



# ***Strategic Analysis***

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October 2022

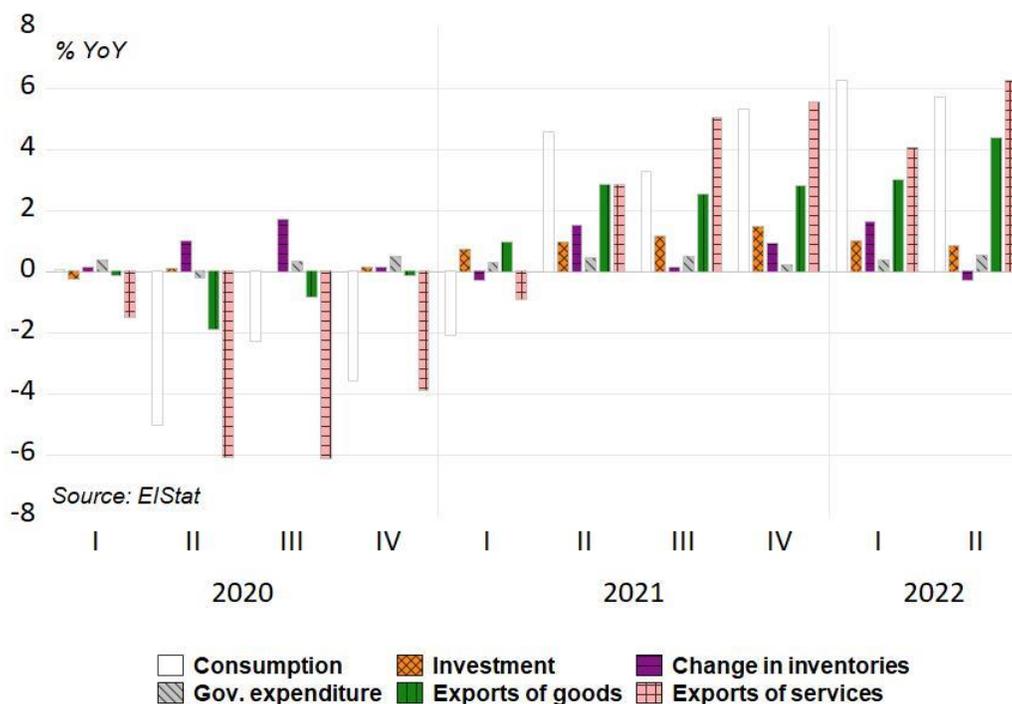
## **Greece: Recovery, or Another Recession?**

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October 2022

The Greek economy continued its quick recovery of 2021 in the first two quarters of 2022, recouping a significant part of the economic losses caused by the Covid-19 pandemic. Various economic indicators such as exports, retail sales, and manufacturing production are growing, unemployment is falling together with rapidly increasing GDP—all indicate optimistic prospects for future growth. Gross Domestic Product, at constant prices, increased by 7 percent over the same quarter of 2021, and it is now higher than the pre-pandemic level of 2019. The preliminary growth estimates for the second quarter of 2022 continued growing by 7.7 percent compared to the second quarter of 2021, but at a slower rate over the first quarter of 2022 (1.2 percent). While the economic sentiment expressed by many is high, denoting the resilience of the Greek economy, there are still the unknown effects of the lingering pandemic and the continuing war in Ukraine with the energy and food-induced inflationary pressures. A careful analysis of these optimistic trends tells a different story as for example with the decreasing unemployment. Employment has increased in the unskilled low-wage categories, pushing many of the unemployed toward self-employment in activities of very low productivity, low-value added work as reported by the Public Service

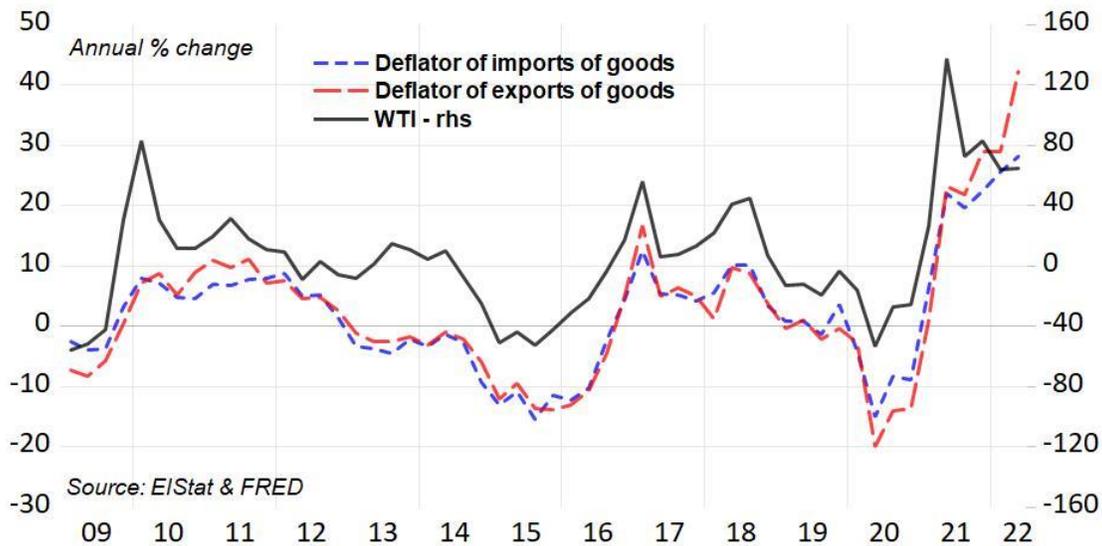
**Figure 1. Greece. Components of GDP: changes over previous year**



Employment Agency (ΔΥΠΙΑ- τ. ΟΑΕΔ) as reported by Salourou (2022a). Furthermore, there is also concern regarding the accuracy of the unemployment conditions in Greece emanating from the very large difference of the unemployed reported by the two government agencies responsible for the employment/unemployment statistics. The recently released report from Elstat shows the unemployed as 569,609 while the Public Service Employment Agency (ΔΥΠΙΑ –τ. ΟΑΕΔ) counts them as 944,000.

In this report, we discuss the robustness of the recovery, critically evaluating the recently released optimistic projections of the IMF and the European Commission, and provide our own projections, conditional on the implementation of the projects financed by the European Recovery and Resilience Funds.

Figure 2. Price indices



In Figure 1, we report the absolute changes over the previous year in the components of GDP at current prices. The downturn caused by the pandemic seems to have ended in the first quarter of 2021, and in the other three quarters of last year all components have more than recovered in nominal terms to their pre-pandemic level. Note however, that the analysis in Figure 1 is comparable to what we presented in previous reports: given the very low level of inflation up to 2020, and some doubts about the procedures adopted by EIStat in estimating GDP deflators,<sup>1</sup> we preferred to discuss GDP components at current prices. The situation has now changed, since one of the disruptive effects of the pandemic has been the increase in transportation costs and the price of energy – exacerbated by the consequences of the war in Ukraine – generating import price increases, and therefore inflation, not only in Greece, but also in most western countries.

<sup>1</sup> See Zezza et al. (2022).

Figure 3. Greece. Price indices

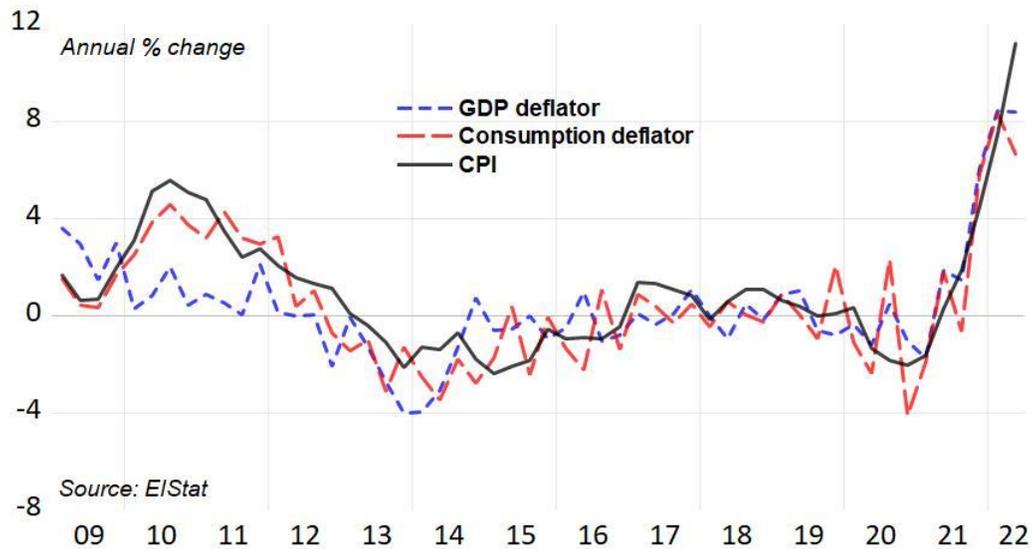
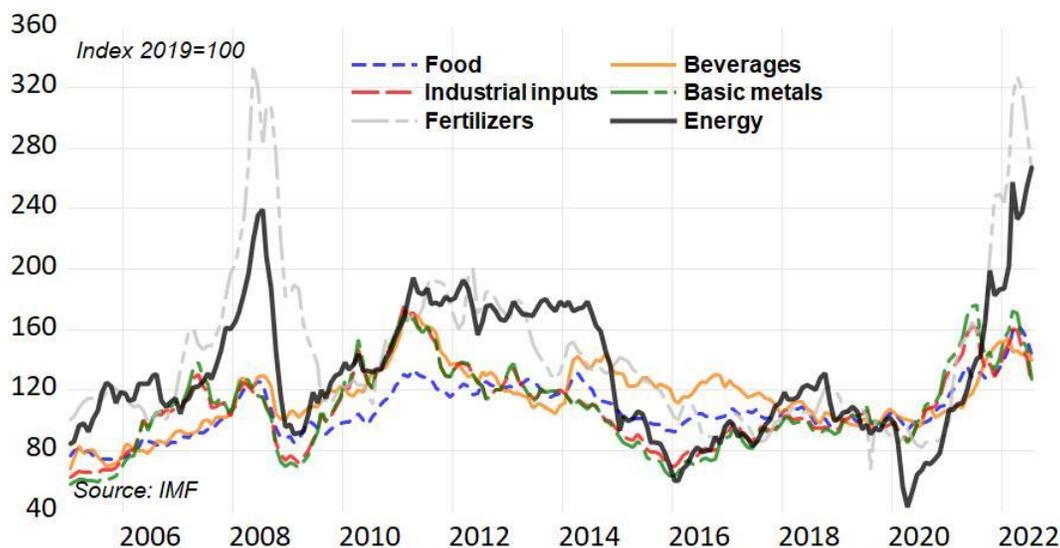


Figure 2 documents the link between the international price of oil – as measured by the monthly average of the West Texas Intermediate (WTI) spot crude oil price – and the deflators for exports and imports of goods for Greece. The WTI peaked in June 2022 at 114.8 dollars per barrel, up from a low of 16.5 dollars in April 2020 during the pandemic. The price was lower in July 2022, at 101.6 dollars per barrel, possibly signaling an inverted trend.

Figure 2 clearly shows that the deflators for the Greek components of trade in goods have a much lower volatility (they are scaled on the left vertical axis, while the WTI is scaled on the right axis) but instead a very strong correlation with the dynamics of the WTI. If the trend is indeed being inverted, we could therefore expect lower imported inflation in the rest of 2022, but still with figures above those experienced in the pre-Covid decade.

Domestic inflation is reacting to imported inflation, as expected due to Greece's high imports, even though growth rates in domestic prices seem to be lower than those for imports. In Figure 3, we report three different indicators of domestic prices: the

Figure 4. Price of commodities

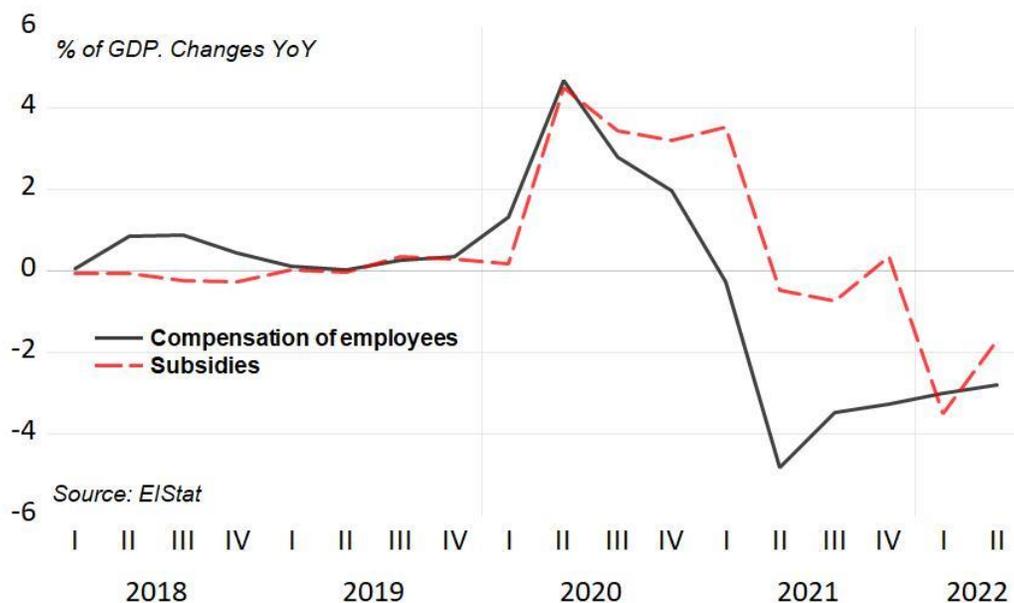


GDP deflator, the deflator for consumption, and the consumer price index (CPI), the last one showing an increase of 10.5 percent over the same quarter of 2021. Comparing the dynamics of CPI to the deflator for imports, in Figures 3 and 2 respectively, there are some similarities with the increase around 2009, while movements in foreign prices in the 2016-7 period had no apparent impact on domestic inflation.

Commodity prices have also been increasing, most likely affected by the continuing war in Ukraine. Some aggregate indices, published by the IMF, are reported in Figure 4, rescaled to 2019 (the last period before the pandemic) as the base year. Again, while it is true that most price indices are above their 2019 level, domestic prices in Greece did not increase with commodity prices in previous periods, so that the surge in domestic inflation, which certainly started with the external shocks discussed above, must also depend on some other changes –possibly due to higher profit mark-ups.

Domestic inflation has so far not been provoked or followed by wage inflation: the index of wages published by ElStat illustrates a decline of about 2 percent in the

**Figure 5. Greece. Compensation of employees and subsidies**



first quarter of 2022 against the same quarter of the previous year which renders low and middle income households economically more vulnerable with the rising price level.

This divergence between wage and price inflation is confirmed by the analysis of the shifts in functional income distribution, reported in Figure 5. The share of wages in GDP increased temporarily when GDP dropped because of the lockdown, while many workers kept their wages, but has been dropping steadily from 2021 to present. The decrease in wages has been compensated in part by subsidies (which did not necessarily go to wage earners) during the pandemic, but this policy is not expected to continue. The remaining component of the income side of GDP - other than indirect taxes – is the gross operating surplus (including mixed income) which has grown by 4 percent of GDP between 2020 and the second quarter of 2022. In other words, in a period of inflation, the value of GDP will increase in concert with the price level, and - if wages don't follow the same direction - income distribution will have the pattern shown in Figure 5 for the last quarters.

Against this background marked by uncertainty, recent projections for Greece made by the IMF, the European Commission and other analysts (Eurobank Research) look, in our view, problematic.

Real GDP is projected to grow at a rate between 3.5 and 4 percent in 2022, slowing down to around 2.4-2.6 percent in 2023. While these projections may not be off target, the model on which they are based also projects a substantial inversion in fiscal policy, with net government lending cut by 3 to 4 percent of GDP in 2022, and a further 3 percent of GDP in 2023, while the current account balance is not projected to improve substantially, remaining instead largely negative.

**Table 1. Greece: projections of key indicators**

	2020	2021	2022	2023
<b><i>IMF (April 2022)</i></b>				
Real GDP (growth rate)	-9.0	8.3	3.5	2.6
Gov. net lending (% of GDP)	-10.9	-8.7	-4.8	-1.8
Current account (% of GDP)	-7.3	-6.4	-6.3	-6.1
Implied NAFA (% of GDP)	3.5	2.3	-1.5	-4.3
<b><i>European Commission (Spring 2022)</i></b>				
Real GDP (growth rate)				
<b><i>(Summer)</i></b>	-9.0	8.3	4.0	2.4
Gov. net lending (% of GDP)	-10.9	-7.4	-4.3	-1.0
Current account (% of GDP)	-7.3	-8.3	-8.4	-6.4
Implied NAFA (% of GDP)	3.5	-0.9	-4.1	-5.4

As we have discussed several times in our previous reports,<sup>2</sup> the net lending position of the private sector – that we call NAFA shown in Table 1, for Net Acquisition of Financial Assets – must mirror by accounting constraints the sum of government net

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<sup>2</sup> See Papadimitriou et al. (2022) among others.

borrowing plus the current account balance. When NAFA is negative, the private sector as a whole is paying to the other sectors more than it is receiving, and therefore it is either running down its stock of financial assets or increasing its stock of debt.

In our approach, a negative NAFA, which normally implies an increasing foreign debt to income ratio for the private sector, is a sign of increased financial fragility which often translates into a recession. Official forecasts for the Greek economy may look optimistic, when focusing on GDP growth, but are a matter of serious concern, should their assumptions about fiscal policy and the current account balance materialize.

In the following we will discuss in more detail the recent dynamics of the components of GDP and set our own assumptions for the evolution of the economy in the medium term.

## THE COMPONENTS OF DEMAND

### *Household consumption*

As shown in Figure 1 illustrating the changes in the components of GDP over the corresponding quarterly data since 2020, the strongest contributor to GDP growth in the first quarter of 2022 was due to household consumption surpassing all other components. Moreover, the recently released data from Elstat indicate yet another increase in consumption of 2.1 percent in the second quarter of this year over the first also succeeding in exceeding its 2019 level. While the omens of continued increase for the rest of the year are positive, especially with the sustained relaxation of fiscal policy, mixed signals abound from survey data and anecdotal evidence indicating that 7 out of 10 private sector working individuals have decreased their basic foodstuffs consumption (Salourou 2022b) let alone the encountered difficulties in coping with the dramatic price increases of energy and energy-dependent goods and services<sup>3</sup>

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<sup>3</sup> Some negative prospects are slowly emerging that would decrease household consumption as are the trends in retail sales and the declining expectations of retail trade (i.e., according to the EUROSTAT, the change

Notwithstanding, the small decreases of the price level in July and August at 11.6 percent and 11.4 percent respectively from the high 12.1 percent in June, the y-o-y price increases, as reported from Elstat, average 13 percent for foodstuffs, over 30 percent for rent and over 20 percent for transportation related services to name a few. Many consumers notice packaged goods while maintaining their price have reduced the quantity contained in them confirming in a sense what has been coined as the phenomenon of “shrinkflation” or “package downsizing.” There are clearly different distributional effects between low and high-income households.<sup>4</sup>

### ***Investment***

Gross fixed capital formation continued its growth path, started in fourth quarter of 2021, in the first quarter of 2022. Elstat recently reported that gross investment in the second quarter of 2022 although decreasing by 1.0 percent over the first quarter of 2022, increased, however, by 8.7 percent over the same quarter in 2021. As shown in Figure 1, investment growth was a significant driver of GDP growth in the first quarter. It will hopefully continue to mark increases for the remainder of the year even though official reports indicate a slower utilization of public investment funds including those of the NGEU. The positive signs come from investment in building construction even though the measured construction business confidence index as reported by the EUROSTAT indicates more pessimism than optimism based on the recorded changes in August and September 2022 as compared to the corresponding months of 2021. The increase of investment in dwellings that started recovering in the final months of 2021 continued in both quarters of 2022. The building permits, both private and public in May 2022 –

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of the retail confidence indicator was -0.80 percent in September of 2022, dropping from its high of 21.60% in December of 2021 and a record low of -3.70% in August of 2022).

<sup>4</sup> Data obtained from Elstat show that 80 percent of the income of poor households is spent on rent and food. Households living in rented houses spend an average of 18.9 percent of their budget on rent. The share of average expenditure on food, non-alcoholic beverages and housing of households of the poorest 20 percent of the population accounts for 58.1 percent of household expenditure, while the corresponding share of the richest 20 percent of the population accounts to 36.3 percent. Finally, the average annual household expenditure in 2021 as compared to 2008 has been reduced by 33.0 percent.

the last month for which data are available—shows they decreased by 0.4 percent over the same month in 2021 while they increased by 10.8 percent over the June 2021 – May 2022, but only 0.9 percent increase for the five-month period of 2022 over the same five-month period in 2021. On the other hand, private building permits for the period June 2021 – May 2022 showed an increase of 11 percent indicating the decrease in public building permits which does not bode well in for public investment including project programmed to be funded by the NGEU funds. Overall construction output in the second quarter of 2022 increased to 28.9 percent over 14.8 percent the same quarter in 2021 over the second quarter of 2020.

Investment in private housing continues to grow stimulated by the increased demand for short term rentals with the explosion of the Airbnb phenomenon caused by increases in tourism activity which includes increases in demand associated with the “Golden Visa” program allowing foreign investors to obtain a five-year renewable residence for an investment of about 250,000 euro which usually takes the form of housing that it can be in turn used for short-term rentals.

### ***Trade***

The highly positive influence on real GDP growth is the seasonally adjusted growth of retail trade volume index determined by the exports and imports of goods and services respective indices. The respective changes of these indices show the exports index for the first quarter of 2022 y-o-y to mark an increase of 9.8 percent while in the corresponding second quarter y-o-y to dramatically have increased to 20.8 percent. Similarly, the corresponding imports index changes for the first and second quarters of 2022 y-o-y to be 18.1 and 15.5 percent respectively. Clearly, the second quarter changes are based on preliminary and subject correction, but they indicate, nevertheless, the improvement in exports versus imports most likely due to the increased tourism activity.

The recovery in tourism activity in Greece seems to be getting closer to the 2019 levels and by some estimates it may exceed it. As reported by the BoG, in the period of January-July 2022 tourists receipts amounted to 97.1 percent of the corresponding period in 2019 –exceeding it in the month of July at 100.5 percent—fueling the prospects of 2022 becoming a record-high year in the tourist sector. Another recent estimate suggests it will reach to 90 percent of the pre-Covid-19 level (Kokkinidis, 2022). This high records scenarios are, perhaps, in consequence of the government’s decision to lift all Covid-19 related restrictions. Some commentators (capital.gr) attribute the increase of household and corporate bank deposits, despite the high inflation levels, mainly to tourism receipts.

Recently released Elstat –not-seasonally adjusted—data on July 2022 commercial transactions of exports of goods were at current prices 4,971.4 million euro marking a y-o-y increase of 39.9 percent with oil products commanding the lion’s share of 26.7 percent. Products excluding oil and shipping represented the remaining 13.2 percent. Imports on goods respectively increased to 7,967.9 million euro representing a y-o-y increase of 37.3 percent with oil products being the major component of 23.5 percent. Imports excluding oil and shipping represented 13.4 percent. The resulting deficit in the balance of goods increased by 2,996.5 million in July 2022 from 2,247.7 million in July 2021. For the seven-month period, January-July 2022, it widened y-o-y by 8,168.8 million euro.

Exports of goods registered a dramatic increase of 40 percent in the first seven months of 2022, relative to the same period of the previous year, when measured at current prices. As expected, the largest increase was in the oil category (81 percent), confirming the relative specialization of Greece in refining crude oil to be re-exported. It is important to mention that imports in the oil category exceed the value of exports, and over the same period they have grown by 106 percent.

The balance of trade in goods, which improved during the austerity period reaching its lowest deficit at 8.6 percent of GDP in 2015, has worsened since, and has collapsed in the last four quarters, reaching a deficit of 18.5 percent of GDP in the second quarter of 2022.

The trade deficit in goods is partly compensated by the surplus in the trade of services. The surplus which almost vanished during the pandemic as a result of the stop of tourist activities in 2020 has now recovered to almost 12 percent of GDP in the second quarter of 2022, close to its peak at 12.5 percent in 2019. In general a rebound of tourists receipts is very significant toward reducing the high and rising current account deficits. As documented in Figure 1, exports of services together with private consumption have provided the largest contribution to GDP growth in 2022.

Some adjustments to Elstat data on exports of services are discussed in the Appendix.

### Projections for 2022-23.

#### *Fiscal policy*

NGEU funds certainly sustained the growth in government investment, which reached 2 billion in the first quarter of 2022 (data for the second quarter are not available yet). Investment started to increase in 2021, from a through of 1.2 billion in the last quarter of 2020. For our baseline projection we assume that government investment will remain at the level it reached in the first quarter of 2022 until the end of 2023: a hypothesis in line with the planned disbursement of NGEU funds.

Government consumption – which is also a component of GDP – has remained more stable in real terms, remaining roughly in line with the levels reached in the years of austerity. We assume that government collective consumption will stabilize in real terms in our projection period, while individual consumption is projected to increase at annual rate of 1 percent, close to its recent trend.

Expenditure on social benefits has increased in the first half of 2021, but only because of the increase in the number of retired people. Real average expenditure, divided by the population over 65, has remained stable, and we project it will remain so in the projection period. In nominal terms, social benefits will increase with inflation, but are projected to stabilize as a share of GDP.

Other current net transfers from the government to the private sector remained relatively stable in the last two years, and we project them to remain stable. On the contrary, net capital transfers to the private sector increased substantially in the fourth quarter of 2020, and were higher than previous average in 2021. Government total “grants and capital transfers” were about 8 billion euro in 2020, compared to 2.4 bn in 2019, and 5.3 bn in 2021. The value for the first quarter of 2022 was lower, at 617 million euro: we assume they will revert to the pre-Covid average in the projection period.

Government support to the private sector during the pandemic has mainly operated through changes in taxation and subsidies, in addition to capital transfers.

The average ex-post indirect tax rate decreased in 2020 to a low of 15.6 percent, from 17.8 percent in the second quarter of 2019. Since then, it has increased modestly, reaching 18.7 percent in the first quarter of 2022. We will assume no further increase in this rate.

Government subsidies were around 1.8 billion in 2019, and have increased to almost 6 billion in 2020, and 8.5 billion in 2021. They have dropped substantially in the first quarter of 2022, and we assume they will remain at the same level, relative to GDP, over the projection period. An exception will be in the first half of 2023, based on the government’s announcement to distribute 2.5 billion euro – made available by tax receipts exceeding projection in 2022 – to alleviate the cost of energy bills. Lacking

more precise information on their distribution, we assume that half of this amount will go to businesses, and half to households, in the first semester of 2023.

Subsidies received from abroad have been relatively stable, so that we will project them to remain stable in our projection period.

The ex-post average direct tax rate was low only in the third quarter of 2020, but reverted almost to its pre-pandemic level in the following quarters. We assume it will complete its recovery to the 2019 level in the remaining quarters of 2022.

The ex-post average rate of social contributions dropped at the height of the pandemic in the second quarter of 2020, but was already back to its average value in the next quarters. Its value in the first quarter of 2022 was again much lower and we project that it will revert to its average value in the rest of 2022.

Current transfers from abroad to the government are expected to increase with the disbursements of NGEU funds. The government has received about 6.6bn euro in 2021, and we estimate it will get 7.9 billion in 2022, and 9.9 billion in 2023, compared to 4.9bn in 2019 and 6bn in 2020.

### ***Interest rates***

The implicit ex-post interest rates that we use to estimate interest payments on foreign loans are still very low and so is their average value for payments made from the government to the private sector.

However, central banks, including the ECB, have been increasing their base rate to avoid current inflation being translated into higher expected inflation, damaging the credibility of their inflation targets. Since inflation is not due to an increase in wages – it will affect even more negatively the already declining purchasing power of workers – a tighter monetary policy, in our view, will be exacerbating inflation, rather than controlling it. Nevertheless, we assume an increase of 150 basis points in the interest

rate paid on domestically held debt in 2022, while we project the interest rate on foreign loans to remain at its current low level.

### ***Housing market***

The price of housing, as measured by the index price of dwellings published by the Bank of Greece, has been following an upward trend, growing at rates close to 10 percent since the third quarter of 2021. The y-o-y growth rate in the first quarter of 2022 was 9.2 percent with an uptick increase to 9.4 percent in the second quarter based on preliminary Elstat estimates.

The increase in the price of dwellings did not have a proportional effect on investment in dwellings, as published by ElStat, which started to increase moderately after 2018, but is still only about 11 percent of its 2006 pre-crisis level.

The increase in prices reported by the BoG and mentioned above must therefore be the consequence of an increase in demand for existing dwellings, coming from foreign investors, which is not followed by increased construction activity of the same magnitude.

For our projection period, we assume that the price of housing will keep increasing more than the general price level in 2022, and that from 2023 it will revert to a growth rate in line with the general price level.

### ***Inflation and foreign prices***

As discussed above, import prices have increased dramatically during 2021 and the first half of 2022 due to supply chain disruptions, the increase in transportation costs from the pandemic and the war in Ukraine, and domestic prices that have surged, albeit at a smaller rate. We will optimistically assume, following recent signals from monthly data on the price of energy and commodities, that imported inflation will be reduced in the coming months, so that inflation will revert to target by 2023.

## *Tourism*

The number of tourists more than doubled in 2021 (to 3.9 million) with respect to the previous year, when the Covid-19 pandemic caused a collapse of the tourism sector. The recovery was sustained as shown in the first two quarters of this year but the numbers are still below the pre-Covid period. Our model projects that exports of services will continue to recover, as long as disposable income of the countries of the travelers' origin keeps rising as well.

## *Results for the NGEU baseline scenario*

The main results of our baseline projection are summarized in Table 2.

	2020	2021	2022	2023	2024
<b><i>Baseline</i></b>					
Real GDP (growth rate)	-8.7	8.0	5.0	1.6	1.0
Gov. current expenditure	34.8	33.6	30.9	30.5	28.6
Gov. investment	3.3	3.5	4.2	4.5	3.3
Gov. revenues	32.9	32.7	35.1	36.6	34.2
Gov. primary surplus	-7.0	-4.9	0.7	2.8	3.4
Gov. net lending (% of GDP)	-10.0	-7.4	-1.8	0.1	0.8
External balance (% of GDP)	-5.3	-6.2	-12.4	-8.2	-2.7
Implied NAFA (% of GDP)	4.7	1.2	-10.5	-8.4	-3.5
<b><i>Adverse scenario</i></b>					
Real GDP (growth rate)	-8.7	8.0	5.0	0.8	0.3
Gov. current expenditure	34.8	33.6	30.9	30.5	29.8
Gov. investment	3.3	3.5	3.8	3.4	2.6
Gov. current revenues	32.9	32.7	34.3	35.2	33.7
Gov. primary surplus	-7.0	-4.9	0.6	2.4	2.4
Gov. net lending (% of GDP)	-10.0	-7.4	-1.9	-0.3	-0.3
Current account (% of GDP)	-5.3	-6.2	-12.3	-9.5	-3.1
Implied NAFA (% of GDP)	4.7	1.2	-10.4	-9.2	-2.9

Comparing our baseline results to the other projections reported above in Table 1, we notice that real GDP growth is expected to be higher in 2022, and lower in the following year. The discrepancies between these projections and our own are mainly due to (a) the good performance of the tourism industry, which has recovered more than expected, and - together with consumption – accounts for most of the increase in GDP in 2022, and (b) the dire consequences of the war in Ukraine on inflation and uncertainty, which in turn have caused – and will continue to generate – a fall in real disposable income.

In addition, as documented above, we expect tax rates to revert to their pre-pandemic level, generating an increase in government revenues, but at the same time a fall in real disposable income.

The higher increase in import prices in relation to export prices will contribute to the worsening of the deficit of the current account balance of payments with the increase in revenues from tourism insufficient to offset it. As a consequence, as discussed earlier, the Net Acquisition of Financial Assets (NAFA) for the private sector is projected to fall in negative territory, i.e. implying a reduction in the net financial assets of the private sector, and/or an increase in foreign borrowing.

Should this result materialize, appropriate policies have to be put in place to avoid another financial crisis.

### ***An alternative, adverse scenario***

In our baseline scenario, we optimistically assumed that all NGEU investment projects would be financed and approved on time, but previous experiences on the ability of the government to fulfil the criteria of European programs may imply less optimism.

In the alternative scenario reported in lower part of Table 2 we have assumed that only 75 percent of the investment project financed through NGEU funds are realized.

In addition, we have used less optimistic assumptions about inflation, which is now projected to remain above 8 percent in 2023, and decline only in 2024, not because of any significant change in wages, but rather on the hypothesis that international prices will continue to increase.

Under these new assumptions, real GDP growth is not significantly lower in 2022 – since most of the differences against the baseline assumptions have an impact from 2023 onwards – but falls below 1 percent in 2023 and 2024.

Finally, if the assumption that the international prices of energy and commodities continue to increase this would imply a deterioration in the current account balance with respect to the baseline making the Greek economy more fragile.

### ***Conclusions***

The economy of Greece as most economic performance metrics show for the first two quarters of this year is on the road to recouping what was lost in 2020 when the Covid-19 pandemic hit. Growth projections for the current year are lower from those recorded in 2021 indicating the economy needs to perform much better, if it were to continue on the growth path began in the pre-pandemic period. Similarly, growth projections for 2023 and 2024 appear much weaker denoting that serious consequences may be in store.

In this new Strategic Analysis we considered the current economic conditions in play and used reasonable assumptions for the trends of significant growth drivers –both positive and negative—to simulate the growth path of the Greek economy for the intermediate run (2022-2024). Our projections are for two possible scenarios: the basic and an alternate (adverse) scenario. The projections shown (Table 2) are conditional on our assumptions being realized. The basic scenario for 2022 is in line –albeit at the lower range--with more recent projections of the EC, IMF, BoG and other research

organizations, but much more pessimistic for the following two years for the reasons outlined above.

Our alternative (adverse) scenario projects even lower growth than the basic scenario for 2023 and 2024. We hope it does not come to pass since, if it were, it will cause more declines in the fortunes of households, especially to low-income households and a danger for the survival of firms. Most importantly, the worsening of the current account deficits does not bode well for servicing the stock of public sector debt especially with increasing interest rates.

In these troubling times with increasing price levels and the euro depreciating economies like the one of Greece, highly dependent on imports that cost more, become more fragile as the current account deficit widens. In our view, the continuous recovery of the Greek economy rests with the government's ability to utilize the NGEU funds swiftly, efficiently and for projects that will increase the country's productive capacity.

## References

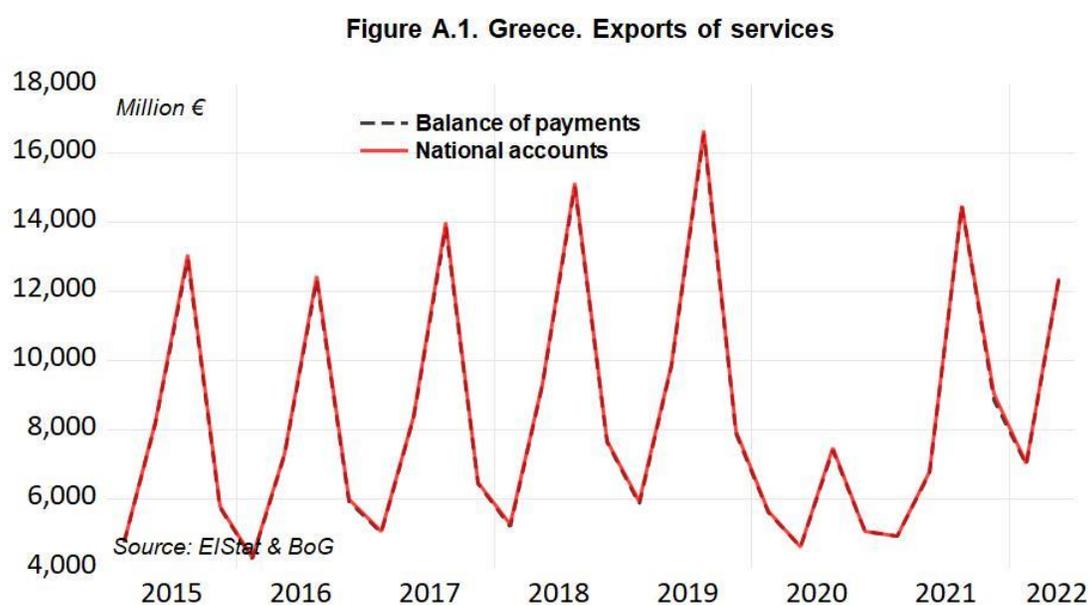
- Capital.gr (2022) “Why are bank deposits increasing despite the high price levels”, ECONOMY, 28 July
- Eurobank Research, Greece Focus Notes, Eurobank, 3 June 2022
- Kokkinidis, T (2022) “Why Greece’s Tourism Is Doing So Well?” Greek Reporter.com, 7 July
- Papadimitriou, D.B., N. Rodousakis, and G. Zezza (2022) “Is Greece on the Road of Economic Recovery?”, Levy Institute Strategic Analysis, March.
- Salourou, Roula (2022a) “Employment: Reduction of low-skill and low-wage unemployed workers” (In Greek) I Kathimerini, 11 August
- , (2022b) “Price Increases: Seven out of ten workers have decreased basic foodstuffs” (In Greek) quoting from INE/GSEE Survey and ALCO Research. I Kathimerini, 11 September
- Zeza, G., D.B. Papadimitriou, and N. Rodousakis (2022) “What is Happening to the New Greek National Accounts Data?”, Levy Institute, Policy note, 2022/1.

## Data Sources

- Bank of Greece: <https://bankofgreece.gr/>
- ELSTAT: <https://www.statistics.gr>
- Eurobank Research, Greece Focus Notes, Eurobank, 3 June 2022
- European Commission: [https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/greece/economic-forecast-greece\\_en](https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/greece/economic-forecast-greece_en)
- FRED: <https://fred.stlouisfed.org/>
- IMF-WEO: <https://www.imf.org/en/Publications/WEO/weo-database/2022/April>
- IMF-CP: <https://www.imf.org/en/Research/commodity-prices>
- OECD: <https://stats.oecd.org>

## Appendix. A note on real exports

In the latest release of the quarterly national accounts for Greece we were surprised to notice that the deflator for exports of services was registering a very large increase in the first two quarters of 2022, when compared to domestic inflation. In the second quarter of 2022, the Y-o-Y growth rate in exports deflators was reported at 28 percent, against an increase of 11 percent in the CPI.

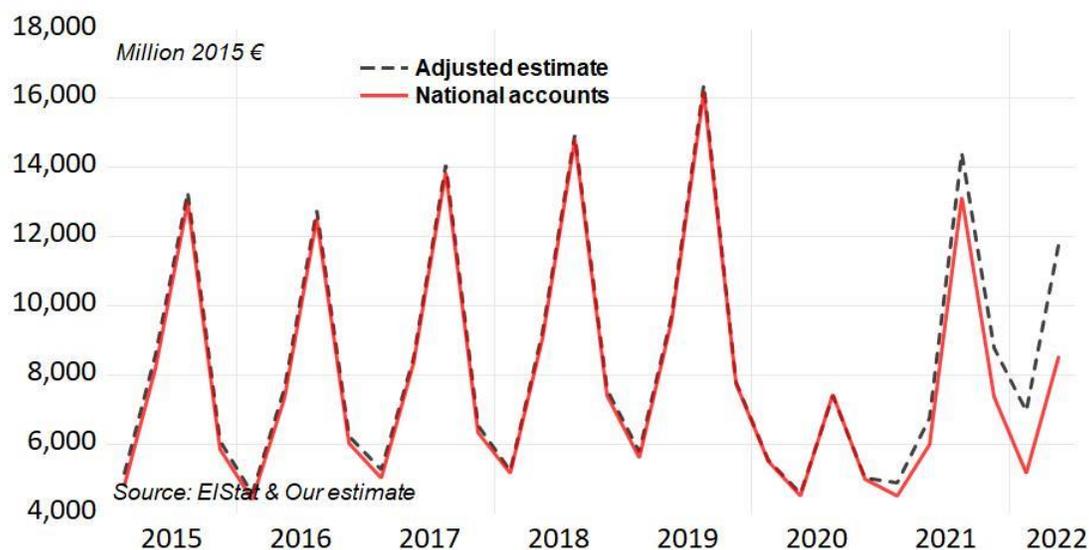


We therefore verified the ElStat estimates following the procedure described in their 2016 report on the methodology adopted to construct national accounts.<sup>5</sup>

We use monthly data from the Bank of Greece Balance of payments statistics, available from January 2002 to July 2022, reporting the receipts from exports of services, disaggregated between Travel, Transportation and Other. Although “Part of

<sup>5</sup> ElStat. 2016. “QNA inventory based on ESA 2010 methodology: Final Report.” July. Athens: Hellenic Statistical Authority (ElStat).

Figure A.2. Greece. Exports of services at 2015 prices



travel services obtained by BOP is allocated to exports of goods”<sup>6</sup>, the quarterly data obtained from BoP statistics are in line with those from national accounts (NA from now on), as the chart in Figure A.1 documents (the discrepancy is usually below 1 percent). We use the non-seasonally adjusted NA statistics.

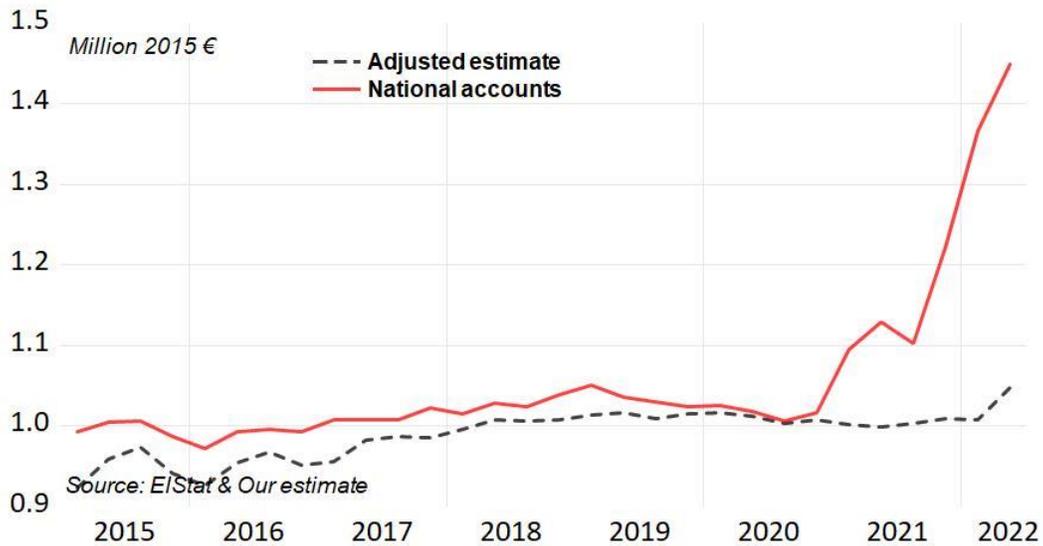
We have next obtained the components of exports of services at constant 2015 prices, using the CPI deflator for Travel, and the Producer Price Index in industry for the non-domestic market, excluding energy, to deflate exports in the Transportation and Other categories.<sup>7</sup>

We next obtain quarterly statistics and sum them up to obtain adjusted estimates of export of services at constant prices, which is compared in Figure A.2 to the data from national accounts.

<sup>6</sup> Ibid. p.31.

<sup>7</sup> Ibid. p.32.

Figure A.3. Greece. Exports of services implied deflator



As the figure shows, the adjusted estimate is very close to that in NA up to 2020, after which they start to diverge, with NA statistics being consistently below our adjusted estimate.

The implication is that the adjusted estimate of the deflator for exports of services will show a lower growth with respect to that implied by NA data, as the chart in Figure A.3 shows.