, accounting and management consultancy activities	20.3%	25.3%
Office administrative, office support and other business support activities	12.8%	-3.8%
Employment activities	10.2%	6.6%

Source: ELSTAT

According to recent trends in leading indicators from the IOBE business and consumer surveys, whose values relate to the first half of 2022, expectations have improved in all four surveyed branches of services. As a result, the overall indicator of the sector increased by 23.5 points, against a much smaller increase, by 2.4 points, a year ago.

The branch index strengthened mainly in Hotels — Restaurants (+38.3 points against +11.1 points in 2021) and Business Services (+24.9 points against +12.2 points last year). This is followed by IT

Services (+9.6 against +19.1 points in 2021) and Financial Intermediaries (+1.4 points against +10 points in 2021).

Table 3.7

Business Sentiment Indicators in Services (2000-2010=100)

	H1 2020	H1 2021	H1 2022	%Δ 21-'20	%Δ 22-'21	Change 2021/2020	Change 2022/2021
Hotels – Restaurants – Travel Agencies	67.7	78.8	117.1	16.4%	48.6%	11.1	38.3
Financial Intermediation	109.5	119.5	120.9	9.1%	1.17%	10	1.4
Other Business Services	77.7	89.9	114.8	15.7%	27.7%	12.2	24.9
Information Services	74.7	93.8	103.4	25.6%	10.2%	19.1	9.6
Total Services	82.7	85.1	108.6	2.9%	27.6%	2.4	23.5

Figure 3.6

Turnover Index in Telecommunications (branch 61)

Marginal reduction in Telecommunications (-1.1 % against + 8.8% last year)

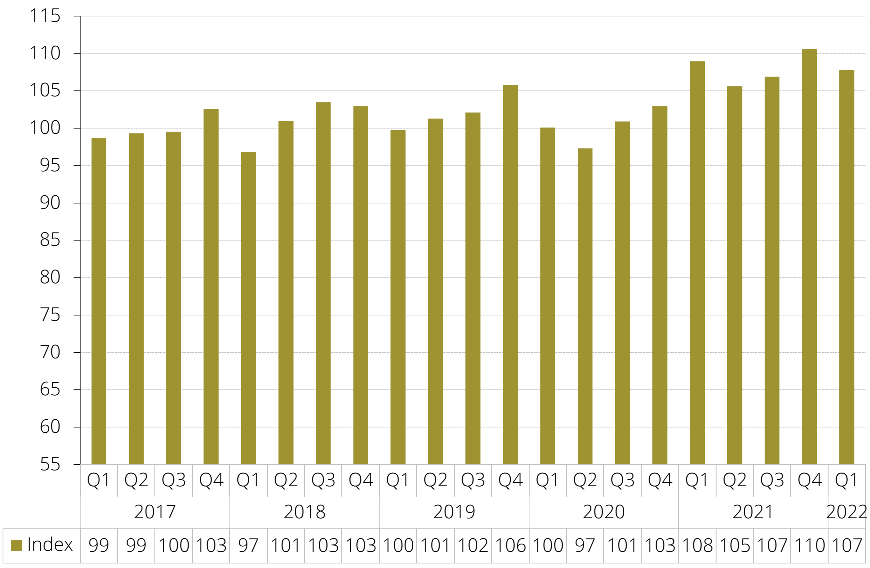
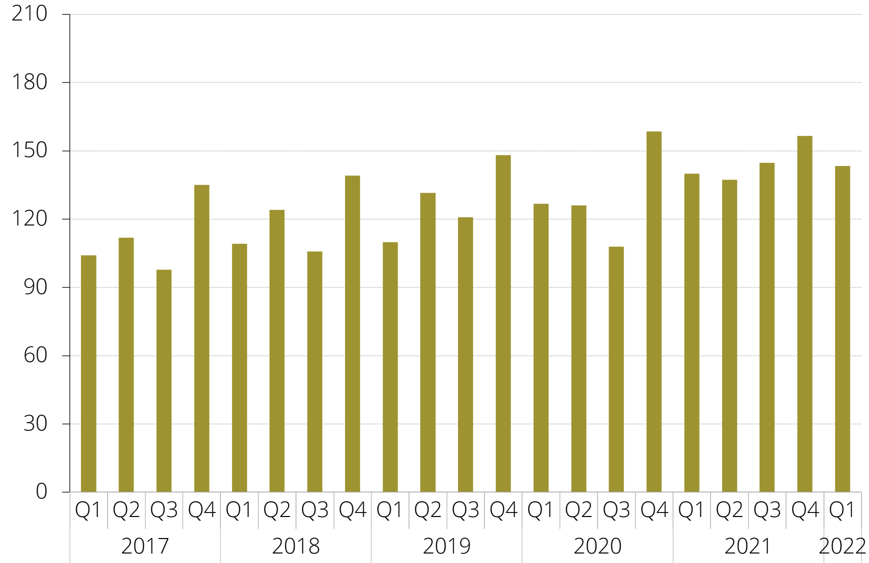


Figure 3.7

Turnover Index in Computer Programming, Consultancy and Related Activities (branch 62)



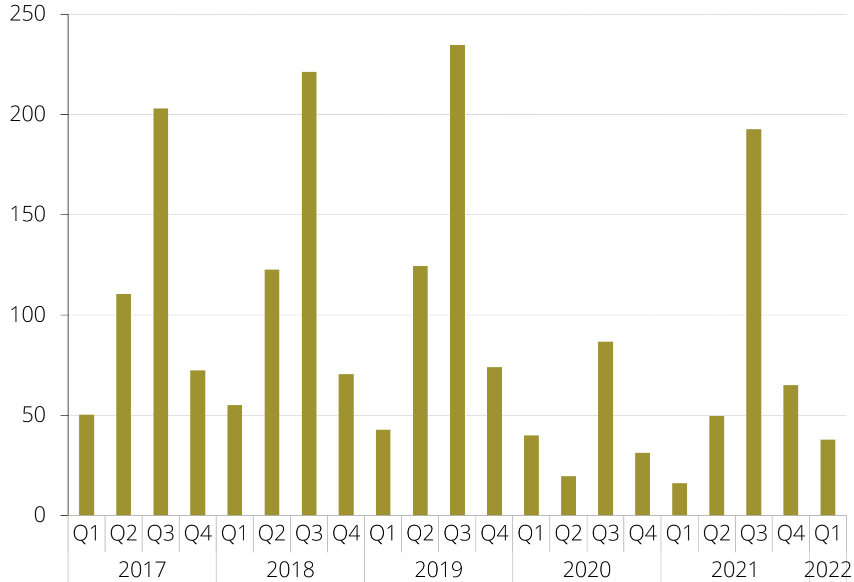
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	2017				2018				2019				2020				2021				2022
Index	104	112	98	135	109	124	106	139	110	132	121	148	127	126	108	159	140	137	145	156	143

Activity growth, but at a much milder rate than last year (+2.4% against +10.4%)

Source: ELSTAT

Figure 3.8

Turnover Index in Tourism (Accommodation and Food Services Activities, branches 55 & 56)



	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	2017				2018				2019				2020				2021				2022
Index	50	111	203	72	55	123	221	71	43	125	235	74	40	20	87	31	16.	49.	192	65	38

A sharp increase of 134.8% in the first quarter of 2022 against +39.9% in 2021, due to the lockdown through most of this quarter a year ago.

Source: ELSTAT

3.3 Export Performance of the Greek Economy

- Strong growth in exports of goods in the first quarter of 2022, at a rate of 31.4%. Milder yet still strong growth in exports excluding petroleum products (+20.6%)
- An increase in all product categories, with the largest increase in fuel exports and agricultural products.
- Marked widening of the trade deficit compared to 2021 by 70.9% to €11.3 billion.
- Growth in demand primarily from countries of the Euro area (+32.8% or +€1.6 billion), the Middle East & North Africa (+35.0% or €586.4 million), and a decline from Asian countries (-41.7% or €386,5 million)

The exports of goods stood at €15.8 billion in January-April 2022, compared with €12.0 billion a year ago, an increase of 31.4%. Excluding fuel and ships, the remaining exports rose by 20.6% to €10.9 billion, from €9.0 billion last year. Imports increased by 45.5% in the same period of this year and stood at €27.0 billion, from €18.6 billion a year earlier. As a result of the above trends in the main components of the external balance of goods, the trade deficit was €4.7 billion higher than in 2021 (+70.9%), at €11.3 billion, from €6.6 billion.

Figure 3.9

Total export activity and exports of goods except for fuels and ships (current prices)

Exports excluding petroleum products — ships stood at €10.9 billion in January-April 2022, 20.6% higher than in 2021

Source: ELSTAT, Data processing: IOBE

Exports of Agricultural Products increased by 14.3% in January - April 2022, to €2.8 billion, from €2.5 billion in 2021. Fuel exports saw the largest increase of 65.7%, reaching €4.9 billion, from €2.9 billion last year. Exports of these two categories accounted for 48.7% of domestic exports this year, up from 45.0% a year earlier. The increase in agricultural products came mainly from an increase of 14.0% in demand for oils of animal or plant origin, the value of which stood at €284,1 million, from €249.1 million last year, while their share of total exports stood at 1.8% in 2022 from 2.1% in 2021. In the Food-Living Animals category, which accounts for about 78.7% of agricultural exports, exports rose by 15.8% to €2.2 billion from €1.9 billion a year ago. In beverages and tobacco products, which account for 11.2% of the exports of agricultural products, demand stood at €313.7 million at the beginning of 2022, 5.2% higher than in the same quarter of 2021.

Exports of industrial products greatly strengthened in January-April 2022 (+23.6%), totalling €7.2 billion, up from €5.8 billion in 2021. This development was mainly driven by the increase in exports for Manufactured Goods Classified Chiefly by Raw Materials by 39.2%, growing from €1.9 billion to €2.6 billion. Stronger international demand was also recorded for Chemicals and related products by 2.7%, totalling €2.0 billion. Also, strong export growth, by 38.1% was recorded in Machinery - Transport Equipment, to €1.5 billion from €1.1 billion, while exports of Miscellaneous Manufactured Articles (+17.7%, to €1.0 billion) increased as well.

Finally, exports of raw materials increased by 8.5% to €668.5 million, from €616.3 million a year earlier, while exports of Commodities and transactions not classified by category increased by 40.3%, from €157.4 million in 2021 to €220.8 million a year later.

In terms of the trends by geographical area, exports of goods expanded strongly in the first quarter of 2022 to the euro area countries by 32.8%, reaching €6.4 billion, from €4.9 billion in the same period of 2021. The EU as a whole saw an increase of 34.4% or €2.2 billion, with exports to this region reaching €8.7 billion, from €6.5 billion a year earlier. Among the euro area countries absorbing most Greek exports, there was a significant expansion to Germany by 20.7%, from €927.6 million to €1.1 billion, and an extensive decrease to France by 17.6%, from €693,5 million to €571,3 million. The exports of goods increased sharply to the top destination, Italy, by 55.2%, reaching €1.7 billion in 2022 from €1.1 billion in 2021.

Among the other countries of the European Union, to which total exports increased by 39.0% or €638.2 million, reaching €2.3 billion, Bulgaria continued to be the main export destination, with product flows growing compared to 2021 by 54.8% or €299.4 million. Positive trends were recorded in two other countries from this group which absorb a significant share of Greek exports, Romania and Poland, where exports increased by 34.2% or €144.9 million (to €568.2 million); and by 50.5% or €115.0 million (€342,6 million) respectively.

Table 3.8

Exports per one-digit category at current prices, January – April (million €)*

Product	Value		% Change	% Share	
	2022	2021	22/21	2022	2021
AGRICULTURAL PRODUCTS	2,208.6	1,907.4	15.8%	14.0%	15.9%
Food and Live Animals	313.7	298.2	5.2%	2.0%	2.5%
Beverages and Tobacco	284.1	249.1	14.0%	1.8%	2.1%
Animal and vegetable oils and fats	284.1	249.1	14.0%	1.8%	2.1%
RAW MATERIALS	668.5	616.3	8.5%	4.3%	5.2%
Non-edible Raw Materials excluding Fuels	668.5	616.3	8.5%	4.3%	5.2%
FUELS	4,851.3	2,928.1	65.7%	30.9%	24.5%
Mineral fuels, lubricants, etc	4,851.3	2,928.1	65.7%	30.9%	24.5%
INDUSTRIAL PRODUCTS	7,176.8	5,807.4	23.6%	45.6%	48.5%
Chemicals and Related Products	1,994.2	1,942.3	2.7%	12.7%	16.2%
Manufactured goods classified chiefly by raw material	2,636.4	1,894.5	39.2%	16.8%	15.8%
Machinery and transport equipment	1,536.5	1,112.7	38.1%	9.8%	9.3%
Miscellaneous manufactured articles	1,009.7	857.9	17.7%	6.4%	7.2%
Other and transactions not classified by category	220.8	157.4	40.3%	1.4%	1.3%
TOTAL EXPORTS	15,723.8	11,964.0	31.4%	100.0%	100.0%

* Provisional data

Source: Eurostat

A strong increase in demand for Greek exports was recorded to the rest of Europe, by 53.1%, from €1.9 billion in the first quarter of 2021 to €2.9 billion a year later. This was recorded primarily in

Turkey, where exports expanded by 24.2%, from €534 million to €663.0 million, and secondarily in the United Kingdom, with an increase of 85.5%, resulting in exports rising from €332.5 million last year to €616.9 million a year later.

Exports to North American countries moved sharply, by 35.0%, from €552.5 million in 2021 to €745.8 million a year later, mainly due to an increase in exports to the US by 38.7%, from €457.7 million in 2021 to €634.6 million last year, and to Canada, by 30.7% or €16.6 million. Exports to Mexico marginally declined (-0.4 %).

The exports to the Middle East and North Africa also increased sharply, by 35.0%, to €2.3 billion from €1.7 billion, mainly due to an increase in exports to Libya (+29.8%), where exports stood in January — April 2022 at €440.8 billion, compared to €339.6 million a year earlier, but also to Lebanon (+65.0%), which increased by €200.5 million in 2022 compared to 2021. In another major export destination in North Africa, Tunisia, exports expanded by 3.2% to €250.0 million, while to the United Arab Emirates they rose by 29.1%, to €113.3 million. Exports to Saudi Arabia rose by 42.1% to €241.2 million.

The flow of Greek exports to Oceania slightly increased, by 0.7 %, with their value in the first quarter of 2022 amounting to €86.1 million from €85.5 million a year earlier. The increase came from a similar trend in New Zealand, where exports grew at 41.3%, totalling €11.5 million last year. By contrast, exports to Australia decreased (-3.6%).

Exports to Central-Latin American markets increased by 17.0% in January-April 2022, totalling €115.4 million from €98.6 million in the same period of 2021. The increase in exports to the countries of the region is mainly due to the sharp increase in the demand for Greek products from Panama, by 47.1%, with their value reaching €63.8 million from €43.4 million a year earlier. By contrast, exports to Brazil fell (-43.4% or -€11.7 million).

Table 3.9

Exports by destination, January - April 2022 (million €)*

ECONOMIC UNIONS – GEOGRAPHIC REGION	EXPORTS		% CHANGE
	2022	2021	22/21
EU (27)	8,694.9	6,471.4	34.4%
Euro Area	6,421.0	4,835.8	32.8%
G7	3,079.9	2,581.0	19.3%
North America	745.8	552.5	35.0%
BRICS	263.6	375.2	-29.8%
Middle East & North Africa	2,261.8	1,675.4	35.0%
Oceania	86.1	85.5	0.7%
Central-Latin America	115.4	98.6	17.0%
Asia	540.1	926.6	-41.7%

* Provisional data

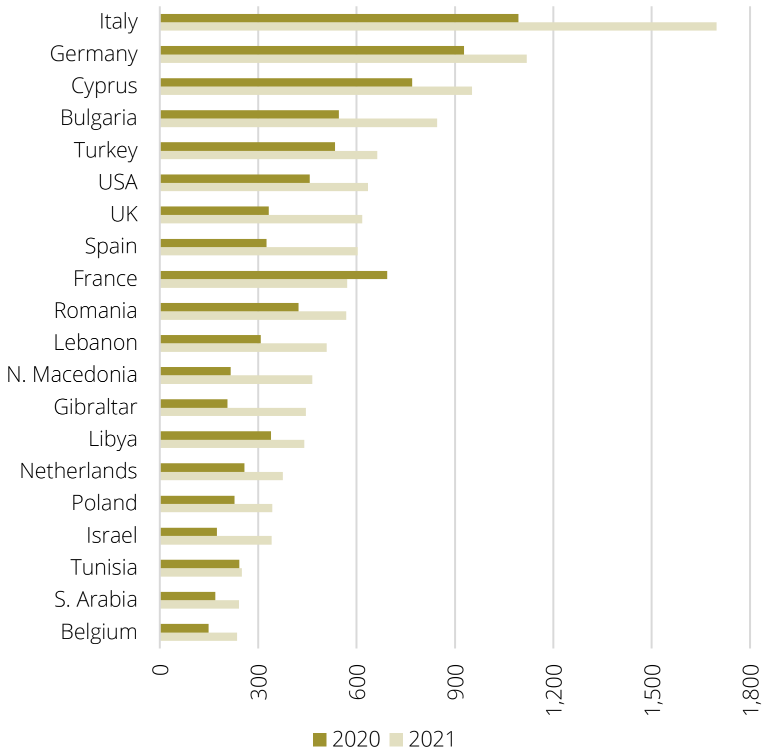
Source: Eurostat

The demand for Greek goods declined sharply among Asian countries, where exports fell in the first quarter of 2022 by 41.7%, to €540.1 million from €926.6 million in 2021. This development is mainly due to a 14.7% drop in exports to South Korea, from €224,4 million in 2021 to €98.6 million a year later, and by 71.4% to Singapore, from €139.3 million last year to €39.9 million this year. Similarly, there was a sharp drop in demand from China (-50.3%, to €111.5 million from €224,4 million in 2021).

In summary, the strong increase in Greek exports of products in January-April 2022 by 31.4% came from growth in all categories of goods, mainly petroleum products (+65.7%) and agricultural products (+14.3%). However, the rise in petroleum products is mainly due to a sharp rise in international prices during the same period, by 64.2%. This strong positive trend has affected the prices of other products and services, including agricultural products and food. The real expansion of exports of products, in volume rather than value terms, is therefore much weaker. Given the impact of rising energy and transport costs in the current period too on international transport and demand, it is now considered likely that the rise in exports will slow down in the second half of this year, in real terms and in current prices. After all, a year ago, the global economy was in a phase of strong recovery, with a sharp expansion in international trade and transport, which, together with the adjustment difficulties in international supply chains, had begun to fuel price increases in energy products and basic raw materials.

Figure 3.10

Countries with the largest share in the exports of Greek goods, January - April 2022 (million €)



The largest increase in the exports of goods in 2022 in absolute terms was recorded in Italy (+€604,1 million). The biggest fall - in South Korea (-€143.8 million). Italy's share of exports remains the largest.

Source: Eurostat. Data processing: IOBE

3.4 Employment – Unemployment

- The unemployment rate in the first quarter of 2022 stood at 13.8%, 3.3 percentage points lower than in the first quarter of 2021 (17.1%). The decline in unemployment was mainly driven by employment growth (+418.9k people), while the economically inactive population significantly decreased (-335.7k people).
- The non-seasonally adjusted unemployment rate fell in April 2022 to 12.5% from 17.0% in April 2021
- Highest employment growth in the first quarter of 2022 in Tourism (+129.9k), Wholesale-Retail trade (+84.9k), Manufacturing (+41.1k) and Education (+28.8k)
- Decrease in the seasonally adjusted index of wage costs in the first quarter of 2022 by 1.9% compared to the first quarter of 2021.

According to ELSTAT's Labour Force Survey, the unemployment rate in the first quarter of this year stood at 13.8%, 3.3 percentage points lower than in the same quarter last year (17.1%). Over the same period, the number of unemployed fell by 13.2% or by 98.2k, to 647.2k from 745.4k, while the number of people employed increased by 418.9k, to 4,044.0k from 3,625.1k. Compared with the fourth quarter of 2021, the unemployment rate in the first quarter of 2022 increased by 0.6 percentage points. It should be noted that in April 2022 the non-seasonally adjusted unemployment rate fell to 12.5% from 17.0% in the same month of 2021.

As regards the evolution of unemployment in the euro area, based on available data, unemployment fell in all member countries. Spain had the second-highest unemployment rate after Greece, falling to 13.7% in the first quarter of 2022 from 16.0% a year earlier. After Greece, the strongest decline in the unemployment rate was recorded in Austria, where it stood at 2.7 percentage points (from 7.9% to 5.2%), followed by Spain (-2.3 percentage points) and Ireland (-2.3 percentage points, to 4.8% from 7.1%). The mildest reduction in the unemployment rate in the first quarter of this year took place in Slovakia (-0.7 percentage points, from 7.1% to 6.4%). Germany had the lowest unemployment rate in the first quarter of this year, falling to 3.1% from 4.1% a year earlier, followed by Malta with essentially the same rate (3.2% from 4.0%) followed by the Netherlands, where unemployment fell to 3.6% from 4.8% in the first quarter of 2021. In the other two major eurozone economies, France and Italy, unemployment fell by 0.8% (to 7.5% from 8.3%) and 1.8 percentage points (from 10.6% to 8.8%), respectively. Finally, in the euro area as a whole, employment fell to 7.0% from 8.5%.

Regarding the development of unemployment by gender in Greece, the rate decreased in both men and women, with the percentage drop being similar in both sexes. In detail, the unemployment rate for men fell by 3.2 percentage points to 10.5% in the first quarter of 2022 from 13.7% a year earlier, while for women it fell by 3.3 percentage points, to 18.0% from 21.3%. Compared with the same quarter last year, the difference in the unemployment rate between men and women narrowed marginally, from 7.6 percentage points to 7.5 percentage points.

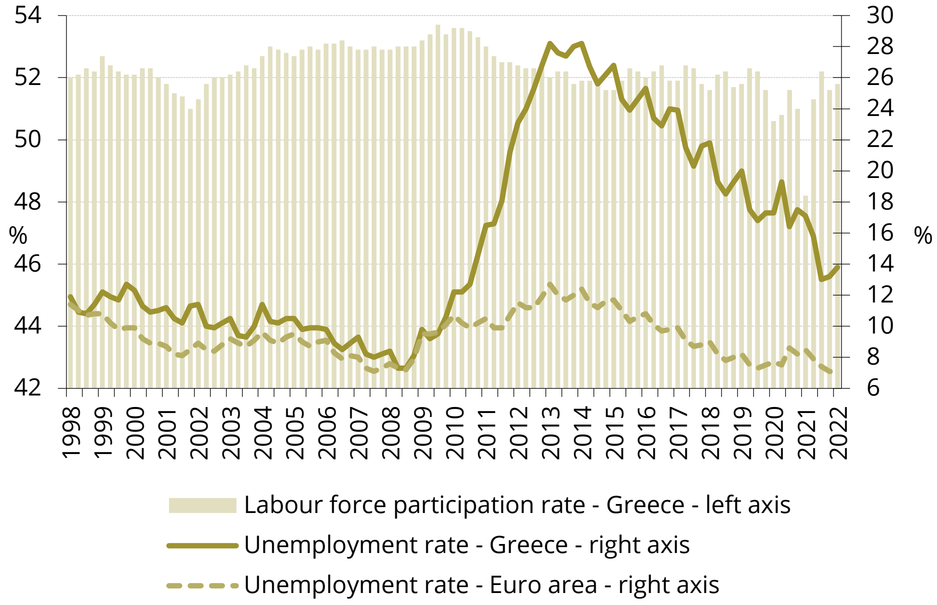
Regarding the evolution of unemployment by age group, the rate is traditionally lower for higher ages. In the first quarter of this year, it fell in all age categories except those with the highest and lowest unemployment rates, i.e. those aged 15-19 and those over 65, respectively. The unemployment rate increased by 0.6 percentage points in the first category, from 60.2% to 60.8%, and by 0.2 percentage points in the second category, from 9.2% to 9.4%. In the remaining age groups, the strongest decrease was observed in those aged 25-29 where the unemployment rate fell from 31.4% to 21.3% (-10.1 percentage points), while equally strong, by 9.6 percentage points, was the fall in the unemployment rate in the 20-24 age bracket (from 41.4% to 31.8%). Much milder was the fall in the unemployment rate in the age categories 30-44 and 45-64, reaching 3.1 (from 16.5% to 13.4%) and 1.5 (from 12.0% to 10.5%) percentage points, respectively.

As regards the duration of unemployment, the share of the long-term unemployed marginally increased in the first quarter of 2022, by 0.3 percentage points, to 58.7% from 58.4% in the first quarter of 2021, with the number of long-term unemployed falling by 59.7k or 13.6% and reaching 380.1k from 439.8k.

In terms of the trends in unemployment by region, the rate increased in 3 of the 13 regions of the country and fell in the remaining 10 regions. The highest unemployment rate in the first quarter of 2022 was recorded in the South Aegean, where it rose by 2.0 percentage points, to 24.4% from 22.4% a year earlier, while the strongest rise in the unemployment rate occurred in the Ionian Islands by 3.4 percentage points, reaching 19.8%. By contrast, the lowest unemployment rate was recorded in the Peloponnese and Attica regions where it reached about the same level. In the first region, it fell to 10.4% in the first quarter of this year from 14.2% a year earlier, while in the second it decreased to 10.5% from 13.0%. The strongest decline in the unemployment rate was observed in the regions of Central Greece and Epirus. In the first, the fall reached 8.0 percentage points, resulting in a decline to 14.7%, and in the second by 7.2 percentage points to reach 12.3%. A significant drop in unemployment was observed in the regions of Thessaly (-5.2 percentage points, to 14.4%), Western Greece (-4.2 percentage points, to 14.6%), and Eastern Macedonia-Thrace (-4.0 percentage points, to 17.4%).

Figure 3.11

Labour force participation and unemployment rates



The unemployment rate decreased in Greece in the first quarter of 2022 to 13.8%, from 17.1% a year earlier.

Sources: ELSTAT – Labour Force Survey, Eurostat

With regard to the trends by professional status, its strongest rise in the first quarter of 2022 was in the most populous category of employees, where it reached 349.5k or 14.4%, to 2,781.2k from

2.431.7k in the same quarter of 2021. Employment increased in the other two categories as well. The self-employed reached 63.4k or 5.9% (from 1.083.2k to 1.146.6k), while the number of contributing family workers increased to 116.3k from 110.1k (+5.6%).

Employment increased in all occupations in the first quarter of 2022 compared to a year ago. In absolute terms, the strongest increase in employment last year was recorded among Service and sales workers, which increased by 145.2k, i.e. to 886.7k from 741.5k (+19.6%). Next in absolute terms came the increase in the number of Professionals, by 87.2k (+11.0%), to reach 879.0k. Finally, employment among Clerical support workers increased by 14.6% or 61.1k people, to reach 480.6k.

Based on the employment status, the number of full-time workers increased in the first quarter of 2022 by 10.0% or by 335.7k compared to the same quarter last year, reaching 3,678.0k. Similarly, the number of part-time workers increased by 83.4k or 29.5%, to 366.1k.

Employment increased in all key sectors in the first quarter of 2022 as compared to a year ago. In the primary sector, employment increased by 9.2k people, or 2.1%, to 453.0k. In the secondary sector, employment increased by 63.9k or 11.3%, reaching 627.0k people, while in the tertiary sector it experienced the highest growth among the main sectors of the economy, by 341.1k (or 13.0%) to reach 2,959.2k employed.

At the level of branches of economic activity, in only two employment declined in the first quarter of this year, while in 19 branches it increased. In particular, employment in Electricity, gas, steam and air conditioning supply fell by 3.8k or 11.2% to reach 30.2k. In the financial and insurance sector, employment also fell by 3.8k people and totalled 73.6k people. By contrast, the strongest employment growth in the first quarter of this year was recorded in Accommodation - Food services, by 129.9k (or +67.3%), totalling 323.0k people. Next came Retail - Wholesale trade and Manufacturing. In the former branch, employment increased by 84.9k or 13.0% (to 737.9k) and in the second by 41.1k or 11.2% (to 409.0k). A marginal increase in employment was recorded in Mining - Quarrying, by 0.1k (to 11.2k people) and in Public administration and defence, by 1.5k (to 372.8k). Employment increased by 28.8k or 9.3% (to 337.6k people) in Education, by 23.5k or 64.7% (59.8k) in Arts, Entertainment and Recreation and by 12.5k or 9.5% (to 144.5k) in the Construction sector.

In conclusion, the employment figures at the sector level show that its rise in the first quarter of 2022 compared to a year ago came mainly from its rise in the following sectors:

● Accommodation and food services (+129.9k), in line with the rise in international arrivals at the country's main airports in the first quarter of 2022 by 6.6 times (from 149.0k to 984.6k)

● Wholesale - Retail trade (+84.9k people), in line with the increase in seasonally adjusted volume index in retail trade and turnover index in wholesale trade between Q1 2021 and Q1 2022 by 10.7% and 22.7% respectively

● Manufacturing (+33.4k people), in line with the increase in the seasonally adjusted industrial production index between Q1 2021 and Q1 2022 by 4.2 %

● Education (+28.8k people).

The seasonally adjusted wage cost index in the Greek economy as a whole fell for the second consecutive quarter, by 1.9%, and stood at 110.8 points in the first quarter of 2022. At the end of this section, we analyse the trends in activity, employment and wage costs per sector in the first quarter of 2022 (Box 3.2).

Figure 3.12

Seasonally adjusted wage cost index and percentage change

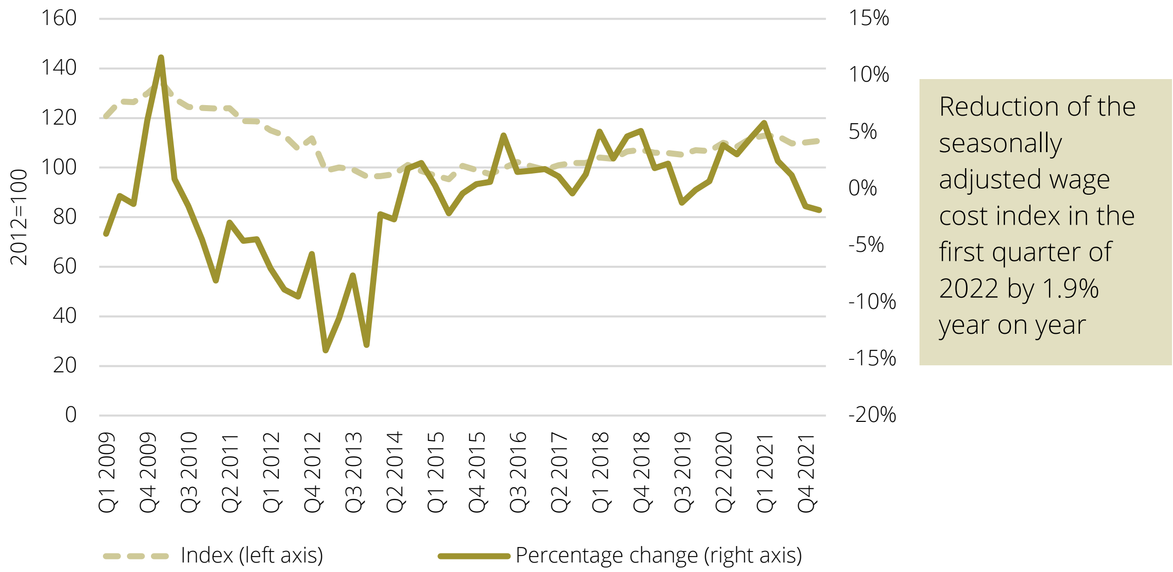


Table 3.10

Population aged 15 years and over by employment status (in thousands)

Reference period	Total	% of Population	Employed	Percentage (%) of the labour force	Unemployed	Percentage (%) of the labour force
2015	9,246.6	52.0	3,610.7	75.1	1,197.0	24.9
2016	9,212.8	52.1	3,673.6	76.5	1,130.9	23.5
2017	9,176.9	52.1	3,752.7	78.6	1,027.1	21.5
2018	9,140.2	51.9	3,828.0	80.7	915.0	19.3
2019	9,103.5	52.0	3,911.0	82.7	818.9	17.3
Q1 2020	9,083.8	50.6	3,852.6	83.8	745.1	16.2
Q2 2020	9,080.5	50.8	3,844.0	83.3	768.3	16.7
Q3 2020	9,077.3	51.6	3,926.8	83.8	756.4	16.2
Q4 2020	9,074.2	51.0	3,878.5	83.8	750.1	16.2
2020	9,079.0	51.0	3,878.5	83.7	755.0	16.3
Q1 2021	9,070.8	48.2	3,625.1	82.9	745.4	17.1
Q2 2021	9,067.1	51.3	3,915.3	84.2	732.5	15.8
Q3 2021	9,063.5	52.2	4,118.3	87.0	615.4	13.0
Q4 2021	9,060.0	51.6	4,053.3	86.8	617.4	13.2
2021	9,065.4	50.8	3,928.0	85.2	677.7	14.7
Q1 2022	9,055.8	51.8	4,044.0	86.2	647.2	13.8

Source: ELSTAT, Labour Force Survey

Medium-term outlook

Following intense developments in the first half of 2022, which include the war in Ukraine, the ensuing energy crisis and the rapid rise in inflation, the weakening of the pandemic, following the rapid spread of the Omicron variant, the basic parameters of the domestic and international socio-economic environment are not expected to diverge significantly in the remainder of the year. Thus, the war in Ukraine is expected to continue for most of the second half of the year and is likely to carry over to 2023. As a result, energy costs will remain at very high levels in the current six months (average increase in 2022 on an annual basis between 50-55%), keeping inflation at very high levels and, on average, at a peak unseen for several decades. As an economic policy response to this trend, government measures to support households and businesses against the energy crisis will continue, which will largely take the place of last year's anti-pandemic measures. Internationally, to curb inflation, a change in monetary policy is expected by the major central banks, with a gradual increase in interest rates after a period of two years when they stood at historically low levels, leading to an increase in the borrowing costs of businesses and households, discouraging investment risk-taking and burdening the servicing of existing debt taken at a floating rate.

On the health issue, there has been an increase in coronavirus cases in recent times, although weather conditions in summer are not conducive to the spread of the virus, which is why a new outbreak of the pandemic is likely to occur from the end of summer or in autumn. In any case, lockdowns are not expected to be reintroduced but — if necessary — protection measures similar to those taken last autumn or last winter are likely.

Taking into account the above expected developments over the remainder of 2022, the trend in domestic employment will be largely determined by the course of tourism, exports of goods, household consumption under the influence of strong inflation, and investment.

On tourism, the rise in international traffic in the first five months of the current year remained strong compared to the same period last year, with international arrivals increasing by 5.93 million or 8.6 times, from 782.9k in the five months of 2021 to 6.71 million a year later. According to SETE data, scheduled international flight seats for the periods 27/06/2022-03/07/2022, 04/07/2022-10/07/2022, and 11/07/2022-17/07/2022 increased year on year by 8.1%, 7.0%, and 1.7%, respectively. Overall, in 2022, IOBE expects revenues from tourism services to expand to 90% of their level in 2019, taking also into account their growth due to nominal inflation. The strong positive dynamics in the tourism sector resulting from these figures are expected to have a corresponding positive impact on the employment of the sector, maintaining and escalating its growth from the first quarter of this year.

The exports of goods will also rise for another year, albeit milder than in previous years, as the eurozone, the main export destination for Greece, will continue to recover, at a rate of 2.5-3.0%, 1.0 to 1.5 percentage points lower than the pre-war forecast. This will continue to support employment in export-oriented branches of Manufacturing, as well as in the auxiliary sectors of Transport and Storage. More broadly, the steady positive dynamics of the exports of goods in recent years will stimulate to some extent employment, both directly and indirectly, through industrial investment. The increase in investment in export-oriented sectors of industry and tourism, mainly by using the resources of the recovery fund, as well as the start of investment in significant privatisation deals, such as in Hellinikon, will significantly boost job creation next year, among other sectors, in Construction.

While there are strong pressures on purchasing power from prolonged exceptionally high inflation, widespread interventions against the energy crisis, combined with the use of part of the accumulated savings during the pandemic, support consumer demand and thus employment in certain sectors (Retail trade, Tourism, Food services, Entertainment - Recreation). The operation of these sectors without strong restrictions throughout the year, in contrast to last year, even if the pandemic resurges strongly for some time, contributes to generating income and consumer demand, fuelling job creation. Jobs will also be created by stronger investment in these sectors.

Taking into account the strong decline in the unemployment rate in the first quarter of this year, combined with the above expected effects on the labour market during the rest of 2022, the forecast for the unemployment rate is revised down to the region of 12.0-12.4%.

According to IOBE's latest data from the business and consumer surveys, in the April-June 2022 quarter the short-term employment expectations deteriorated quarter on quarter in all sectors other than Services where they marginally strengthened. Compared to the same period of 2021, expectations strengthened in Services and Construction, while the relative balance in Retail trade was unchanged and there was a decline in Industry. In more detail:

In Industry, the average balance of the previous quarter fell by 10 points, from +11 points in the first quarter of 2021 to +1 point. Compared to its last year level, the average quarterly index is about 12 points lower. In the quarter under examination, the percentage of industrial enterprises forecasting a decline in their employment in the coming period increased to 14%, from 9% in the previous quarter, while at the same time the percentage of those expecting an increase in the number of jobs weakened to 16% (from 20%). However, the vast majority of enterprises in the sector (70%) foresee stability in terms of employment.

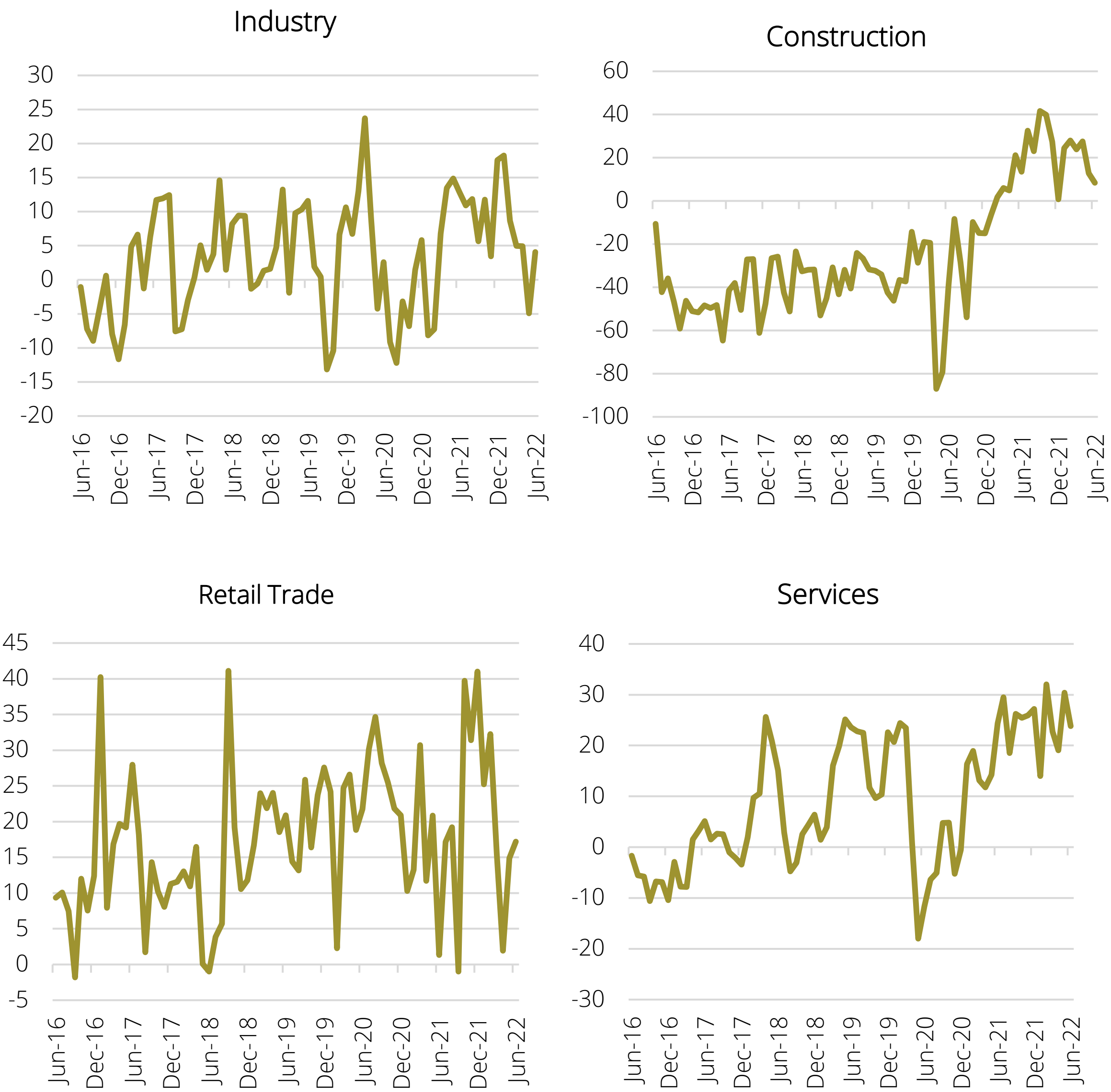
In Construction, the projections point to a slight deterioration in the employment balance of the sector, which declined slightly from +25 points to +16 points, but remained at a marginally higher level compared to the same period of 2021 (+3 points). In the quarter under review, 17% (from 13%) of the companies in the sector expected fewer jobs, while the percentage of respondents expecting employment growth fell to 33% (from 39%). At the sub-sector level, the small improvement in the relative indicator in Private Construction (+18 from +7 points) was not enough to compensate for the sharp decline in the index in Public Works (+14 from +38).

The employment expectations indicator in Retail Trade declined significantly quarter on quarter in the second quarter of this year, to +11 points (from +24), to exactly the same level as last year. Only 3% of the companies in the sector were expecting jobs to fall, while 14% (from 29%) were forecasting employment growth, with those expecting stability moving to 84% (from 67%) of the total. In the individual sectors under consideration, the relative balance decreased significantly in Food - Beverages and Department stores, with the change milder in other sectors, while, by contrast, expectations strengthened significantly in Textiles-Clothing-Footwear.

In Services, the relevant expectations strengthened mildly quarter on quarter, and with somewhat larger intensity year on year. In particular, the employment expectations balance increased by 2 points to +24 points in the second quarter of 2022, while compared to the corresponding period of 2021 it rose by 8 points. Of the companies in the sector, 5% (from 6% in the previous quarter) were expecting employment to decline, with the percentage of those forecasting an increase remaining at 29%. At the branch level, the trend was strongly positive in Hotels-Restaurants and Land Transport and mildly positive in Financial Intermediaries, while expectations in Other business activities and IT services declined.

Figure 3.13

Employment expectations (difference between positive and negative responses)



Source: IOBE

In the April-June 2022 quarter, the short-term employment expectations weakened mildly in all sectors except Services, where there was a marginal improvement.

Box 3.2

Trends in activity, employment and wage costs by sector in the first quarter of 2022

The outbreak of the health crisis in March 2020 and its rapid spread affected economic activity both domestically and internationally. This effect is reflected in the trend in domestic GDP, which from growth of 1.8% in 2019, fell sharply by 9.0% in 2020, while in 2021 GDP experienced an equally pronounced recovery of 8.3%. Despite this evolution of GDP, unemployment over the same period was continuously on a downward path, from 17.3% in 2019 to 16.3% in 2020 and 14.7% in 2021. This trend is primarily attributed to the extensive measures to support businesses and households during the health crisis, especially in periods of its strongest outbreak (special purpose compensation, coverage of social security contributions, suspension of payments of arrears to the tax office and social security funds, non-repayable advance, etc.). Alongside these macroeconomic developments in 2020-2021, the wage costs of enterprises in the secondary and tertiary sectors of the economy decreased marginally by 0.4% after a rise of 2.6% in 2019-2020.

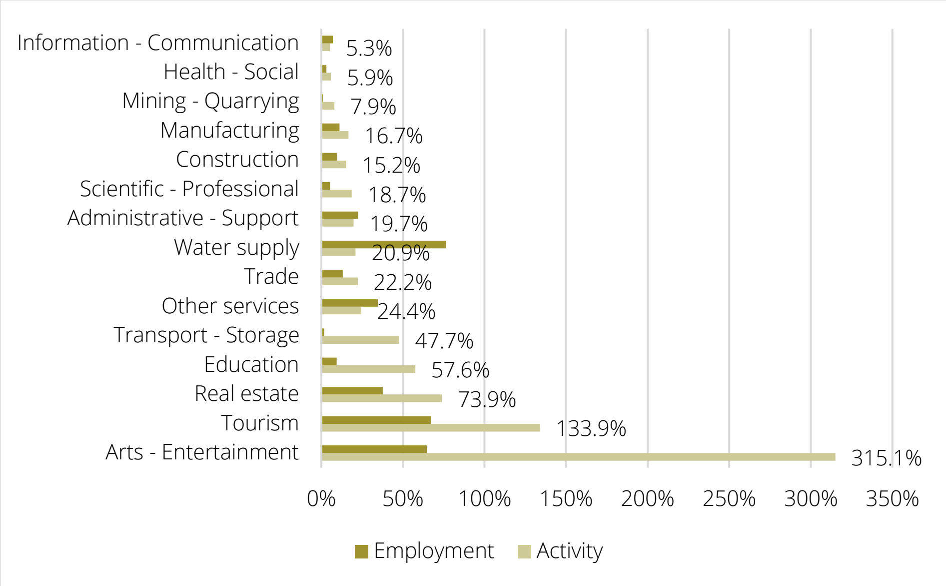
Following the decline experienced by the pandemic from the second quarter of 2021 to almost the end of last year, before the spread of the Omicron variant, it was predicted at the beginning of 2022 that the Greek, but also more broadly, European and global economies would grow at a milder, yet still fast, rate in 2021 this year. According to the IMF's World Economic Outlook last January, the growth rate for this year was projected to reach 4.4% for the global economy and 3.9% for the euro area economy. In addition, according to the European Economic Forecast, Winter 2022, the Greek economy was projected to grow at a rate of 4.9% in 2022. Russia's invasion of Ukraine at the end of last February and the war that has raged since then have radically altered the prospects of all economies. Despite particularly unfavourable developments in the first quarter of this year, the domestic economy grew at a strong pace of 7.0%, slightly milder than in the last quarter of 2021 (8.1%). Given this, as well as the downward trend of unemployment which continued in this period (13.8%, from 17.1% a year ago), it is interesting to examine which sectors of the Greek economy in this difficult juncture showed dynamism, both in terms of their contribution to economic activity and their employment. These sectors could help support employment in the coming quarters, in which the effects of the war will escalate. Another factor of interest to consider in relation to its impact on recent employment trends is wage costs. The analysis is carried out at the single-digit sector level according to NACE Rev. 2.

Starting from an examination of the relationship between sectoral employment and sector activity (Figure 3.14), it appears that during the period under consideration their trends coincide to a large extent. The largest increase in turnover in the Q1 2022 took place in Arts, Entertainment and Recreation, by 315% (+€1.05 billion), where employment increased by 64.7% (+23.5k people). Tourism came next in terms of turnover growth, where it increased by 134% (+€801.7 million) with the increase in employment reaching 67.3% (+129.9k people). In real estate management, turnover increased by 73.9% (+€225.5 million), while the number of employees rose by 37.7% (+2.3k). Activity expanded significantly in Education, by 57.6% (+€35.6 million), where employment increased by 9.3% or 28.8k people. A significant year-on-year increase in turnover in Q1 2022 was also recorded in Transport - Storage, by 47.7% (+€1.32 billion), yet the number of employed in the sector increased only by 1.8% or 3.4k. In Wholesale-Retail trade - the most populous sector of the Greek economy - turnover increased during the examined period by 22.2% (+€6.5 billion), while its employment by 13.0% (+84.9k). In another major sector of the economy, Manufacturing, the increase in turnover by 16.7% (+€2.47 billion) was accompanied by an increase in employment by 11.2% (+ 41.1k employees).

Only in two sectors, namely Electricity, gas, steam - air-conditioning supply and Financial-Insurance Activities, employment decreased in the period considered, by 11.2% (-3.8k employed) and 4.9% (-3.8k) respectively. However, it was not possible to draw any conclusions on turnover and employment, as turnover figures were not published for these sectors. Therefore, it is apparent from the information provided that, in the vast majority of sectors of the Greek economy, the increase in activity, in terms of turnover, was accompanied by an increase in employment. As a result, the correlation between the two figures is positive (0.59, with a level of statistical significance of 98.2%), while in most of the sectors with an increase in turnover and employment, the percentage increase of the first figure was higher than the percentage increase of the second.

Figure 3.14

Percentage change in employment and activity, Q1 2022 (annual changes)



Sources: ELSTAT, Eurostat. Data processing: IOBE

The resulting relationship differs when analysing the relationship between sectoral wage costs and sectoral employment in the first quarter of 2022 (Figure 3.15). Out of all 18 single-digit sectors for which data are available, employment increased in eight sectors despite the increase in wage costs, in two with wage costs increasing employment declined, and the remaining eight saw a reduction in wage costs and increased employment. Therefore, there seems to be no correlation between the trends in wage costs and employment.

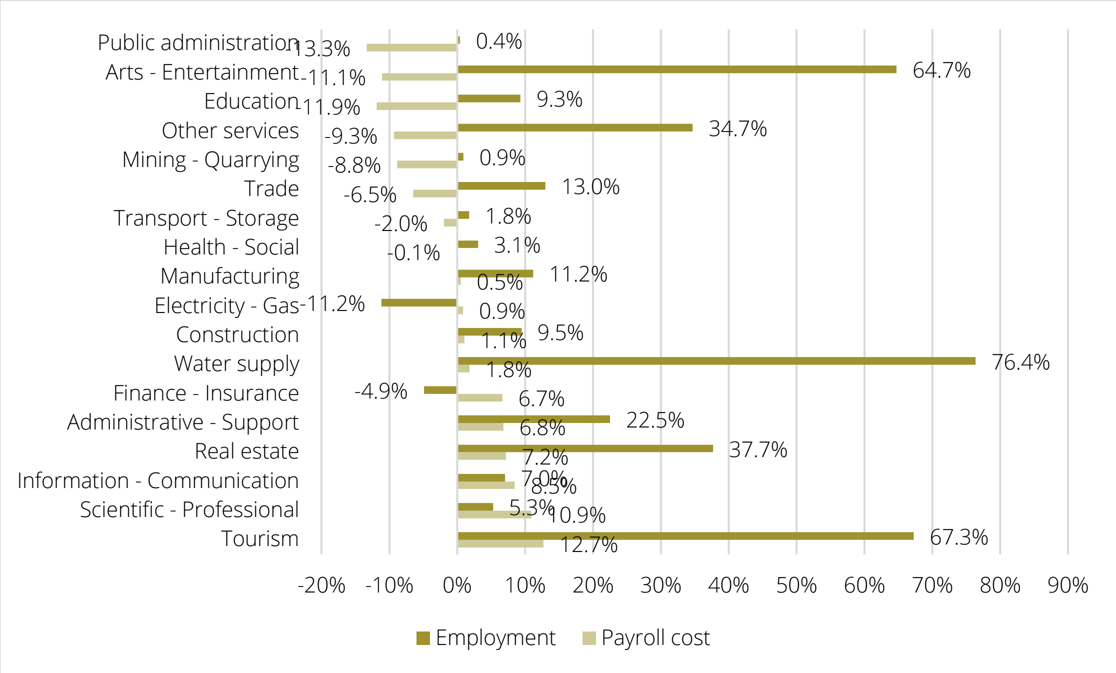
Starting with the first group of sectors, the highest increase in wage costs in the period considered took place in Tourism and Professional-Scientific-Technical Activities. In the first sector, wage costs increased by 12.7% and employment by 67.3%, while in the second sector wage costs increased by 10.9%, while employment increased by 5.3%. In Information - Communication and Real estate management, the rise in wage costs by 8.5% and 7.2%, respectively, did not negatively affect their employment, which rose by 7.0% and 37.7%, respectively. Finally, in two major sectors of the domestic economy, Construction and Manufacturing, employment in the first quarter of 2022 increased by 9.5% and 11.2%, despite the marginal increase in wage costs by 1.1% and 0.5%, respectively.

In the second group of sectors, i.e. Financial-Insurance activities and Electricity-gas-steam-air conditioning supply, at the same time as the rise in wage costs, by 6.7% and 0.9%, respectively, there was a decrease in employment, by 4.9% and 11.2%, respectively.

Moving to the third group of sectors, the marginal reduction in wage costs by 0.1% in Human Health-Social Care was accompanied by an increase in employment by 3.1%, while in Transport - Storage, despite a 2.0% reduction in wage costs, employment rose by 1.8%. Similar trends in wage costs and employment were recorded in Wholesale-Retail trade, the most populous sector of the Greek economy, where the decline of wage costs by 6.5% was accompanied by a significant increase in the number of employed, by 13.0%. In Education and Arts, Entertainment - Recreation, the — relatively similar — reduction in wage costs, by 11.9% and 11.1%, respectively, was accompanied by an increase in the number of employees by 9.3% and 64.7%, respectively. A slightly larger reduction in wage costs in the public administration sector (-13.3%) led to a rise in employment by just 0.4% or 1.5k people.

Figure 3.15

Percentage change of the wage cost* and employment, Q1 2022



*Wage cost index: Employee remuneration plus taxes less contributions (non-seasonally and calendar-adjusted data)

Sources: ELSTAT, Eurostat. Data processing: IOBE

In conclusion, when the analysis focuses on the relationship between wage cost development and employment, the results differ, as they are divided between sectors (eight) where wage costs and employment are rising and sectors (also eight) where wage costs are falling while the number of workers is rising. Therefore, there seems to be no correlation between the two variables. The relevant correlation coefficient was estimated at only 0.10 and was statistically insignificant (31.2%). This conclusion is also drawn from the fact that, in the sectors with the largest expansion of employment and turnover, wage costs have either increased (Tourism, Real Estate Management) or decreased (Education, Arts - Entertainment - Recreation).

In conclusion, the preceding analysis showed, first of all, that in Q1 2022, the rise in turnover in almost all sectors of the Greek economy was accompanied by an increase in employment. Moreover, the employment trend does not appear to be related to wage costs, as in the sectors with the highest percentage growth in jobs and turnover, wage costs either increased or decreased. The significant increase in turnover may have helped to cover to some extent the higher wage costs, despite the simultaneous expansion of employment. Examples can be found in Tourism (+133.9% turnover, +67.3% employment, +12.7% wage cost), Real estate management (+73.9%, +37.7%, and +7.2%, respectively), and Construction (+15.2%, +9.5%, and +1.1% respectively), without forgetting that the increase in turnover in many of the above sectors is accompanied by an increase in other costs.

3.5 Consumer and Producer Prices

- At a 27-year high, the boost of CPI in the first five months of 2022 reached 8.8%, against 1.0% a year ago. The increase came mainly from a hike in energy prices.
- The rate of change of HICP with fixed taxes and without energy reached 3.9% in the five months of 2022, from a decline of 1.1% a year ago.
- In June this year, the HICP is estimated to have increased by 12.0%, down from 11.3% in the previous month, while in the same month last year it had risen marginally by 0.6%.
- For 2022, it is projected that the Consumer Price Index will increase by about 9.0% to 9.6%, primarily due to strong price hikes in energy products and secondarily from stronger household demand.

Recent developments

In January - May 2022 prices increased particularly strongly compared to a year ago, with the average rate of change in the domestic Consumer Prices Index (CPI) reaching 8.8%, against a decline of 1.0% a year earlier. A strong increase of 7.9% was recorded in the Harmonised Index of Consumer Prices (HICP) in the first five months of this year, from a deflation of 1.7% last year. According to preliminary estimates, in June this year, the HICP increased by 12.0%, from 11.3% in the previous month, when the same month last year it saw a marginal increase of 0.6%.

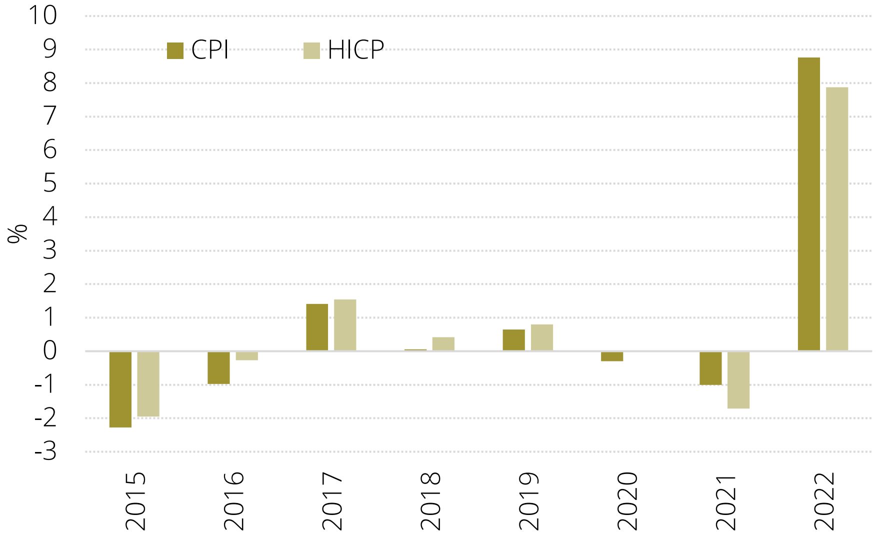
As regards the effects of the components of the HICP on its trend in January - May this year, the significant rise of the harmonised index is mainly, but not exclusively, due to the strongly inflationary effect of energy goods, as the percentage change in the index with fixed taxes and without energy goods stood at 3.9%. Therefore, domestic demand also had a positive effect on the price change. Indirect taxation had virtually no effect on prices in the period January-May of this year (-0.1 percentage points of the HICP), from -0.9 percentage points in the corresponding period of 2021.

With regard to developments in energy prices and their impact on the HICP, the average international oil price increased sharply in January - May 2022 compared to the same period last year. The average price of Brent oil stood at $104.1/barrel this year from $63.2/barrel last year, up by 64.7%. The decline in the euro's average exchange rate against the dollar in the same period, by 8.6%, to 1.10 from 1.20, further strengthened the rise in the price of oil in euros, with its average price standing at €94.5/barrel, 80.2% higher than in the same period last year. The increase in the price of oil, which is a key component of energy costs, explains the average incremental effect of energy prices on the rate of change in the HICP domestically of 3.9 percentage points over the period January — May 2022, compared with a negative effect of 0.2% in the corresponding period of 2021.

The strong increase in the price level in Greece based on the HICP in January - May this year, by 7.9%, brings the country to the middle of the ranking of euro area countries in terms of the rate of change. The average change in the euro area HICP stood at 6.8% over the same period, from 1.3% in the same period of 2021. Domestic demand appears to have been the main driver of price growth in the euro area, as the price index with fixed taxes and without energy goods increased by 3.5% in the first five months of this year, compared to the same period of 2021, when it had increased by 1.1%.

Figure 3.16

Annual change in the domestic CPI and the HICP in Greece (January - May)

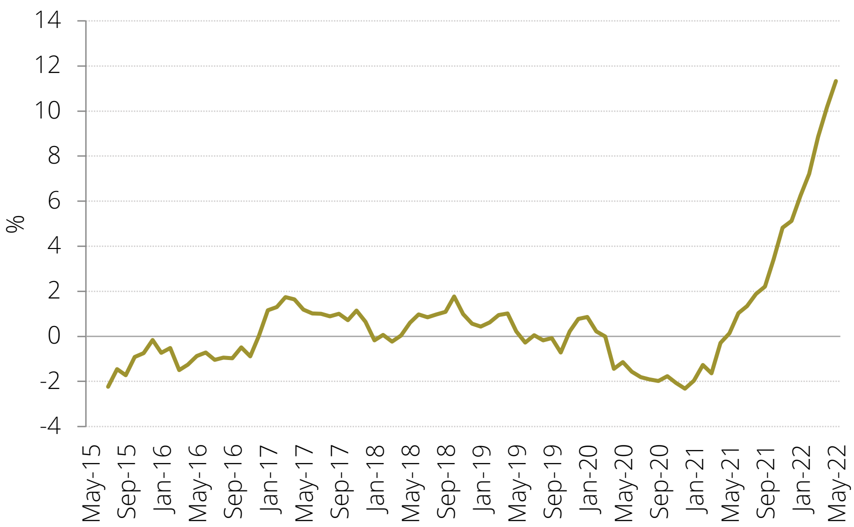


Average CPI year-on-year rise of 8.8% in the first five months of 2022, from 1.0% deflation in the corresponding period of 2021.

Source: ELSTAT, processing IOBE

Figure 3.17

CPI in Greece (annual percentage change per month)



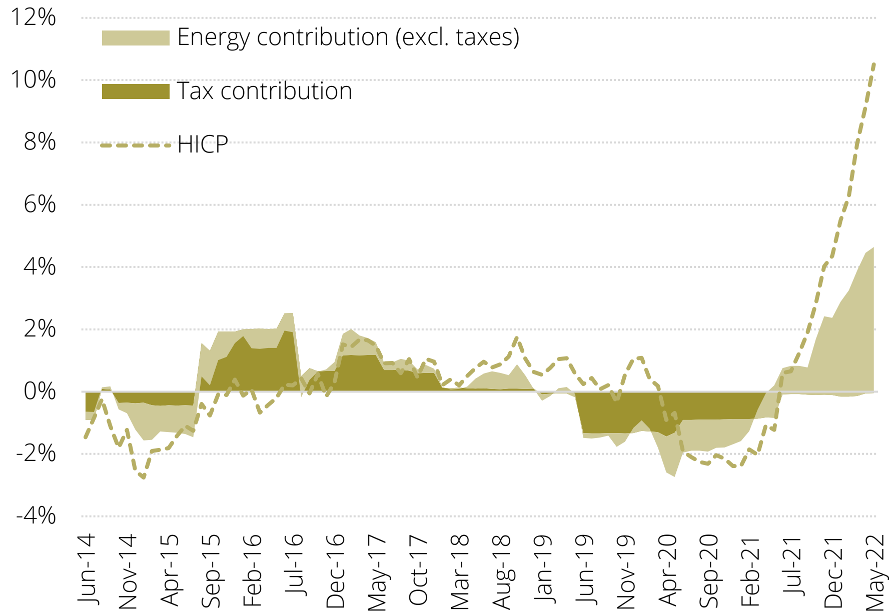
Particularly strong rise in the domestic CPI in May (11.3%), compared with a marginal increase of 0.1% in the corresponding month of 2021. The biggest increase in almost 27 years.

Source: ELSTAT. Data processing IOBE

Figure 3.18

Annual rate of HICP change in Greece and impact of energy product prices and tax changes

Taxes had no effect on prices in January-May 2022 (-0.1 pp), while one year ago they had a negative contribution (-0.9 pp)



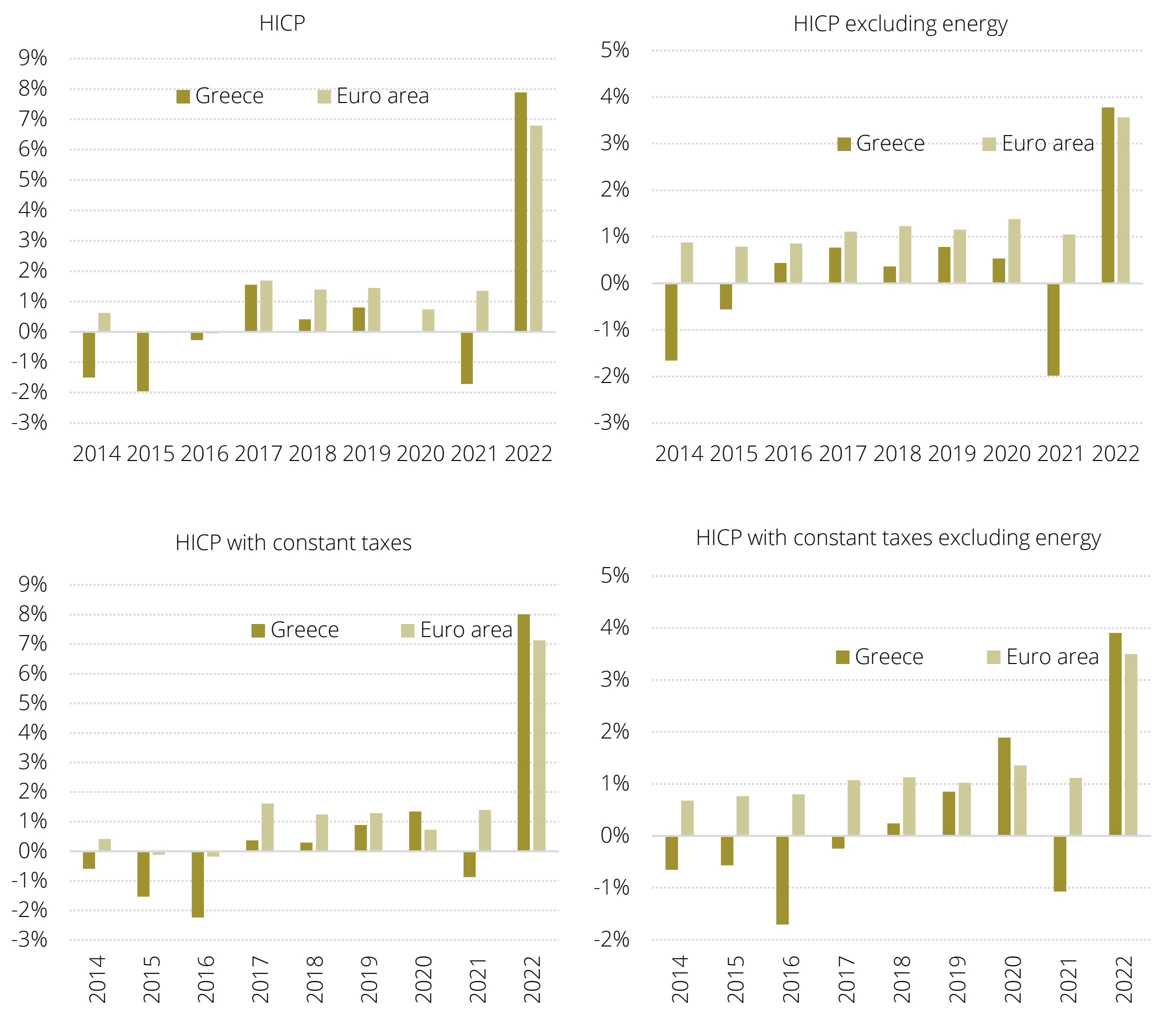
Source: Eurostat, Data processing IOBE

In terms of trends in product and service categories included in the domestic Consumer Price Index, the largest increase in the period January-May this year was recorded in Housing and Transport, reflecting the significant rise in energy prices. The price increase in the Housing category reached 29.6%, from no change a year ago, while in the Transport category prices rose by 14.6%, against 0.8% deflation in the first five months of last year. Significantly milder, yet still quite high, was the change in Food, posting a 8.7% rise from a decline of 0.5% a year ago, followed by Clothing with 5.3%, against a 5.3% decline last year. Prices in Durable goods and Hotels rose by 4.0% and 3.0%, respectively, from a decrease of 1.7% and 0.8% a year ago. The increase in Education prices was limited in the first five months of this year (0.9%), from no change a year ago, while the price increase was lower in Recreation (0.4 %) and Other goods (0.3 %), from a decline of 0.6% and 1.9%, respectively in the same period last year. In Alcoholic beverages and Health services, prices remained essentially unchanged year on year (+0.2% and +0.1%, respectively). In that period, the changes were negative compared to 2020 (-0.2% and 1.1%). By contrast, prices in the Communications category fell by 2.9%, due to a reduction in the mobile subscriber levy, after a 1.7% drop a year ago.

In terms of price trends on the production side in the first four months of 2022, for which data are available, the Producer Price Index (PPI), in the domestic and external markets as a whole, rose sharply compared to the same period of 2021 (+40.1%). In detail, the PPI excluding energy increased in the first four months of 2022 by 7.5%, compared with a milder increase in the corresponding period of 2021 (1.4%). In terms of trends in industrial product prices, refined petroleum products and electricity-gas recorded the largest increase, by 80.3% and 74.8%, compared to 17.4% and 0.8% respectively a year ago. A sharp rise in producer prices was also recorded in crude oil and natural gas, by 70.8%, after a rise of 18.5% in the initial four months last year. Next, with a lower, yet still fairly high rate of positive change, came Coal-Lignite, with 24.4%, after a stronger rise of 53.0% a year earlier, and Base metals, with 21.3%, after a lower rise of 5.4% a year earlier. A significant increase in producer prices was recorded in Wood Products (+18.8%), compared with price stability last year (+0.1%). An increase in producer prices was recorded in January-April this year in Metal and Plastic products too, by 14.1% in both, against a rise of 2.8% and no change (+0.1%), respectively a year ago. Slightly milder was the increase in Mineral ores, 13.5%, after a rise of 2.1% a year ago. By contrast, the trend in producer prices in pharmaceuticals and beverages was slightly negative, by 0.7% and 0.3%, respectively, after a decrease of 1.2% and a rise of 1.4%, respectively, one year ago.

Figure 3.19

Annual HICP change in Greece and the Euro area (January - May)



Source: Eurostat. Data processing IOBE

Particularly strong domestic price increase in the first five months of 2022, mainly due to the inflationary impact of energy goods (by 3.9 percentage points).

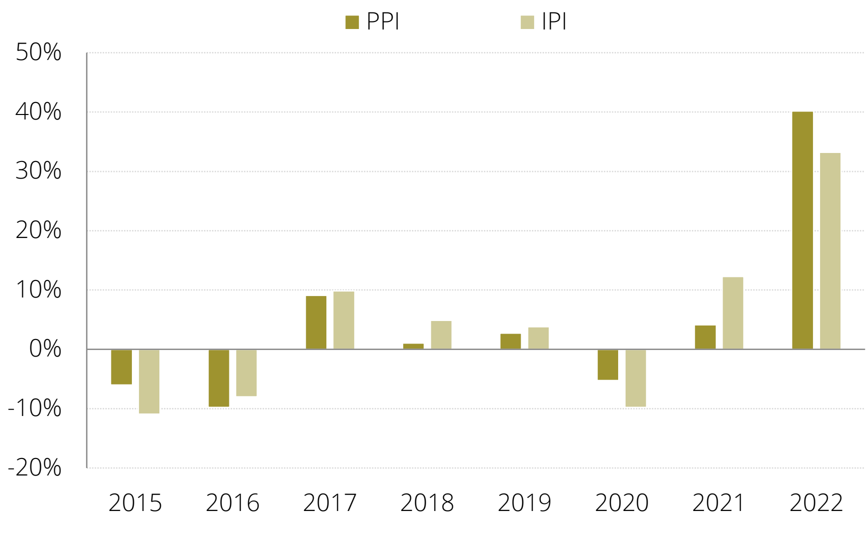
The Import Price Index (IPI) increased strongly in January - May of this year, by 33.2%, compared with a significantly lower increase of 12.3% a year ago. The strengthening of the same index in the euro area, +27.9%, was slightly weaker than in Greece, against an increase of 3.2% in the corresponding period of 2021. The strong rise in import prices domestically ranks Greece first along with Estonia among ten euro area countries for which data were available in that period, with France coming next with a rise of 30.4%. It should be noted that in all euro area countries for which data are available, there has been a strong rise in import prices in the five months of this year compared to 2021, which mostly reflects the inflationary effect of the strong rise in energy prices.

Among the individual categories of imported products, the largest increase in the first five months of 2022 was recorded in the prices of refined petroleum products, by 80.6%, mainly due to the positive effect of energy prices, compared with a boost of 22.1% in the corresponding period of 2021. Slightly milder was the increase in Crude oil extraction, 76.3%, and Electricity supply, 56.3 %, compared with milder yet strong reinforcement respectively in the first five months of 2021 (49% and 11.8%). A particularly strong surge in prices was also recorded in Base metals, by 31.0%, and Mineral ores, by 14.3%, from a milder rise of 8.5% and 1.8% a year ago. By contrast, prices fell between January and May 2022 in Beverages, by 1.8 %, and in Leather goods, by 2.4 %, after their rise of 1.2% and 0.6% respectively a year earlier.

Figure 3.20

Annual change of PPI and IPI in Greece (January - April)

A rise in import prices (33.2%) in the first quarter of 2022, mainly due to a positive impact of energy prices. Strong rise in producer prices in the same period of 2022 (+40.1%).



Source: ELSTAT. Data processing IOBE

Medium-term outlook

An examination of the trends in the main components of the domestic Consumer Price Index in January-May this year showed that its particularly strong increase was mainly driven by the inflationary effect of energy prices. Russia's war on Ukraine, countries that play an important role in the production of energy products (oil, natural gas) and raw materials, and the widespread sanctions gradually imposed by the United States, the European Union and the United Kingdom on Russia, are the main cause of the price boom, coupled with the ongoing global economic recovery since last year. Moreover, the strong domestic recovery in 2021 has fuelled a significant boost in consumption demand, which is an additional driver of price growth.

In detail on recent developments affecting the Consumer Price Index, following the sanctions gradually imposed on Russia due to its invasion of Ukraine, a new set of sanctions was imposed in May, mainly concerning the gradual reduction of imports and transportation of crude oil, as well as some petroleum products from Russia to the EU. The process will take 6 months for crude oil and 8 months for other refined petroleum products. The UK has also pledged to halt imports by the end of the year, while the US has already imposed an embargo on Russian oil and gas. The new EU sanctions package also includes the exclusion of key Russian banks from the international SWIFT payment system. In response to the new sanctions, Gazprom reduced its gas exports to Europe via Ukraine twice in June, reaching 41.4 million cubic meters, from 42.1 million barrels per day at the end of May. Following that, Europe is looking for ways to cover up to 2 million barrels of Russian crude oil a day, and about 2 million barrels of refined products per day, which it imported from Russia before the war in Ukraine. In addition, OPEC was unable to increase its production in line with its targets, exacerbating the global oil supply deficit.

Energy prices have been on a growth path since the second half of 2021 due to the rapid global recovery, with oil consumption now significantly higher than a year ago.

In the second quarter of this year, the international price of Brent oil jumped above $113.5 per barrel, up by 64.7% from a year ago. The euro/dollar exchange rate in the second quarter of 2022 averaged 1.06, 11.6% lower than in the same period last year. As a result, the average price of oil in euros reached €106.6/barrel in April-June, recording a particularly large increase compared to a year ago, by 86.4%.

A new package of measures was announced in June, following previous packages, to halt price increases in energy domestically. The total cost of additional interventions amounts to €3.2 billion by the end of the year, while they are estimated to absorb 70-80% of the kilowatt-hour increase. In detail, the new measures extend the electricity subsidies for May and June, with the subsidy now covering consumption above 300 KWh, subsidising 60% of the increase for all bills from December 2021 to May 2022 (Power pass). The new support measures also concern a diesel subsidy of €0.15/litre, provided at source in May and June (Fuel pass). They also include the expansion of the fuel pass with a higher subsidy and for more beneficiaries. Finally, the electricity and gas rebate mechanism has been strengthened horizontally since July, with a time horizon of up to 1 year, while introducing a mechanism for absorbing additional fuel tax revenues, with the aim of keeping prices at slightly higher levels than a year ago. Regarding businesses, the unit electricity price subsidy stood at €120/MWh, while for small and medium-sized enterprises the additional subsidy amounts to €50/MWh, reaching a total of €170/MWh, a level estimated by the government to absorb 80% of the increase for 1.250.000 enterprises. Since last November, the payment of universal service charges for businesses connected to the mid-voltage grid has been suspended. The widening of interventions against the energy crisis further mitigates their effects on inflation, as they are taken into account in the calculation of the CPI. That said, the measures prop up a significant part of the demand from households and businesses for energy products, preventing a significant fall in their prices.

With regard to the developments surrounding the health crisis, all measures to contain it domestically related to sectors of the economy, as well as to movement and access of people to indoor spaces, were lifted in early May - early June. These developments are conducive to consumer demand, but also contribute to higher prices.

Moving to the expected effects of indirect taxation interventions, the reduction in VAT from June 2020 on specific goods and services has been extended again, for the whole of this year. However, as one year has elapsed since the start of its implementation, no further substantial effect on year-on-year price changes is expected. The deduction of VAT on certain services (gyms, dance schools, etc.) from October 2021 was also extended until the end of 2022. That said, this has had a limited effect on containing inflation, as these services make up a small part of household expenditure. The price effect of the decrease in the mobile subscription levy from 1 October 2021 is most noticeable, with the relevant category showing the largest fall in prices among the categories of goods and services of the CPI in January — May 2022, as shown in the previous subsection. This effect will likely last for a year after the adjustment of the levy. A containment effect on the rise in food prices is expected to come, firstly, from a reduction in VAT on fertilisers and feedstock, from 13% to 6%, and secondly, from the refund of farmers' excise duty on diesel, measures that were decided before the war in Ukraine and will be in force for the whole of this year.

With regard to the expected trends in consumer demand and its impact on prices, the suspension of the solidarity levy and the reduction of the social security contributions for a second year will not lead to any additional change in disposable income and therefore in consumer demand, therefore also in prices. ENFIA's new design is expected to bring some income support, as it now includes more tiers and coefficients in order to avoid heavy burdens on households. Receipts from the revised tax are projected to be reduced by €350 million. [24] Significant support for income and purchasing power is expected from the income support measures for vulnerable social groups (low-pension receivers, people with disabilities, beneficiaries of minimum income, etc.) and the increase in the minimum wage announced in April. Disposable income will be propped up mainly by the significant expansion of employment this year, in sectors where a significant part of household consumption takes place and where significant restrictions were periodically imposed in 2021 (Retail Trade, Food Services, Hotels, Entertainment-Recreation).

Ending the section of inflation forecasts with estimates of energy cost dynamics, the international price of Brent oil averaged $123 per barrel in June, up 68.1% from a year ago, under the influence of uncertainty over the course of the war and new sanctions on Russia's energy exports. The euro/dollar exchange rate in June 2022 stood at 1.05, 12.3% lower than in the same month of 2021. As a result, the average price of oil in euro stood at €116.4/barrel, recording an increase of 91.7% compared to a year ago.

Although OPEC production fell by 176,000 barrels/day in May, to 28.51 million barrels/day, due to losses in Libya, Nigeria, and other countries, the agency did not decide to increase its production to cover these shortfalls. At an OPEC+ meeting at the end of April with Russia's participation, it was again decided to extend its members' agreement to gradually increase oil production by 432,000 barrels per day (bpd) for May and June. OPEC's oil output in May was 33.7 million barrels/day, 1 percent higher than the average output in the first quarter of 2020 (33.4 million barrels/day).

According to international organisations, Russia produced about 10 million barrels/day (b/d) of oil in June, with its production expected to increase mildly in July, by about 600,000 barrels/day, but remaining by about 300,000 b/d below the average levels before the invasion in Ukraine. Russia's

[24] Law 4916/2022

production fell by about 1 million barrels per day in recent months as a result of Western sanctions. OPEC has estimated that Russia's total liquid fuel production will fall from 11.3 million barrels/day in the first quarter of 2022 to 9.3 million barrels/day in the fourth quarter of 2023. However, Russia's oil production and export capacity will continue to be available, although there is considerable uncertainty about which countries and to what extent they will continue importing oil from it. That said, imposing sanctions on Russia's oil exports would significantly increase its reserves, making it necessary to promote its oil reserves into new markets, mainly to Asia. China and India are the largest developing markets for Russian oil, with their shares now reaching 30% and 20%, respectively, of Russian oil trade. [25]

At its last meeting in June, OPEC+ agreed to increase production by 648,000 barrels per day from July to September in order to partially compensate for Russian losses. The US president's upcoming visit to Saudi Arabia, the strongest player within OPEC+, aims to exert indirect pressure on other members of the organisation to circumvent Russia's influence on production-level decisions, in order to increase oil production. An imminent increase in production in Saudi Arabia and the United Arab Emirates is therefore probable. Saudi Arabia produces 10.5 million b/d and has a nominal capacity of 12.0-12.5 million b/d, which theoretically allows it to increase production by 2 million b/d. The UAE generates about 3 million b/d, while having a capacity of 3.4 million b/d and is working to increase it to 4 million b/d. Taking into account these capabilities, OPEC+ oil production is expected to average 29.2 million b/d in the second half of 2022, up by 0.8 million b/d per day compared to the first half of this year. Despite a planned increase in oil production in the coming months, the total output of OPEC+ may not compensate for the limited oil production by some of its members and losses in Russian production.

Regarding developments in oil production in the US, the largest non-OPEC producer, the release of 1 million barrels per day for six months from the country's strategic reserves was announced in March in an effort to lower gasoline prices that have skyrocketed during Russia's war with Ukraine. The release of 180 million barrels is equivalent to about two days of global demand and is the third time Washington has used its Strategic Petroleum Reserve (SPR) in the previous six months. Although US oil production is expected to average 94% of its operating capacity in the third quarter of 2022, it will be 900,000 b/d lower than its production in late 2019.

International analysts estimate that US oil production will increase on average to 17.9 million barrels/day in 2022, down 1 percent from the beginning of 2021.[26] The countries of the International Energy Agency, including the United States, with total reserves of about 1.5 billion barrels, have released 60 million barrels from their reserves. Over the whole of 2022, non-OPEC supply growth is expected to be down by 300,000 bpd, compared to the target of 2.4 million bpd.

Despite the stimulus interventions on the oil supply side, analysts believe that it will continue to fall significantly short of global market demand, as oil companies from around the world, refineries, and shipping companies avoid Russian oil.

On the side of factors affecting oil demand, the deteriorating outlook for global demand recovery this year and the next is reflected in recent macroeconomic forecasts of international organisations. According to these forecasts,[27] global GDP growth is expected to slow this year to around 3%, well below the rate projected last December (4.5%). Growth is expected at weaker rates

[25] www.reuters.com
[26] Energy International Agency, Short-Term Energy Outlook, June 2022
[27] Economic Outlook, Volume 2022 Issue 1: Preliminary version, OECD, June 2022

than originally predicted in almost all economies, as Russia's invasion of Ukraine and turbulence in international supply chains are seriously damaging economic activity. As can be expected, global economies are suffering from higher commodity prices and sharp rises in energy goods prices, developments that reinforce inflationary pressures and limit real incomes and expenditure, further slowing the recovery. However, due to a milder-than-expected global recovery, demand is expected to strengthen this year, with global oil consumption estimated at an average of 100.3 million barrels/day in 2022, up by 3.36 million barrels/day from 2021. This increase, coupled with lags in production and widening sanctions on Russia, prevent the decline in oil prices in the current period and in the near future from the high levels at which they are now found.

To sum up, it is obvious that the trend in the price of oil and energy goods for the rest of 2022 will depend to a large extent on the development of the Russian war in Ukraine, on the implementation of recent sanctions on Russia, as well as any additional ones imposed on it, as well as on the strategies of the companies regarding the purchase of Russian oil and/or its trade in the global market. The degree of reaction of other oil-producing countries, as well as the potential impact of macroeconomic developments on global oil demand, will play a key role in shaping its price. Against this background, the average oil price for 2022 is estimated at $107/barrel from $70.8/barrel in 2021 (+51.1%). The euro/dollar exchange rate this year is expected to average 1.07, down by 9.6% from 2021. [28] As a result, the average price of oil in euros will be €100/barrel in 2022, recording an increase of 67.1% compared to last year.

Taking into account the above trends and developments in the main factors affecting consumer prices and taking into account the other assumptions and forecasts of the IOBE macroeconomic developments scenario (continued war for most of the second half of 2022, revenues from tourism at 90% of their 2019 level, no general restrictive measures due to the pandemic, private consumption increase of 3.5-4.0% compared to a year ago), the Consumer Price Index is projected to increase strongly this year, at a rate of about 9.0%-9.6%, which will be a 27-year high.

The monthly business and consumer surveys of IOBE provide results that serve for the coming period as leading indicators for the price developments on the supply side.

The trends in price change expectations were mixed in the second quarter of 2022 compared with the first quarter of this year, with Retail trade and Services strengthening and the indicator in Industry and Private Construction falling. Year on year, the price expectations strengthened in all sectors, especially in Retail and Services and notably in the remaining two sectors. In more detail:

In Industry, the price expectations in the second quarter of the year marginally weakened quarter on quarter. In particular, the index declined by 2 points in the quarter under review and stood at +50 points, while it was 23 points higher than in the corresponding quarter of 2021. Of the companies in the sector, 4% were expecting prices to fall in the short term, while the share of respondents expecting prices to grow remained at 54%, with the remaining 43% expecting price stability.

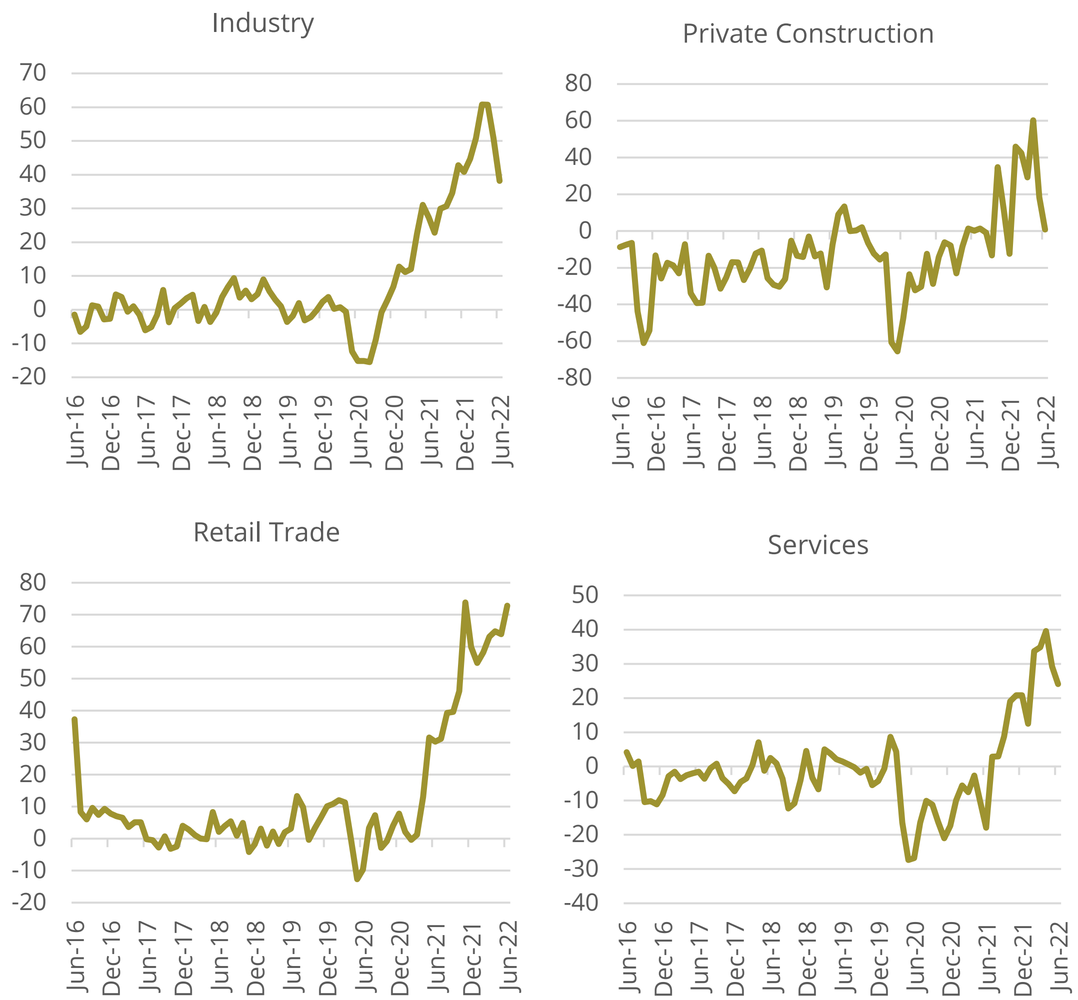
In Retail trade, the balance of +59 points in the previous quarter improved by 8 points, while at the same time it was 42 points higher than in the same period of 2021. Of the companies in the sector, only 2% were expecting prices to fall in the short term, while the percentage of those projecting price rises increased to 69%, with the remaining 29% (from 38%) expecting price stability. In the retail sub-sectors, the quarter-on-quarter changes in price expectations in the second quarter of

[28] Macroeconomic projections, ECB, June 2022

2022 were positive in all individual sub-sectors under review, with the exception of the balance in Department stores which slightly declined.

Figure 3.21

Price expectations over the coming quarter (difference between positive and negative answers)



Source: IOBE

Quarter-on-quarter trends in price change expectations are mixed in the second quarter of 2022, with the relative balance rising mildly in Services and Retail trade, declining marginally in Industry and Services, while in Private Construction there is a stronger decline.

The average indicator of price change expectations in Services in the quarter under review improved slightly quarter on quarter and stood at +31 (from +27) points, while at the same time it moved to a significantly higher level year on year (+41 points). In the current quarter, 4% (from 3%) of the companies in the sector were expecting a fall in prices and 35% (from 30%) a rise. The indicator moderately strengthened in most individual sub-sectors, with the exception of Financial intermediaries which declined marginally and the IT sector where it weakened more strongly.

Finally, in Private Construction, the strongly positive balance of +39 points in the previous quarter declined significantly, to +26 points, having strongly increased compared to the corresponding level in 2021 (+29 points). In addition, 8% (from 7%) of the companies in the sector were expecting a fall in prices, while the percentage of those expecting prices to rise reached 34% (from 47%), with 58% (from 46%) predicting price stability.

3.6 Balance of Payments

- A significant increase in the current account deficit in the first quarter of 2022 to €8.1 billion, compared with €4.7 billion in 2021
- Deterioration in the goods and primary income accounts, partly offset by an improvement in service and secondary income accounts

Current Account

January - April 2022

In the first quarter of 2022, the Current Account (CA) had a deficit of €8.1 billion, almost twice as high as in 2021 (€4.7 billion). The deficit was exacerbated by a large increase in the deficit in the goods account, which was not offset by the improvement in the services and secondary income accounts.

In detail, the deficit of the goods account stood at €11.7 billion in January-April, up by €4.7 billion compared to 2021, due to more than double the increase in imports over exports. Exports increased to €15.4 billion (€3.7 billion),[29] with fuel exports expanding by €1.6 billion and exports excluding fuel and ships by €2.04 billion. The imports of goods increased to €27.1 billion (€8.4 billion), while fuel imports increased by €3.9 billion and imports excluding fuel and ships by €4.45 billion. Note that fuels accounted for 45% of the growth in exports and imports, compared with 28% for exports and almost zero in the expansion of imports in 2021. The deficit of the balance of goods without fuel and ships stood at €8.1 billion in 2022, up by €2.4 billion.

The positive balance of the Services Account increased by €865 million to €1.9 billion in the first four months of 2022, approaching the level of 2019 (88%). The improvement came from a strong recovery in transport receipts. In detail, total receipts from Services amounted to €10.1 billion, up by 48% compared to last year. Receipts from travel services reached the level of 2019, at €1.1 billion, with an increase of 577% from last year. Transport services rose 44% to €7.1 billion, while receipts from other services reached €1.9 billion, an increase of 10%. Total service payments stood at €8.2 billion, 42.0% higher than in the previous year. Payments for travel services increased by 230% to €484 million, transport payments increased 52.0% to €5.7 billion, while payments for Other Services reached €1.9 billion, with an increase of 6.0%.

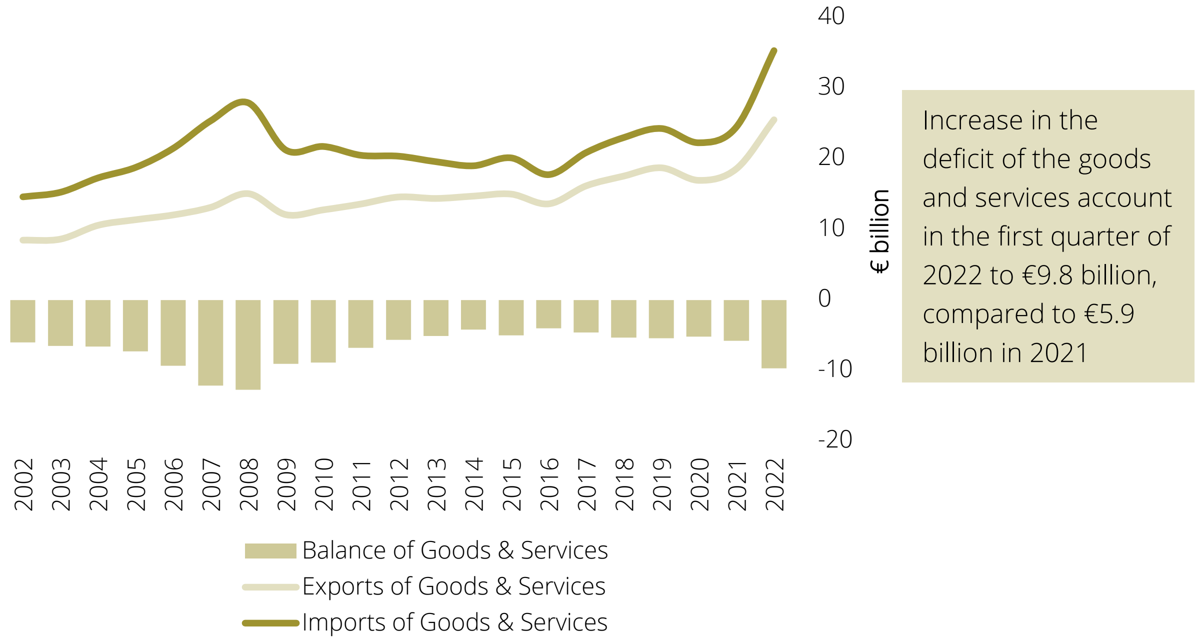
In the primary income account, there was a surplus of €1.2 billion in the first four months of this year, down year on year by €349 million. Receipts fell to €2.8 billion, from €3.1 billion in 2021, while payments remained at €1.6 billion. In detail, labour receipts increased to €79 million, investment receipts decreased by 11%, to €994 million, while other primary incomes (subsidies and taxes on production) decreased by 12%, to €1.7 billion. Payments for income from labour to €502 million

[29] The figures in brackets reflect the absolute change in relation to the corresponding period of the previous year, unless otherwise stated.

(+ 21%), from investment fell by 6% to €946 million, and from other primary incomes fell by 14% to €159 million.

Figure 3.22

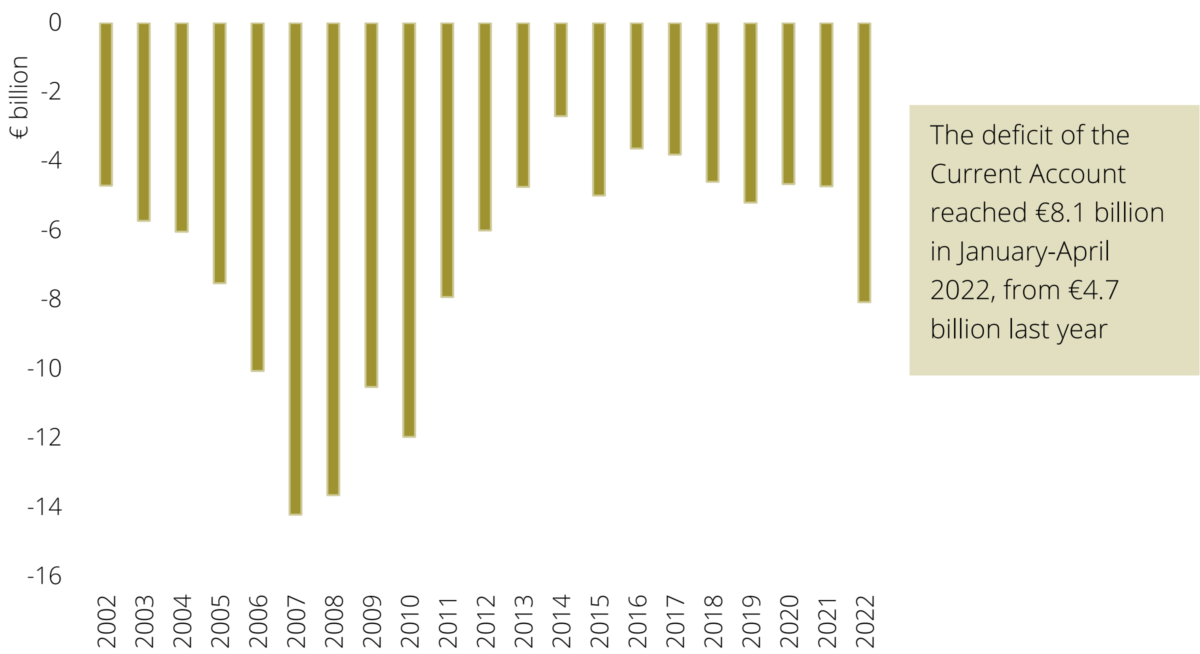
Imports-Exports of Goods and Services (January - April) 2002-2022



Source: Bank of Greece. Data processing IOBE

Figure 3.23

Current Account (January - April), 2002-2022

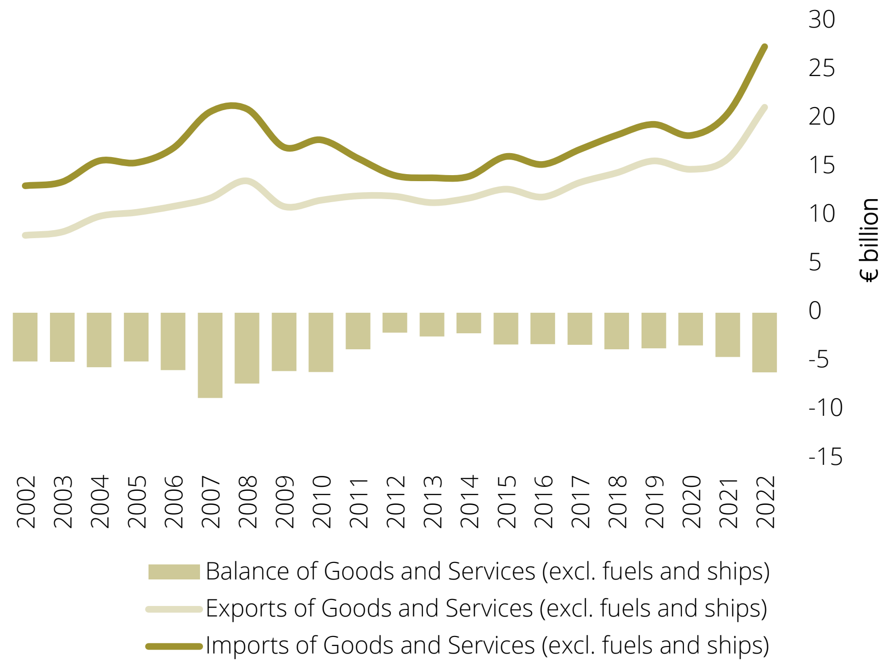


Source: Bank of Greece. Data processing IOBE

Figure 3.24

Imports-Exports of Goods excluding fuel and ships (January - April) 2002-2022

Expansion of the deficit of the Goods and services account without fuels to €6.2 billion, from €4.6 billion in 2021



Source: Bank of Greece. Data processing IOBE

The Secondary Income Account recorded a surplus of €570 million, compared with a deficit of €303 million in 2021, with receipts rising to €1.9 billion, due to the disbursement of the first tranche from the Recovery and Resilience Facility (RRF).

Capital Account

The surplus of the Capital Account[30] increased to €913 million in January-April, compared with €221 million in 2021, with an increase in receipts to €1.3 billion, and a decrease in payments to €370 million.

Finally, the current and capital account, reflecting the relationship of an economy with the rest of the world as a lender or borrower, had a deficit of €7.1 billion, compared with €4.5 billion in 2021.

Financial Account

The Financial Account was in deficit in the first quarter of this year, by €6.1 billion, compared with €3.8 billion in 2021.

[30] The capital account shows capital transfers, i.e. unilateral receipts and payments between residents and non-residents linked to fixed capital formation. Capital transfers mainly comprise part of the transfers (receipts) from the Community budget of the European Union to the General Government (withdrawals from the Structural Funds – with the exception of the European Social Fund – and from the Cohesion Fund under the CSFs).

In the sub-accounts, the net receivables of residents from direct investment abroad increased by €240 million, while the net liabilities to non-residents (non-residents' investments in the country) increased by €3.1 billion.

Under portfolio investment, the foreign receivables of residents increased by €5.8 billion, while the liabilities to non-residents increased by €2.6 billion. In the category of other investments, the claims of residents fell by €2.0 billion, while their liabilities increased by €2.3 billion.

Finally, the country's foreign reserve assets stood at €11.5 billion at the end of April 2022.

Table 3.11 Balance of payments (€ million)

			January – April			April	
		2020	**2021**	**2020**	**2021**	**2020**	**2021**
I	CURRENT ACCOUNT (I.A + I.B + I.C + I.D)	**-4,649.5**	**-4,714.2**	**-8,063.8**	**-1,131.2**	**-2,071.8**	**-1,615.7**
	GOODS AND SERVICES ACCOUNT (I.A + I.B)	**-5,330.4**	**-5,932.9**	**-9,806.9**	**-879.9**	**-1,669.0**	**-2,130.6**
I.A	GOODS ACCOUNT (I.A.1 - I.A.2)	**-6,860.6**	**-6,968.0**	**-11,707.2**	**-1,266.4**	**-1,964.8**	**-2,945.4**
	Oil balance	-1,804.9	-1,235.7	-3,527.4	-283.6	-437.6	-901.9
	Trade balance excluding oil	-5,055.8	-5,732.2	-8,179.8	-982.8	-1,527.1	-2,043.5
	Ships balance	-41.2	-30.7	-40.3	-7.1	-12.3	-16.2
	Trade balance excluding ships	-6,819.4	-6,937.3	-11,666.9	-1,259.3	-1,952.5	-2,929.2
	Trade balance excluding oil and ships	-5,014.6	-5,701.5	-8,139.5	-975.7	-1,514.8	-2,027.3
I.A.1	Exports of Goods	**9,632.6**	**11,683.0**	**15,356.5**	**1,981.2**	**3,101.7**	**4,031.2**
	Oil	2,152.8	2,717.9	4,342.0	305.5	720.0	1,216.4
	Ships (sales)	17.4	24.5	34.0	1.4	8.4	9.1
	Goods excluding oil and ships	7,462.5	8,940.5	10,980.5	1,674.3	2,373.3	2,805.7
I.A.2	Imports of Goods	**16,493.3**	**18,650.9**	**27,063.6**	**3,247.6**	**5,066.4**	**6,976.6**
	Oil	3,957.7	3,953.6	7,869.4	589.2	1,157.6	2,118.3
	Ships (buying)	58.6	55.2	74.3	8.5	20.7	25.3
	Goods excluding oil and ships	12,477.0	14,642.1	19,119.9	2,650.0	3,888.1	4,832.9
I.B	SERVICES ACCOUNT (I.B.1-I.B.2)	**1,530.3**	**1,035.1**	**1,900.2**	**386.5**	**295.8**	**814.7**
I.B.1	Receipts	**7,200.5**	**6,798.2**	**10,067.7**	**1,583.5**	**1,894.8**	**3,049.0**
	Travel	607.1	165.0	1,116.7	13.8	58.8	647.0
	Transportation	5,137.3	4,924.1	7,073.7	1,209.0	1,372.7	1,935.1
	Other services	1,456.1	1,709.0	1,877.3	360.6	463.3	467.0
I.B.2	Payments	**5,670.2**	**5,763.1**	**8,167.5**	**1,196.9**	**1,599.0**	**2,234.2**
	Travel	401.3	146.6	483.7	8.9	55.6	214.8
	Transportation	3,655.1	3,784.9	5,741.2	843.9	1,098.0	1,517.0
	Other services	1,613.8	1,831.6	1,942.5	344.1	445.4	502.4
I.C	PRIMARY INCOME ACCOUNT (I.C.1-I.C.2)	**634.3**	**1,522.0**	**1,173.3**	**-125.9**	**-67.7**	**-30.5**
I.C.1	Receipts	**2,778.5**	**3,128.3**	**2,779.7**	**362.5**	**356.4**	**371.5**
	From work (wages, compensation)	66.8	67.1	79.0	17.1	16.5	20.5
	From investments (interest, dividends, profit)	938.6	1,122.1	994.2	200.7	256.3	244.4
	Other primary income	1,773.2	1,939.0	1,706.5	144.8	83.7	106.5
I.C.2	Payments	**2,144.2**	**1,606.3**	**1,606.4**	**488.4**	**424.0**	**402.0**
	From work (wages, compensation)	474.4	413.7	501.6	120.0	105.8	135.4
	From investments (interest, dividends, profit)	1,538.9	1,008.9	946.0	337.2	258.7	230.4
	Other primary income	130.9	183.7	158.8	31.2	59.6	36.2
I.D	SECONDARY INCOME ACCOUNT (I.D.1-I.D.2)	**46.6**	**-303.3**	**569.8**	**-125.4**	**-335.2**	**545.5**
I.D.1	Receipts	**1,224.8**	**1,179.0**	**1,945.7**	**131.3**	**121.2**	**882.0**
	General government	591.1	646.3	1,306.2	48.3	27.9	772.8
	Other sectors	633.7	532.7	639.5	83.0	93.3	109.1
I.D.2	Payments	**1,178.2**	**1,482.3**	**1,375.8**	**256.8**	**456.4**	**336.5**
	General government	742.0	1,041.0	899.8	176.8	337.5	204.9
	Other sectors	436.1	441.3	476.0	79.9	118.8	131.6
II	CAPITAL ACCOUNT (II.1-II.2)	**391.4**	**221.1**	**913.4**	**134.9**	**29.6**	**1,031.3**
II.1	Receipts	**483.2**	**704.3**	**1,283.4**	**154.9**	**55.8**	**1,078.3**
	General government	450.0	542.6	1,109.6	138.7	11.3	1,014.7
	Other sectors	33.2	161.7	173.8	16.2	44.4	63.6
II.2	Payments	**91.8**	**483.3**	**370.0**	**19.9**	**26.2**	**46.9**
	General government	1.4	1.4	2.5	0.3	0.4	0.5
	Other sectors	90.3	481.8	367.5	19.7	25.8	46.5
	BALANCE OF CURRENT AND CAPITAL ACCOUNT (I+II)	***-4,258.0***	***-4,493.1***	***-7,150.4***	***-996.2***	***-2,042.2***	***-584.4***
III	FINANCIAL ACCOUNT (III.A+III.B+III.C+III.D)	**-4,219.0**	**-3,793.8**	**-6,132.3**	**-501.9**	**-1,654.0**	**8.3**
III.A	DIRECT INVESTMENT*	**-888.5**	**-512.0**	**-2,849.6**	**-86.1**	**-141.5**	**-489.7**
	Assets	97.8	472.6	239.5	7.5	13.1	104.4
	Liabilities	986.3	984.6	3,089.1	93.6	154.6	594.1
III.B	PORTFOLIO INVESTMENT*	**16,253.5**	**-1,225.4**	**3,198.2**	**11,367.0**	**-1,669.2**	**-1,308.6**
	Assets	10,676.0	-264.4	5,845.4	7,084.0	-2,536.2	298.5
	Liabilities	-5,577.5	961.0	2,647.2	-4,283.0	-867.0	1,607.1
III.C	OTHER INVESTMENT*	**-19,974.2**	**-1,590.9**	**-4,330.8**	**-11,738.0**	**227.0**	**3,706.3**
	Assets	2,564.0	218.6	-2,000.6	-273.7	-370.4	17.9
	Liabilities	22,538.2	1,809.5	2,330.3	11,464.3	-597.4	-3,688.3
	(Loans of general government)	86.6	-3,262.1	-617.5	126.5	-12.8	-39.0
III.D	CHANGE IN RESERVE ASSETS**	**390.2**	**-465.5**	**-2,150.0**	**-44.8**	**-70.4**	**-1,899.7**
IV	BALANCE ITEMS (I +II +IV +V = 0)	**39.1**	**699.4**	**1,018.1**	**494.4**	**388.2**	**592.6**
	RESERVE ASSETS (STOCK)***				**6,423**	**8,827**	**11,541**

Source: Bank of Greece

* (+) Increase (-) decrease - According to the new balance of payments methodology training BPM6, increases in demand are presented with a positive sign while the decrease in receivables is displayed with a negative sign. Similarly, the increase in liabilities is captured with a positive sign, while the reduction of liabilities with a negative sign.

** (+) Increase (-) decrease - According to the new balance of payments methodology training BPM6, the increase in foreign reserves is now presented with a positive sign, while the reduction of foreign exchange reserves with a negative sign.

* * * Reserve assets, as defined by the European Central Bank, include only monetary gold, the "reserve position" in the IMF, "Special Drawing Rights" and the claims of the Bank of Greece in foreign currency from residents of countries outside the euro area. Conversely, they do not include claims in euro from residents of countries outside the euro area, claims in foreign currency and in euros from residents of euro area countries and the participation of the Bank of Greece in the capital and the reserve assets of the ECB.

4 DIGITAL HEALTH AND REAL-WORLD DATA IN GREECE: HEALTH ECOSYSTEM TRANSFORMATION AND ECONOMIC IMPACT[31]

- The collection and use of RWD/RWE has multiple social benefits for patients (substantial upgrading of the healthcare system and health services) and significant structural effects on the country's economy.
- Investment in collecting and using RWD according to IOBE estimates can boost GDP and become a source for specialised work in the country
- Significant progress has been made in the collection of digital health data in Greece. However, there is a need for appropriate strategic planning for the next stage, i.e. for the use of these data to create added value.

4.1 Digital Health, Real World Data (RWD), Real World Evidence (RWE)

The concept of digital health refers to healthcare tools and services that use and integrate information and communication technologies (ICTs) to improve the prevention, diagnosis, treatment, monitoring and management of health-related issues. The importance of Real World Data (RWD) and Real World Evidence (RWE) decision-making has been at the heart of the health and pharmaceuticals debate in recent years. RWDs are related to health and come from various populations in real life. These are medical records, patient registries, biobanks, administrative data, health research, observation studies, health insurance data, data generated by "smart" applications, etc. They also include large amounts of data, which are automatically collected and

[31] This chapter is based on a recent study by IOBE in collaboration with the Laboratory of Industrial and Energy Economics (LIEE) of NTUA on Digital Health and Real-World Data (RWD-RWE) in Greece and the economic impact of their use on the healthcare system as well as the national economy. The full text as well as a presentation of the study are available at this link: http://iobe.gr/research_dtl.asp?RID=250

stored electronically and can be reused for different purposes and from different perspectives, depending on the purpose of the application. They usually come from composing and linking existing databases in order to continuously improve the health of the population and the overall performance of the health system. They are used for greater and better understanding of diseases, they are automatically collected and stored electronically and can be reused for different purposes and can come from various sources.

By contrast, Real World Evidence (RWE) is the result of the recording, analysis, and appropriate scientific processing of RWDs. Therefore, they can be defined as the clinical evidence of the use and potential benefits or risks of a medical product, arising from the analysis of RWDs and including validation and standardisation methods and procedures that check their suitability for each application. For example, RWE is the main source for supporting the financial planning (such as the budget) for the introduction of innovative medicines into the market. In addition, they provide information to understand the examined disease, help identify new areas of therapeutic intervention and improve the effectiveness of research and development (R&D), especially in clinical trials.

4.2 Digital data in Greece - Benefits and prospects from the use of RWD and RWE

The data on public health mainly includes clinical, biometric and prescription information and comes from a variety of sources. A significant number of organisations and bodies mainly in the public sector are involved in the collection and processing of medical and hospital data. In Greece, the electronic systems of the health sector include patients — users of the system (almost 11 million), doctors who prescribe treatments in the public and private sectors (66,058), pharmacists (11,368) as well as outpatient clinics of hospitals, providers of diagnostic services and healthcare providers.[32]

RWD/RWE can significantly contribute to understanding complex issues related to human health and make a significant contribution to the evolution of health sciences. From simply recording health-related data to validating complex biomarkers and studying the feasibility of a clinical trial, the wide range of applications of RWD/RWE is constantly growing.

The use of RWD in combination with results from clinical trials and RWE can make a contribution and benefit patients, science, and the health professionals:

- Benefits of using RWD/RWE for patients:
  - Improvement of therapeutic outcome
  - Valid information, transparency, and freedom of access to their data
  - More effective medical care and diagnosis
  - Possibility of implementing new services with significant added value for the patient, such as planning medical visits for preventive and/or regular examinations
- Benefits of using RWD/RWE to advance science:
  - Drawing authoritative statistical conclusions through data analysis
  - Contribute to clinical and medical research by improving methodologies, protocols and accelerating the development of new drugs
- Benefits for health professionals:

[32] Source: ELSTAT (2019)

- Access to and recording of patient health data over time
- Support for diagnosis, evidence-based medicine, as well as the promotion of scientific research
- Optimisation of design and cost reduction of clinical trials and specialised studies
- Strengthening personalised medicine

In the case of clinical trials, RWD constitute the driving force behind the further use of ICT in their design and implementation, with different implications and benefits depending on the type of clinical trial (such as randomised vs. pragmatic).

Figure 4.1:

The main sources of digital health data that can provide RWD and RWE

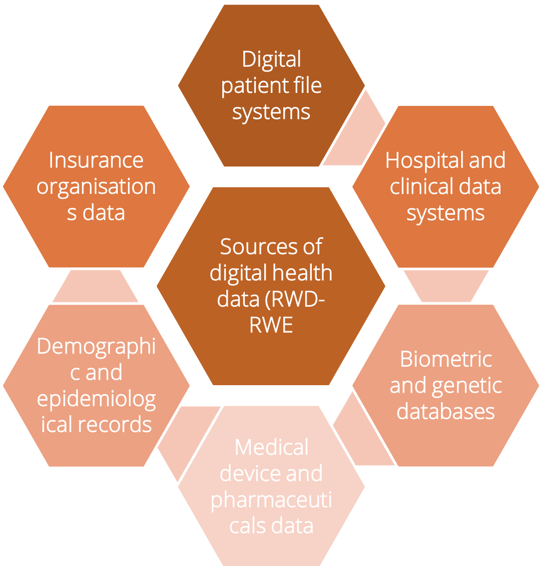
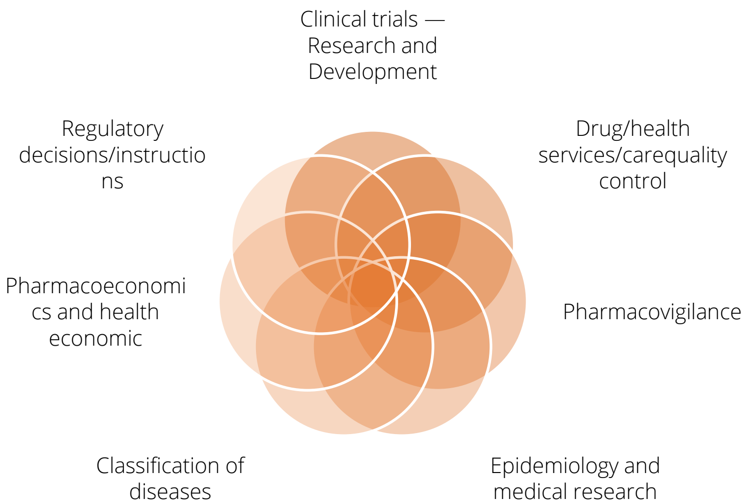


Figure 4.2

Potential application and use of RWD and RWE



4.3 Estimation of potential benefits for the Greek economy from the creation of an excellency centre for the management of RWD

In order to quantify the potential benefits of the economic use of RWD in the country, we consider, using input-output analysis, the case study of setting up a centre of excellence for the utilisation. For the purposes of this study, the input-output model is extended with necessary additional structural data for the sectors of the Greek economy, drawn from the Hellenic Statistical Service (ELSTAT). In summary, the model is an economic analysis system that illustrates the interlinkages between the production sectors and the different types of final consumption of their products and services, while at the same time it can lead to the assessment of multiplier effects from an exogenous change in the activity of these sectors, such as the implementation of an investment, in GDP and the number of jobs in the domestic economy. More specifically, the composite sector that concerns the operation of RWD management centres — like all sectors of economic activity in an economy — has raw material needs from other supplying industries (intermediate inputs), while also consuming its own capital and labour to produce its final products and services, and thus creating value added for itself and for the wider economy (direct effect). In this analytical context, we estimated that every €1 million increase in the turnover of the composite sector caused by direct investment in production contributes a total of €1.89 million to the production value of the wider economy.

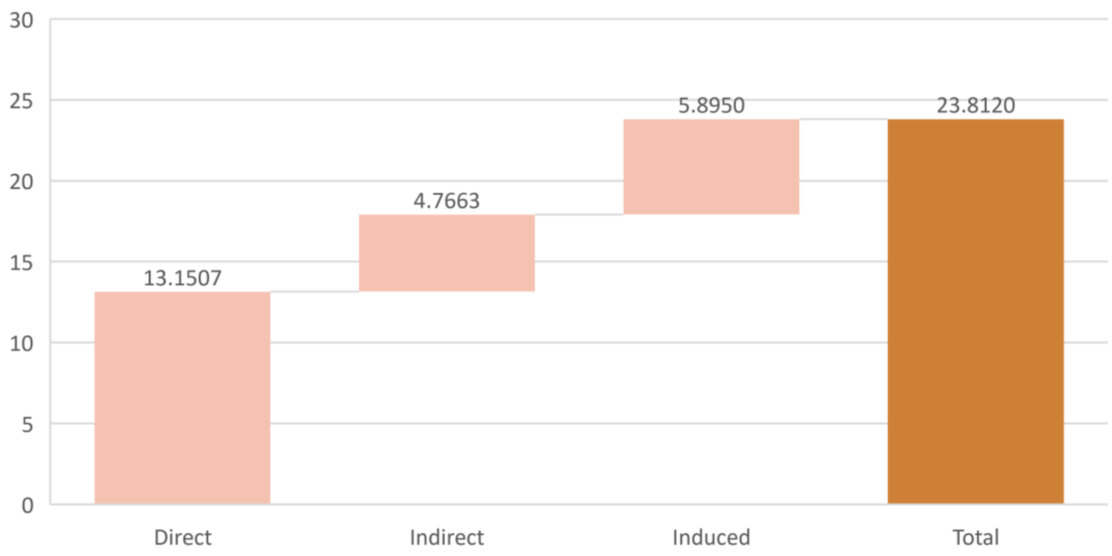
Accordingly, every €1 million investment in the sector's total production supports directly around 13 jobs and 24 in total. These jobs concern both the industry itself and the overall interconnected ecosystem that supports its activities. For each job directly involved in RWD activity, a total of about 1.8 jobs are supported in the economy.

In terms of value added, for every €1 million investment in the production of the sector, €470k indirect and €900k total value added are generated in the economy. In addition, for each €1 million value added directly produced by the sector, a total of €1.91 million value added is generated overall in the economy.

Taking into account the effects arising from the payment of taxes by the concerned sectors and the payment of state subsidies, we estimate the impact of the RWD composite sector in terms of the country's Gross Domestic Product (GDP). Each €1 million investment, contributes directly €496k to the country's GDP, with approximately €206k and €258k formed through the indirect and induced effects respectively. As a result, the total effect amounts to €959k. In addition, for each €1 million of GDP produced directly from the RWD operation, the economy generates in total €1.93 million of GDP.

Figure 4.3

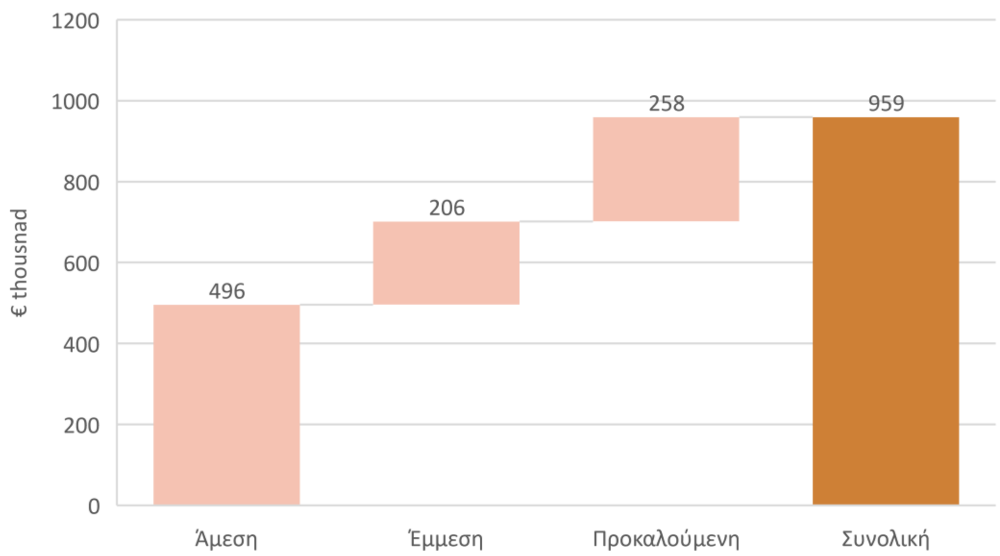
Contribution of the RWD composite sector to the rest of the economy in employment terms (jobs per €1 million of investment in its production)



Source: IOBE and LIEE-NTUA

Figure 4.4

Contribution of the composite RWD sector to the rest of the economy in terms of Gross Domestic Product (per €1 million of investment in its production)



Source: IOBE και ΕΒΕΟ-ΕΜΠ

Therefore, the results of quantifying the effects of an investment to create a centre of excellence for the use of RWD in Greece point to significant benefits for the Greek economy as a whole, with a significant increase in the generated value added and job creation. Indeed, the benefits and structural effects of such an investment in the country seem to outweigh the corresponding benefits of a corresponding investment in the domestic pharmaceutical industry. This is due to the complex activity of such a centre and its significant interconnection with the other industrial sectors of the country.

4.4 The new ecosystem for the digital health data

A new digital ecosystem for RWD in Greece, where a centre of excellence for the processing of RWD is added to the existing infrastructure and the system is re-fed with RWE and clinical data, is the next step of a development strategy for the use of health data in the country. Taking a broader perspective, the utilisation of RWD will include an assessment of treatment needs, possible treatment pathways, and the impact of such an intervention on patients' health status and quality of life. Growing data sources provide new opportunities for developing diagnostics for rare diseases and planning clinical trials. However, it should be noted that the development of the digital health data utilisation ecosystem also requires attracting people with the right skills (personal and professional) to start the active effort for continued training of existing and new workforce. In addition to health professionals, there is a need for epidemiologists, biostatisticians, public health specialists, specialised IT professionals, project managers, experts in research methodology, scientific researchers, and other specialties.

Figure 4.5

A new digital ecosystem for RWD in Greece

4.5 Policy implications

Greece is in a privileged position regarding the collection of RWD as collection/storage systems have already been developed by multiple operators, while strategic planning is already in place for their interconnection/interoperability. The potential benefits of integrating their analysis and utilisation into the country's digital health ecosystem are multiple, but so far a significant gap has been identified in the country's strategic planning in this direction. This gap is directly related to the lack of concrete and necessary guidelines and interventions towards the implementation of relevant initiatives. The establishment of such a framework should include a specific timing of interventions and a clearly defined time horizon for implementation.

Proposed short-term interventions

- Integrate the mission of using RWD/RWE for health and the Greek economy in the context of the country's digital transformation strategies
- Differentiate the strategic planning for the utilisation of RWD from the other actions of the digital transformation of health of the National Recovery and Resilience Plan Greece 2.0
- Introduce the collection of RWD from sources outside the wider health ecosystem as a distinct mission in the context of the wider industrial policy of the country
- Strategic and programmatic planning of specific actions
- State investment in a public awareness campaign on the benefits of digital health and the possibilities of providing advanced health services through the sharing and utilisation of RWD

Proposed interventions over the medium term

- Establish a regulatory body to control and ensure the sharing of health data under the auspices of a public body (Ministry of Health or Ministry of Digital Transformation)
- Channel public funds and attract private investment towards the maintenance and upgrading of existing digital RWD collection and storage infrastructures
- Establish a centre of excellence for the promotion of research and innovation through the use of RWD, the function of which will be part of a public body (competent ministries), namely the regulatory body for monitoring the sharing of digital health data
- Support private-public partnerships to promote research on the collection and management of health data.
- Establish a framework for cooperation between academic and research institutes with the private sector in order to utilise health data to promote research and medical science in the country

Proposed long-term interventions

- Record, audit and evaluate the initiative to share health data between the operators of the ecosystem and the research and commercial use of RWD-RWE in the country
- Record the impact of the project on the sharing and utilisation of health data on the country's population and evaluate the results for the renewal of ecosystem components and the design of new actions
- Document the added value of the collection and use of RWD-RWE through detailed studies and reports on their footprint on the public, on clinical research, and on the country's economy

- Ensure a continuous flow of state grants and investments aimed at ensuring quality and responsiveness of the digital health ecosystem and RWD to ongoing technological developments
- Actions to disseminate the results and value of RWD-RWE to the stakeholders of the ecosystem and to the general public

APPENDIX

Table 1: GDP Rate of Change

	Annual data (%)							
	2014	2015	2016	2017	2018	2019	2020	2021
Austria	0.7	1.0	2.0	2.4	2.6	1.5	-6.7	4.8
Belgium	1.6	2.0	1.5	1.9	1.5	2.1	-5.7	6.2
Bulgaria	1.9	4.0	3.8	3.5	3.1	4.0	-4.4	4.2
France	1.0	1.1	1.1	2.3	1.8	1.8	-7.8	6.8
Germany	2.2	1.5	2.2	2.6	1.3	1.1	-4.6	2.9
Denmark	1.6	2.3	3.2	2.8	2.2	1.5	-2.0	4.9
Czech Republic	2.3	5.4	2.5	5.2	3.2	3.0	-5.5	3.5
EU 27	1.6	2.3	2.0	2.8	2.1	1.8	-5.9	5.4
Greece	0.7	-0.4	-0.5	1.3	1.6	1.8	-9.0	8.3
Estonia	3.0	1.8	3.2	5.5	4.4	4.1	-3.0	8.3
Euro area	1.4	2.0	1.9	2.6	1.8	1.6	-6.3	5.4
Ireland	8.6	25.2	2.0	9.1	8.5	4.9	5.9	13.5
Spain	1.4	3.8	3.0	3.0	2.4	2.1	-10.8	5.1
Italy	0.0	0.8	1.3	1.7	0.9	0.5	-9.0	6.6
Croatia	-0.1	2.4	3.5	3.1	2.7	3.5	-8.1	10.2
Cyprus	-1.8	3.2	6.4	5.2	5.2	5.3	-5.0	5.5
Latvia	1.1	4.0	2.4	3.3	4.0	2.5	-3.8	4.5
Lithuania	3.5	2.0	2.5	4.3	3.9	4.6	-0.1	5.0
Luxembourg	4.3	4.3	4.6	1.8	3.1	3.3	-1.8	6.9
Malta	7.6	9.6	3.9	8.0	5.2	5.9	-8.3	10.4
Netherlands	1.4	2.0	2.2	2.9	2.4	2.0	-3.9	4.9
Hungary	4.2	3.8	2.1	4.3	5.4	4.6	-4.5	7.1
Poland	3.4	4.2	3.1	4.8	5.4	4.7	-2.2	5.9
Portugal	0.8	1.8	2.0	3.5	2.8	2.7	-8.4	4.9
Romania	3.6	3.0	4.7	7.3	4.5	4.2	-3.7	5.9
Slovakia	2.6	4.8	2.1	3.0	3.8	2.6	-4.4	3.0
Slovenia	2.8	2.2	3.2	4.8	4.4	3.3	-4.2	8.1
Sweden	2.7	4.5	2.1	2.6	2.0	2.0	-2.2	5.1
Finland	-0.4	0.5	2.8	3.3	1.5	1.2	-2.2	3.0

Table 2: General Government Debt as % of GDP

	Annual data (%)							
	2014	2015	2016	2017	2018	2019	2020	2020
Austria	84	84.9	82.9	78.3	74	70.6	83.3	82.8
Belgium	107	105.2	104.9	101.7	99.8	97.7	112.8	108.2
Bulgaria	27.1	26	29.3	25.3	22.3	20.0	24.7	25.1
France	94.9	95.6	98	98.3	98.1	97.4	114.6	112.9
Germany	75.7	72.1	69.2	65.3	61.9	58.9	68.7	69.3
Denmark	44.3	39.8	37.2	35.8	33.9	33.6	42.1	36.7
Czech Republic	42.2	40	36.8	34.7	32.6	30.1	37.7	41.9
EU 27	92.8	90.9	90	87.8	85.8	77.5	90.0	88.1
Greece	178.9	175.9	178.5	176.2	181.2	180.7	206.3	193.3
Estonia	10.6	10	10.2	9.3	8.4	8.6	19.0	18.1
Euro area	86.6	84.7	84	81.6	79.6	83.8	97.2	95.6
Ireland	104.4	76.7	73.8	67.7	63.5	57.2	58.4	56.0
Spain	100.7	99.3	99.2	98.6	97.6	98.3	120.0	118.4
Italy	135.4	135.3	134.8	134.1	134.8	134.1	155.3	150.8
Croatia	84.7	84.3	80.8	77.8	74.7	71.1	87.3	79.8
Cyprus	109.2	107.5	103.4	93.9	100.6	91.1	115.0	103.6
Latvia	41.6	37.3	40.9	39.3	37.2	36.7	43.3	44.8
Lithuania	40.6	42.6	39.7	39.1	33.8	35.9	46.6	44.3
Luxembourg	22.7	22	20.1	22.3	21	22.3	24.8	24.4
Malta	63.4	58	55.5	50.3	45.6	40.7	53.4	57.0
Netherlands	67.8	64.6	61.9	56.9	52.4	48.5	54.3	52.1
Hungary	76.8	76.2	75.5	72.9	70.2	65.5	79.6	76.8
Poland	50.8	51.3	54.3	50.6	48.8	45.6	57.1	53.8
Portugal	132.9	131.2	131.5	126.1	122	116.6	135.2	127.4
Romania	39.2	37.8	37.3	35.1	34.7	35.3	47.2	48.8
Slovakia	53.5	51.9	52	51.3	49.4	48.1	59.7	63.1
Slovenia	80.3	82.6	78.7	74.1	70.4	65.6	79.8	74.7
Sweden	45.1	43.9	42.2	40.8	38.8	34.9	39.6	36.7
Finland	59.8	63.6	63.2	61.3	59.6	59.6	69.0	65.8

Table 3: General government balance as % of GDP

	Annual data (%)							
	2014	2015	2016	2017	2018	2019	2020	2021
Austria	-2.7	-1	-1.5	-0.8	0.2	0.6	-8.0	-5.9
Belgium	-3.1	-2.4	-2.4	-0.7	-0.8	-2.0	-9.0	-5.5
Bulgaria	-5.4	-1.7	0.1	1.1	2	2.1	-4.0	-4.1
France	-3.9	-3.6	-3.6	-2.9	-2.3	-3.1	-8.9	-6.5
Germany	0.6	0.9	1.2	1.2	1.9	1.5	-4.3	-3.7
Denmark	1.1	-1.2	0.1	1.8	0.7	4.1	-0.2	2.3
Czech Republic	-2.1	-0.6	0.7	1.5	0.9	0.3	-5.8	-5.9
EU 27	-2.4	-1.9	-1.3	-0.8	-0.4	-0.6	-6.8	-4.7
Greece	-3.6	-5.6	0.5	0.7	1	1.1	-10.2	-7.4
Estonia	0.7	0.1	-0.5	-0.8	-0.6	0.1	-5.6	-2.4
Euro area	-2.5	-2	-1.5	-1	-0.5	-0.7	-7.1	-5.1
Ireland	-3.6	-2	-0.7	-0.3	0.1	0.5	-5.1	-1.9
Spain	-5.9	-5.2	-4.3	-3	-2.5	-3.1	-10.3	-6.9
Italy	-3	-2.6	-2.4	-2.4	-2.2	-1.5	-9.6	-7.2
Croatia	-5.3	-3.3	-1	0.8	0.2	0.2	-7.3	-2.9
Cyprus	-8.7	-1	0.3	2	-3.7	1.3	-5.8	-1.7
Latvia	-1.6	-1.4	0.2	-0.8	-0.8	-0.6	-4.5	-7.3
Lithuania	-0.6	-0.3	0.2	0.5	0.6	0.5	-7.3	-1.0
Luxembourg	1.3	1.3	1.8	1.3	3.1	2.3	-3.4	0.9
Malta	-1.7	-1	1	3.3	1.9	0.6	-9.5	-8.0
Netherlands	-2.2	-2	0	1.3	1.4	1.7	-3.7	-2.5
Hungary	-2.8	-2	-1.8	-2.5	-2.1	-2.1	-7.8	-6.8
Poland	-3.6	-2.6	-2.4	-1.5	-0.2	-0.7	-6.9	-1.9
Portugal	-7.4	-4.4	-1.9	-3	-0.4	0.1	-5.8	-2.8
Romania	-1.2	-0.6	-2.6	-2.6	-2.9	-4.3	-9.3	-7.1
Slovakia	-3.1	-2.7	-2.5	-1	-1	-1.3	-5.5	-6.2
Slovenia	-5.5	-2.8	-1.9	0	0.7	0.4	-7.8	-5.2
Sweden	-1.5	0	1	1.4	0.8	0.6	-2.7	-0.2
Finland	-3	-2.4	-1.7	-0.7	-0.9	-0.9	-5.5	-2.6

Table 4: Percentage of Population in Poverty or Social Exclusion * (see last page)

	Annual data (%)							
	2013	2014	2015	2016	2017	2018	2019	2020
Austria	18.8	19.2	18.3	18.0	18.1	17.5	16.9	17.5
Belgium	20.8	21.2	21.1	20.9	20.6	20.0	19.5	18.9
Bulgaria	48.0	40.1	41.3	40.4	38.9	32.8	32.5	32.1
France	18.1	18.5	17.7	18.2	17.0	17.4	17.9	18.2
Germany	20.3	20.6	20.0	19.7	19.0	18.7	17.4	24.0
Denmark	18.3	17.9	17.7	16.8	17.2	17.4	16.3	15.9
Czech Republic	14.6	14.8	14.0	13.3	12.2	12.2	12.5	11.9
EU 27	24.6	24.5	23.8	23.7	22.5	21.6	21.1	:
Greece	35.7	36.0	35.7	35.6	34.8	31.8	30	28.9
Estonia	23.5	26.0	24.2	24.4	23.4	24.4	24.3	23.3
Euro area	23.1	23.5	23.1	23.1	22.1	21.6	21.1	:
Ireland	29.9	27.7	26.2	24.4	22.7	21.1	:	:
Spain	27.3	29.2	28.6	27.9	26.6	26.1	25.3	26.4
Italy	28.5	28.3	28.7	30.0	28.9	27.3	:	:
Croatia	29.9	29.3	29.1	27.9	26.4	24.8	23.3	23.2
Cyprus	27.8	27.4	28.9	27.7	25.2	23.9	22.3	21.3
Latvia	35.1	32.7	30.9	28.5	28.2	28.4	27.3	:
Lithuania	30.8	27.3	29.3	30.1	29.6	28.3	26.3	24.8
Luxembourg	19.0	19.0	18.5	19.8	21.5	21.9	20.6	20.9
Malta	24.6	23.9	23.0	20.3	19.3	19.0	20.1	19.0
Netherlands	15.9	16.5	16.4	16.7	17.0	16.7	16.5	16.3
Hungary	34.8	31.8	28.2	26.3	25.6	19.6	18.9	17.8
Poland	25.8	24.7	23.4	21.9	19.5	18.9	18.2	17.3
Portugal	27.5	27.5	26.6	25.1	23.3	21.6	21.6	19.8
Romania	41.9	40.3	37.4	38.8	35.7	32.5	31.2	30.4
Slovakia	19.8	18.4	18.4	18.1	16.3	16.3	16.4	14.8
Slovenia	20.4	20.4	19.2	18.4	17.1	16.2	14.4	15.0
Sweden	18.3	18.2	18.6	18.3	17.7	18.0	18.8	17.9
Finland	16.0	17.3	16.8	16.6	15.7	16.5	15.6	16.0

Table 5: Inflation

	Annual data (%)			January - May			Change (%)	
	2018	2019	2020	2020	2021	2022	2022/21	2021/20
Austria	2.1	1.5	1.4	1.1	1.7	7.3	5.7	0.6
Belgium	2.3	1.3	0.4	0.7	1.3	6.8	5.5	0.6
Bulgaria	2.6	2.5	1.2	0.5	1.0	9.7	8.7	0.5
France	2.1	1.3	0.5	2.2	1.2	10.2	9.0	-1.1
Germany	1.9	1.4	0.4	3.5	3.1	11.1	8.0	-0.4
Denmark	0.7	0.7	0.3	0.3	1.3	6.1	4.8	1.0
Czech Republic	2.0	2.6	3.3	1.2	2.1	6.8	4.7	0.9
EU 27	1.8	1.4	0.7	0.4	1.3	15.3	14.0	1.0
Greece	0.8	0.5	-1.3	0.3	0.3	6.9	6.6	0.0
Estonia	3.4	2.3	-0.6	0.0	-1.8	7.9	9.7	-1.8
Euro area	1.8	1.2	0.3	0.1	1.3	8.0	6.7	1.1
Ireland	0.7	0.9	-0.5	1.0	0.8	5.2	4.4	-0.1
Spain	1.7	0.8	-0.3	0.5	1.7	7.5	5.7	1.2
Italy	1.2	0.6	-0.1	0.1	0.9	6.3	5.4	0.8
Croatia	1.6	0.8	0.0	-0.2	0.0	7.2	7.1	0.2
Cyprus	0.8	0.6	-1.1	1.0	1.4	10.8	9.3	0.5
Latvia	2.6	2.7	0.1	1.7	2.7	14.1	11.4	1.0
Lithuania	2.5	2.2	1.1	0.5	2.1	7.7	5.6	1.6
Luxembourg	2.0	1.7	0.0	3.6	4.6	8.6	4.0	1.0
Malta	1.7	1.5	0.8	1.1	0.5	4.5	4.0	-0.7
Netherlands	1.6	2.7	1.1	1.2	1.7	9.7	8.0	0.5
Hungary	2.9	3.4	3.4	1.6	2.2	6.0	3.8	0.6
Poland	1.2	2.1	3.7	3.6	4.5	10.0	5.5	0.9
Portugal	1.2	0.3	-0.1	0.1	0.2	5.8	5.6	0.0
Romania	4.1	3.9	2.3	2.7	2.6	9.7	7.1	-0.1
Slovakia	2.5	2.8	2.0	0.5	0.9	6.6	5.7	0.4
Slovenia	1.9	1.7	-0.3	2.6	2.3	8.6	6.2	-0.2
Sweden	2.0	1.7	0.7	0.5	1.2	5.8	4.6	0.6
Finland	1.2	1.1	0.4	0.7	1.7	6.2	4.5	1.0

Table 6: GDP per Capita (in PPS, EE-27 =1)

	Annual data (%)							
	2014	2015	2016	2017	2018	2019	2020	2021
Austria	1.11	1.11	1.12	1.13	1.13	1.18	1.19	1.19
Belgium	1.12	1.11	1.12	1.13	1.13	1.17	1.16	1.16
Bulgaria	0.92	0.94	0.96	0.99	1.01	0.96	1.00	1.02
France	1.13	1.12	1.12	1.12	1.11	1.10	1.09	1.08
Germany	1.07	1.08	1.08	1.08	1.09	1.08	1.07	1.09
Denmark	10.23	10.16	10.20	10.03	9.96	10.63	10.61	10.58
Czech Republic	17.73	18.00	18.11	18.11	18.23	17.80	18.57	18.68
EU 27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Greece	0.85	0.85	0.85	0.84	0.83	0.84	0.85	0.84
Estonia	0.74	0.75	0.76	0.78	0.80	0.82	0.82	0.84
Euro area	1.05	1.05	1.05	1.05	1.05	1.06	1.06	1.06
Ireland	1.14	1.13	1.14	1.16	1.16	1.38	1.42	1.41
Spain	0.92	0.92	0.93	0.92	0.93	0.97	0.98	0.97
Italy	1.03	1.03	1.01	1.00	1.00	1.03	1.03	1.02
Croatia	4.95	4.89	4.87	4.87	4.90	4.98	5.01	5.05
Cyprus	0.95	0.92	0.90	0.90	0.90	0.94	0.95	0.95
Latvia	0.69	0.69	0.70	0.71	0.72	0.74	0.74	0.75
Lithuania	0.62	0.62	0.63	0.65	0.66	0.64	0.67	0.68
Luxembourg	1.23	1.23	1.23	1.24	1.24	1.44	1.50	1.49
Malta	0.82	0.83	0.84	0.85	0.86	0.88	0.91	0.91
Netherlands	1.13	1.13	1.15	1.14	1.15	1.19	1.19	1.19
Hungary	180.63	184.37	190.13	196.61	203.17	206.51	214.69	222.49
Poland	2.47	2.46	2.50	2.54	2.58	2.46	2.52	2.59
Portugal	0.81	0.81	0.82	0.84	0.85	0.87	0.88	0.88
Romania	2.27	2.31	2.30	2.35	2.45	2.40	2.41	2.46
Slovakia	0.68	0.68	0.72	0.74	0.74	0.80	0.82	0.82
Slovenia	0.83	0.83	0.83	0.83	0.84	0.87	0.87	0.88
Sweden	12.18	12.32	12.70	12.76	12.98	13.94	13.82	13.80
Finland	1.27	1.26	1.27	1.26	1.26	1.28	1.29	1.29

Table 7: Average Labour Productivity (euro per hour of work, EE-27 =100)

	Annual data							
	2014	2015	2016	2017	2018	2019	2020	2021
Austria	116.8	117.3	117.5	116.3	116.5	115.5	114.4	110.9
Belgium	131.2	131.6	130.7	129.7	129.2	129.1	126.3	132.5
Bulgaria	44	44.5	45.7	46	47.1	48.6	50.3	51.4
France	116.1	115.7	115.3	114.9	115.3	116.7	114.8	115.1
Germany	106.3	105.3	105.9	105.7	105.1	103.6	103.5	103.2
Denmark	115.5	114.9	114.8	116	116.7	116.9	121.9	119.3
Czech Republic	79.3	79.9	79.9	81.4	83.8	85.3	86.7	85.4
EU 27	100	100	100	100	100	100	100	100
Greece	86.4	83.5	81.5	80.6	80.5	78.5	69.7	69.3
Estonia	75.4	72.4	73	74.2	76.7	78.7	82.7	84.8
Euro area	107.6	107.3	107.2	106.9	106.4	105.7	105	104.9
Ireland	146.5	188.6	182.3	187	195.1	196.9	218.4	221.8
Spain	103.3	102.2	101.8	101.5	99.6	98.2	95.7	93.2
Italy	107.7	106.6	108.1	107.4	106.4	104.9	102.8	104.2
Croatia	70.8	70.7	72	71.9	72.7	72.1	71.1	74.9
Cyprus	84	84.9	87.1	85.5	85.3	83.7	82.7	82
Latvia	64.7	64.4	64.8	66.7	68.6	68.7	71.9	73.5
Lithuania	74.4	72.8	71.8	75	76	77.5	82.5	83.5
Luxembourg	169.7	169.6	170.8	166	164.6	162	163.3	170.5
Malta	91.5	95.2	95.9	94.1	94.4	93.5	90.6	90.3
Netherlands	113.5	112.8	110.5	110.5	109.8	108	111.6	111
Hungary	71.4	70.9	67.4	67.7	70	71.6	71.4	72.3
Poland	73.8	74.5	74	74.9	76.7	80.1	82	82.3
Portugal	79	78.3	77.9	75.8	75.1	76.1	74.4	71.7
Romania	56.7	58.6	63.1	66.1	68.7	72.6	74.6	84.4
Slovakia	84.3	83.5	77	75.7	76.2	76.2	75	72.5
Slovenia	81.5	80.6	80.8	81.7	82.1	81.9	83.4	84
Sweden	115.2	116.7	113.4	112.9	111.6	112.2	115.6	116.6
Finland	107.7	107.6	108.1	109	107.9	106.6	110.5	109.7

Table 8: Employment Rate for People aged 20-64 (*)

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	74.8	75.4	76.2	76.8	75.5	75.6	0.1	-1.3
Belgium	67.7	68.5	69.7	70.5	70	70.6	0.6	-0.5
Bulgaria	67.7	71.4	72.4	75	73.4	73.2	-0.2	-1.6
France	70	70.6	71.3	71.6	71.4	73.2	1.8	-0.2
Germany	78.6	79.2	79.9	80.6	79.2	79.6	0.4	-1.4
Denmark	76	76.6	77.5	78.3	77.8	79.1	1.3	-0.5
Czech Republic	76.7	78.6	79.9	80.3	79.7	80	0.3	-0.6
EU 27	70.1	71.3	72.3	73.1	72.2	73.1	0.9	-0.9
Greece	56.2	57.8	59.5	61.2	61.1	62.6	1.5	-0.1
Estonia	76.6	78.8	79.5	79.7	78.2	79.3	1.1	-1.5
Euro area	69.9	70.9	71.9	72.6	71.5	72.5	1.0	-1.1
Ireland	71.4	73.0	74.1	75.1	73.4	74.9	1.5	-1.7
Spain	63.9	65.5	67	68	65.7	67.7	2.0	-2.3
Italy	61.6	62.4	63	63.5	62.6	62.7	0.1	-0.9
Croatia	61.4	63.6	65.2	66.7	66.9	68.2	1.3	0.2
Cyprus	68.7	70.8	73.9	75.7	74.9	75.9	1.0	-0.8
Latvia	73.2	74.8	76.8	77.4	77	75.3	-1.7	-0.4
Lithuania	75.2	76.0	77.8	78.2	76.7	77.4	0.7	-1.5
Luxembourg	70.7	71.6	72.1	72.8	72.1	74.1	2.0	-0.7
Malta	71.1	73.0	75.5	76.8	77.3	78.5	1.2	0.5
Netherlands	77.1	78.0	79.2	80.1	80	81.7	1.7	-0.1
Hungary	71.5	73.3	74.4	75.3	75	78.8	3.8	-0.3
Poland	69.3	70.9	72.2	73	73.6	75.4	1.8	0.6
Portugal	70.6	73.4	75.4	76.1	74.7	75.9	1.2	-1.4
Romania	66.3	68.9	69.9	70.9	70.8	67.1	-3.7	-0.1
Slovakia	69.8	71.1	72.4	73.4	72.5	74.6	2.1	-0.9
Slovenia	70.1	73.4	75.4	76.4	75.6	76.1	0.5	-0.8
Sweden	81.2	81.8	82.4	82.1	80.8	80.7	-0.1	-1.3
Finland	73.4	74.2	76.3	77.2	76.5	76.8	0.3	-0.7

(*) % of employed people between 20 and 64 in relation to their total population

Table 9: Employment rate for people aged 55-64 (*)

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	49.2	51.3	54.0	54.5	54.7	55.4	0.7	0.2
Belgium	45.4	48.2	50.4	52.1	53.3	54.5	1.2	1.2
Bulgaria	54.5	58.2	60.7	64.4	64.2	64.8	0.6	-0.2
France	49.9	51.3	52.3	53.1	53.8	55.9	2.1	0.7
Germany	68.6	70.2	71.4	72.7	71.7	71.8	0.1	-1.0
Denmark	65.8	68.2	69.2	71.3	71.4	72.3	0.9	0.1
Czech Republic	58.5	62.1	65.1	66.7	68.2	69.8	1.6	1.5
EU 27	54.2	56.1	57.8	59.1	59.6	60.5	0.9	0.5
Greece	36.3	38.3	41.1	43.2	44.6	48.3	3.7	1.4
Estonia	65.2	68.0	69.0	71.9	71.3	71.6	0.3	-0.6
Euro area	55.3	57.1	58.8	60	60.2	61	0.8	0.2
Ireland	56.8	58.4	60.4	61.8	61.8	62.8	1.0	0.0
Spain	49.1	50.5	52.2	53.8	54.7	55.8	1.1	0.9
Italy	50.3	52.2	53.7	54.3	54.2	53.4	-0.8	-0.1
Croatia	38.1	40.4	42.8	43.9	45.5	48.6	3.1	1.6
Cyprus	52.2	55.3	60.9	61.1	61	63.4	2.4	-0.1
Latvia	61.4	62.3	65.4	67.3	68.6	67.8	-0.8	1.3
Lithuania	64.6	66.1	68.5	68.4	67.6	68	0.4	-0.8
Luxembourg	39.6	39.8	40.5	43.1	44	46.6	2.6	0.9
Malta	45.8	47.2	50.2	51.1	52.7	51.7	-1.0	1.6
Netherlands	63.5	65.7	67.7	69.7	71	71.4	0.4	1.3
Hungary	49.8	51.7	54.4	56.7	59.6	62.8	3.2	2.9
Poland	46.2	48.3	49.0	49.5	51.8	54.7	2.9	2.3
Portugal	52.1	56.2	59.2	60.4	60.7	63.4	2.7	0.3
Romania	42.8	44.6	46.3	47.8	48.5	43.8	-4.7	0.7
Slovakia	49	53.0	54.2	57	58.3	60.6	2.3	1.3
Slovenia	38.5	42.8	47.1	48.6	50.5	52.7	2.2	1.9
Sweden	75.5	76.4	78.0	77.7	77.6	76.9	-0.7	-0.1
Finland	61.4	62.6	65.4	66.8	67.5	68.3	0.8	0.7

(*) % of employed people between 55 and 64 in relation to their total population

Table 10: Change in Employment (persons aged over 15)

	Annual data (%)					
	2016	2017	2018	2019	2020	2021
Austria	1.8	1.0	1.3	0.9	-1.3	0.2
Belgium	0.9	1.0	2.4	1.5	-0.6	1.1
Bulgaria	-0.6	4.0	-0.1	2.2	-3.6	-1.2
France	0.5	0.8	0.8	0.2	-0.6	2.7
Germany	2.5	0.8	0.4	1.0		
Denmark	1.7	1.1	1.5	1.5	-0.9	1.5
Czech Republic	1.7	1.6	1.0	0.1	-1.2	-0.4
EU 27	1.5	1.4	1.1	0.9	-1.4	0.5
Greece	1.8	2.0	1.9	2.0	-1.2	1.1
Estonia	-0.1	2.2	0.7	0.6	-2.2	-0.7
Euro area	1.7	1.3	1.2	1.0	-1.5	0.8
Ireland	3.6	2.8	2.6	2.7	-1.5	3.9
Spain	2.6	2.6	2.6	2.3	-3.1	2.8
Italy	1.2	0.9	0.6	0.4	-2.0	-1.7
Croatia	0.5	2.3	1.7	1.2	-1.2	1.2
Cyprus	1.1	4.5	5.4	3.5	0.3	3.0
Latvia	-0.6	0.0	1.3	-0.3	-2.1	-3.5
Lithuania	1.3	-0.9	1.4	0.0	-2.0	0.9
Luxembourg	1.6	4.0	3.1	3.2	1.0	4.4
Malta	5.2	6.0	8.1	5.5	2.7	2.2
Netherlands	1.3	1.9	2.0	1.7	-0.1	3.4
Hungary	3.2	1.5	0.9	0.6	-1.4	3.6
Poland	0.6	1.1	0.3	-0.2	-0.3	1.2
Portugal	1.4	3.3	2.2	0.8	-2.1	1.4
Romania	-0.8	2.4	0.2	0.3	-1.6	-7.3
Slovakia	2.8	1.2	1.2	0.4	-2.1	1.2
Slovenia	0.1	4.5	2.0	0.8	-0.5	-1.1
Sweden	1.6	2.1	1.6	0.6	-1.5	0.5
Finland	0.5	1.0	2.6	0.9	-1.5	0.8

Table 11: Unemployment Rate – Total Population

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	6.5	5.9	5.2	4.8	6.0	6.2	0.2	1.2
Belgium	7.9	7.2	6.0	5.5	5.8	6.3	0.5	0.3
Bulgaria	8.6	7.2	6.2	5.2	6.1	5.3	-0.8	0.9
France	10.1	9.4	9.0	8.4	8.0	7.9	-0.1	-0.4
Germany	3.9	3.6	3.2	3.0	3.7	3.6	-0.1	0.7
Denmark	6.0	5.8	5.1	5.0	5.6	5.1	-0.5	0.6
Czech Republic	4.0	2.9	2.2	2.0	2.6	2.8	0.2	0.6
EU 27	9.3	8.3	7.4	6.8	7.2	7.0	-0.2	0.4
Greece	23.9	21.8	19.7	17.9	17.6	14.7	-2.9	-0.3
Estonia	6.8	5.8	5.4	4.5	6.9	6.2	-0.7	2.4
Euro area	10.1	9.1	8.2	7.6	8.0	7.7	-0.3	0.4
Ireland	8.4	6.7	5.8	5.0	5.9	6.2	0.3	0.9
Spain	19.6	17.2	15.3	14.1	15.5	14.8	-0.7	1.4
Italy	11.7	11.3	10.6	9.9	9.3	9.5	0.2	-0.6
Croatia	13.1	11.2	8.5	6.6	7.5	7.6	0.1	0.9
Cyprus	13.0	11.1	8.4	7.1	7.6	7.5	-0.1	0.5
Latvia	9.7	8.7	7.4	6.3	8.1	7.6	-0.5	1.8
Lithuania	7.9	7.1	6.2	6.3	8.5	7.1	-1.4	2.2
Luxembourg	6.3	5.5	5.6	5.6	6.8	5.3	-1.5	1.2
Malta	4.7	4.0	3.7	3.6	4.4	3.5	-0.9	0.8
Netherlands	7.0	5.9	4.9	4.4	4.9	4.2	-0.7	0.5
Hungary	5.0	4.0	3.6	3.3	4.1	4.1	0.0	0.8
Poland	6.3	5.0	3.9	3.3	3.2	3.4	0.2	-0.1
Portugal	11.5	9.2	7.2	6.7	7.0	6.6	-0.4	0.3
Romania	7.2	6.1	5.3	4.9	6.1	5.6	-0.5	1.2
Slovakia	9.6	8.1	6.5	5.7	6.7	6.8	0.1	1.0
Slovenia	8.0	6.6	5.1	4.4	5.0	4.8	-0.2	0.6
Sweden	7.1	6.8	6.5	7.0	8.5	8.8	0.3	1.5
Finland	8.9	8.7	7.5	6.8	7.7	7.7	0.0	0.9

Table 12: Unemployment Rate among Men

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	7.0	6.5	5.5	5.1	6.1	6.3	0.2	1.0
Belgium	8.2	7.2	6.4	5.9	6.0	6.6	0.6	0.1
Bulgaria	9.2	7.4	6.7	5.6	6.5	5.5	-1.0	0.9
France	10.3	9.5	9.0	8.5	8.1	8.0	-0.1	-0.4
Germany	4.2	3.9	3.6	3.3	4.0	3.9	-0.1	0.7
Denmark	5.6	5.6	4.9	4.8	5.3	5.0	-0.3	0.5
Czech Republic	3.4	2.3	1.8	1.7	2.2	2.3	0.1	0.5
EU 27	9.0	8.0	7.1	6.5	7.0	6.7	-0.3	0.5
Greece	20.2	18.2	15.8	14.4	14.6	11.4	-3.2	0.2
Estonia	7.6	6.3	5.6	4.1	7.1	6.8	-0.3	3.0
Euro area	9.8	8.8	7.9	7.3	7.7	7.4	-0.3	0.4
Ireland	9.1	7.1	5.8	5.2	5.8	6.3	0.5	0.6
Spain	18.1	15.7	13.7	12.5	13.9	13.1	-0.8	1.4
Italy	11.0	10.4	9.7	9.1	8.6	8.7	0.1	-0.5
Croatia	12.5	10.6	7.7	6.2	7.5	7.3	-0.2	1.3
Cyprus	12.7	10.9	8.1	6.3	7.6	7.1	-0.5	1.3
Latvia	11.0	9.8	8.4	7.2	9.1	8.5	-0.6	1.9
Lithuania	9.1	8.6	6.9	7.1	9.3	7.6	-1.7	2.2
Luxembourg	6.0	5.6	5.3	5.7	6.6	4.9	-1.7	0.9
Malta	4.4	3.8	3.8	3.4	4.3	3.7	-0.6	0.9
Netherlands	6.5	5.4	4.7	4.3	4.6	4.0	-0.6	0.3
Hungary	5.1	3.8	3.5	3.4	4.1	3.9	-0.2	0.7
Poland	6.2	5.0	3.9	3.1	3.1	3.4	0.3	0.0
Portugal	11.5	8.8	6.9	6.0	6.8	6.3	-0.5	0.8
Romania	7.9	6.8	5.8	5.3	6.3	6.0	-0.3	1.0
Slovakia	8.6	7.7	6.0	5.5	6.2	6.7	0.5	0.7
Slovenia	7.5	5.8	4.6	4.0	4.4	4.3	-0.1	0.4
Sweden	7.5	7.1	6.6	6.9	8.6	8.5	-0.1	1.7
Finland	9.4	9.1	7.7	7.3	8.1	8.2	0.1	0.8

Table 13: Unemployment Rate among Women

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	5.8	5.3	4.9	4.6	5.9	6.1	0.2	1.3
Belgium	7.6	7.1	5.6	5.0	5.5	5.9	0.4	0.5
Bulgaria	7.9	6.9	5.6	4.8	5.7	5.0	-0.7	0.9
France	9.8	9.4	9.0	8.4	8.0	7.8	-0.2	-0.4
Germany	3.5	3.1	2.8	2.6	3.3	3.2	-0.1	0.7
Denmark	6.4	6.1	5.3	5.3	6.0	5.2	-0.8	0.7
Czech Republic	4.7	3.6	2.8	2.4	3.0	3.4	0.4	0.6
EU 27	9.5	8.6	7.7	7.2	7.6	7.4	-0.2	0.4
Greece	28.5	26.4	24.7	22.4	21.5	18.9	-2.6	-0.9
Estonia	6.1	5.1	5.2	4.8	6.6	5.6	-1.0	1.8
Euro area	10.4	9.5	8.6	8.0	8.3	8.1	-0.2	0.3
Ireland	7.6	6.3	5.7	4.7	5.9	6.2	0.3	1.2
Spain	21.4	19.0	17.0	16.0	17.4	16.7	-0.7	1.4
Italy	12.8	12.4	11.7	11.1	10.4	10.6	0.2	-0.7
Croatia	13.8	11.9	9.4	7.2	7.6	8.0	0.4	0.4
Cyprus	13.4	11.3	8.8	8.0	7.6	7.9	0.3	-0.4
Latvia	8.5	7.7	6.5	5.4	7.1	6.6	-0.5	1.7
Lithuania	6.7	5.7	5.4	5.5	7.7	6.6	-1.1	2.2
Luxembourg	6.6	5.5	5.9	5.5	7.0	5.6	-1.4	1.5
Malta	5.2	4.3	3.5	4.0	4.5	3.3	-1.2	0.5
Netherlands	7.6	6.4	5.1	4.5	5.1	4.5	-0.6	0.6
Hungary	4.8	4.3	3.7	3.3	4.2	4.2	0.0	0.9
Poland	6.3	5.0	3.9	3.6	3.3	3.4	0.1	-0.3
Portugal	11.5	9.6	7.6	7.3	7.2	6.9	-0.3	-0.1
Romania	6.2	5.1	4.5	4.3	5.7	5.1	-0.6	1.4
Slovakia	10.9	8.5	7.1	6.0	7.1	7.0	-0.1	1.1
Slovenia	8.6	7.5	5.7	5.0	5.7	5.3	-0.4	0.7
Sweden	6.7	6.6	6.4	7.1	8.5	9.1	0.6	1.4
Finland	8.4	8.3	7.2	6.2	7.4	7.1	-0.3	1.2

Table 14: Long-Term Unemployment Rate (*)

	Annual data (%)						Change (%)	
	2018	2019	2020	2019	2020	2021	2021/20	2020/19
Austria	28.9	25.1	24.5	8.4	11.7	11.6	-0.1	3.3
Belgium	48.7	43.5	41.6	13.6	15.3	18.9	3.6	1.7
Bulgaria	58.4	56.6	45	10.7	18.3	15.5	-2.8	7.6
France	41.6	40	36.5	19.1	21.0	18.2	-2.8	1.9
Germany	40.9	37.8	29.6	5.4	8.1	7.1	-1.0	2.7
Denmark	19.1	16.4	16.4	8.2	10.8	8.7	-2.1	2.6
Czech Republic	30.5	30	22.1	5.7	7.2	7.2	0.0	1.5
EU 27	44.4	41.4	35.4	15.1	17.1	17.4	0.3	2.0
Greece	70.3	70.1	66.5	33.6	36.0	38.2	2.2	2.4
Estonia	24.9	20	17.1	14.1	18.4	19.1	0.7	4.3
Euro area	46.4	43.5	37.5	15.7	17.5	17.6	0.1	1.8
Ireland	36.3	32.1	23.6	15.7	16.6	21.1	4.5	0.9
Spain	41.7	37.8	32.1	33.1	39.6	38.4	-1.2	6.5
Italy	58.1	56	51.5	28.4	24.7	29.3	4.6	-3.7
Croatia	40.2	35.8	28.1	9.7	19.8	22.7	2.9	10.1
Cyprus	31.7	29.1	28.1	14.9	17.8	17.0	-0.8	2.9
Latvia	41.6	38	27.3	15.1	18.2	16.7	-1.5	3.1
Lithuania	32.2	30.6	29	10.2	21.1	19.4	-1.7	10.9
Luxembourg	24.7	22.8	25.5	17.5	23.3	16.2	-7.1	5.8
Malta	48.1	25.1	25.5	9.1	11.1	10.6	-0.5	2.0
Netherlands	36.6	30.3	23.2	6.3	9.5	9.3	-0.2	3.2
Hungary	38.5	31.9	26.2	10.8	14.7	13.3	-1.4	3.9
Poland	26.9	21.6	20	10.4	9.5	13.3	3.8	-0.9
Portugal	43.7	42.6	33.3	18.1	19.9	23.7	3.8	1.8
Romania	44.1	42.4	29.9	15.0	15.4	17.6	2.2	0.4
Slovakia	61.8	58.2	47.8	14.6	18.5	20.0	1.5	3.9
Slovenia	42.9	43	38.8	6.5	15.6	14.2	-1.4	9.1
Sweden	17.2	13.7	13.9	23.5	30.0	30.0	0.0	6.5
Finland	21.8	17.6	15.4	22.5	28.2	23.9	-4.3	5.7

(*) % long term unemployed (12 months or more) as a % of total unemployed

Table 15: Unemployment Rate among Youth 15-24 years old

	Annual data (%)						Change (%)	
	2016	2017	2018	2019	2020	2021	2021/20	2020/19
Austria	12.0	10.5	10.0	9.1	11.7	11.0	-0.7	2.6
Belgium	20.3	19.4	16.0	14.5	15.9	18.2	2.3	1.4
Bulgaria	20.4	16.1	15.9	12.1	17.4	15.8	-1.6	5.3
France	26.0	23.5	22.0	20.7	21.5	18.9	-2.6	0.8
Germany	7.5	7.2	6.6	6.2	8.0	6.9	-1.1	1.8
Denmark	12.2	12.4	10.5	10.1	11.6	10.8	-0.8	1.5
Czech Republic	10.5	7.9	6.7	5.6	8.0	8.2	0.2	2.4
EU 27	20.7	18.5	16.7	15.6	17.6	16.6	-1.0	2.0
Greece	48.2	44.5	41.2	37.5	38.0	35.5	-2.5	0.5
Estonia	14.0	12.1	12.0	11.6	18.3	16.7	-1.6	6.7
Euro area	21.4	19.3	17.5	16.3	18.1	16.8	-1.3	1.8
Ireland	16.8	14.4	13.8	12.5	15.8	14.5	-1.3	3.3
Spain	44.4	38.6	34.3	32.5	38.3	34.8	-3.5	5.8
Italy	37.7	34.6	32.2	29.2	29.8	29.7	-0.1	0.6
Croatia	31.3	27.4	23.7	16.6	21.1	21.9	0.8	4.5
Cyprus	29.1	24.7	20.2	16.6	18.2	17.1	-1.1	1.6
Latvia	17.5	17.0	12.2	12.7	14.9	14.8	-0.1	2.2
Lithuania	14.5	13.3	11.1	11.9	19.6	14.3	-5.3	7.7
Luxembourg	18.9	15.4	14.2	17.0	23.2	16.9	-6.3	6.2
Malta	10.7	10.6	9.1	9.3	10.9	9.6	-1.3	1.6
Netherlands	12.1	10.4	8.9	8.5	10.6	9.3	-1.3	2.1
Hungary	12.7	10.5	9.9	11.2	12.5	13.5	1.0	1.3
Poland	17.8	14.9	11.8	9.9	10.9	11.9	1.0	1.0
Portugal	28.0	23.9	20.3	18.3	22.5	23.4	0.9	4.2
Romania	25.9	23.0	20.5	21.0	21.6	21.0	-0.6	0.6
Slovakia	23.4	20.0	15.8	17.1	20.4	20.6	0.2	3.3
Slovenia	15.3	11.3	8.9	8.1	14.3	12.8	-1.5	6.2
Sweden	18.3	17.2	16.8	19.4	23.5	24.7	1.2	4.1
Finland	20.5	20.0	17.3	17.7	21.0	17.1	-3.9	3.3

(*) For the exact definition of the index see here:

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16664385&RdoSearch=BEGIN&TxtSearch=&CboTheme=36940331&IsTer=TERM&IntCurrentPage=4&ter_valid=0

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=27697382&RdoSearch=BEGIN&TxtSearch=&CboTheme=36940331&IsTer=TERM&IntCurrentPage=44&ter_valid=0