Quarterly Report on the Greek Economy

03/22

October 12, 2022

ΙΔΡΥΜΑ ΟΙΚΟΝΟΜΙΚΩΝ & ΒΙΟΜΗΧΑΝΙΚΩΝ ΕΡΕΥΝΩΝ

Overview of the report

Positive dynamics of the economy in a challenging global environment (1)

- The new global crisis is rooted in long-term issues
  - Long run unconventional expansionary monetary policy
  - Pandemic: production and demand imbalances, as well as fiscal imbalances
  - Geopolitical instability
  - Distortions in the energy market
- Addressing the crisis requires concerted action and structural changes
  - Monetary Policy: Balance between Inflation Targeting and Recession Trap
  - Fiscal policy: Limited space, targeted interventions
  - Structural reforms: crucial. Credibility and political capital are prerequisites
- The risk of recession, especially in Europe, is now high
- The challenge of high and persistent inflation
  - Short-term positive effects on debt (with fixed interest rates) and on nominal public revenue
  - Negative effects on household cost of living, ability to repay loans, and cost of financing new investment
  - Need for countermeasures, such as measures to increase supply and competition

Positive dynamics of the economy in a challenging global environment (2)

- The Greek economy has shown resilience in 2022
  - Consumption and exports dynamics have exceeded expectations
  - Higher than the European average
- Growth comes with quality features
  - Consistently high extroversion
  - Significant involvement of the public sector in the economy
- The Greek economy remains vulnerable in the medium term
  - Rising financing costs, high public debt
  - External balance deterioration, dependence on imports, low domestic saving
  - Pressures on the fiscal balance
  - Unsustainable consumption trend
  - Unfavorable demographic characteristics
- How will the Greek economy cope with the passing "storm"?
  - Enhancement of the production base
  - Turn to a productive model with an emphasis on investment and production of high added value

Global environment: slowdown in Q2/2022, the energy crisis and inflation deepen

- **Growth slowdown in the second quarter**, under the effect of **high energy costs**. 4.1% growth rate in the Eurozone, 1.7% in the US, and 0.4% in China.
  - ➢ OECD countries (second quarter): 3.7% annual rate of change, down from 4.4% in the previous quarter and 13.3% in the second quarter of 2021

- **Inflation** in the OECD countries reached a 39-year high in August (10.3%)
- The **war in Ukraine** has had a big impact on the world economy
  - ➢ Intense pressure on energy products, raw materials, and food markets
  - ➢ Secondary effects from uncertainty about the duration and effects of the war and spillover effects through the supply chains

- The OECD forecasts **3.0% global growth in 2022** and 2.2% in 2023
- The ECB predicts weak growth in the Eurozone in 2023 (+0.9%) in its baseline scenario. In the unfavorable scenario, the ECB predicts a **recession** of 0.9%.

Global environment: challenges in the medium term

Global challenges

- Dealing with the effects of the war in Ukraine on energy efficiency and the operation of supply chains. Food crisis risk in poor countries.
- Restraining new strong inflationary pressure
  - ➢ Faster monetary policy tightening (FED, ECB) ➔ increase in interest rates, with effects on investment
- Dealing with new outbreaks of the pandemic in China

European challenges

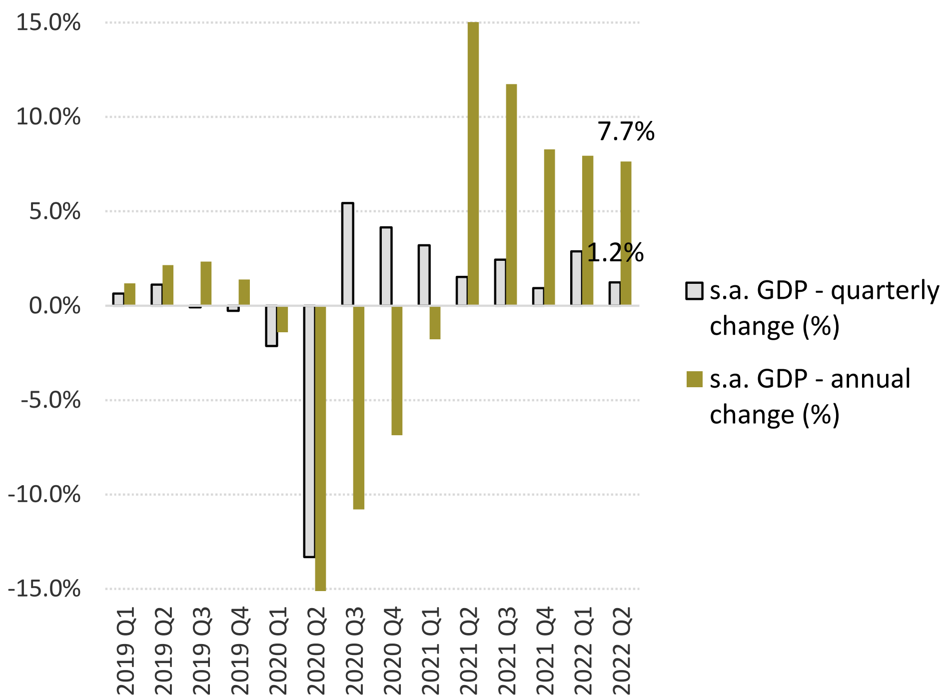
- Diversification of energy sources and energy security
- Fiscal interventions to support households and businesses
- Effects of monetary policy tightening by the ECB
- Implementation of the European Recovery Fund

Greece Q2/2022: Recovery was better than expected, despite the slowdown

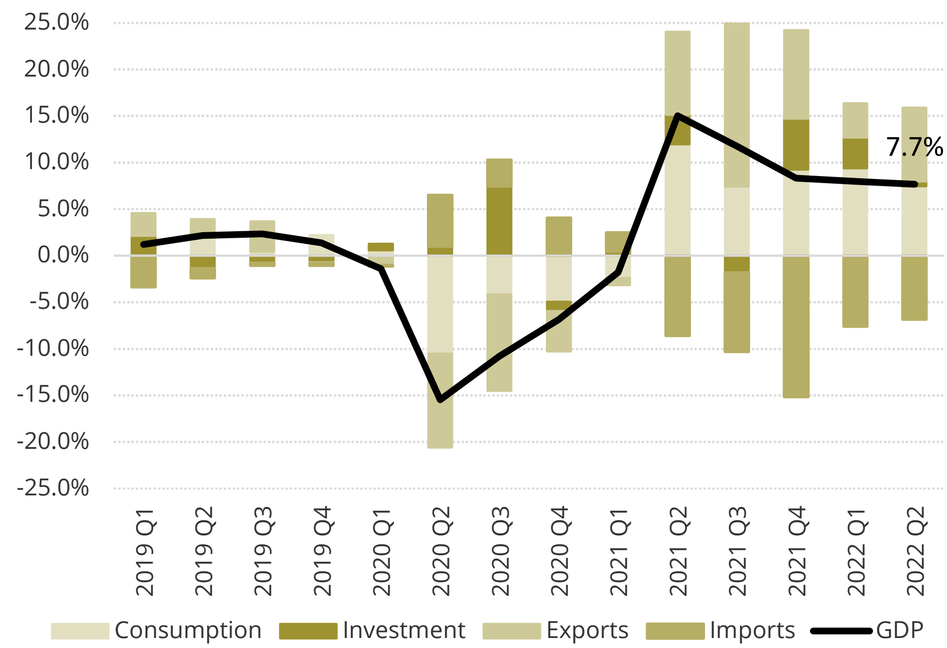
Real GDP Q2: +7.7% y/y, the 5th highest growth rate in the Eurozone

- Small slowdown (+8.0% y/y in Q1)
- Resilient consumption (private +11.0%, public +0.8%)
- High exports (+20.8%, services +47.4%)
- Small rise in investment (+3.5%)
- Strong import recovery (+15.5%)
- Consistently high extroversion (82% of GDP)

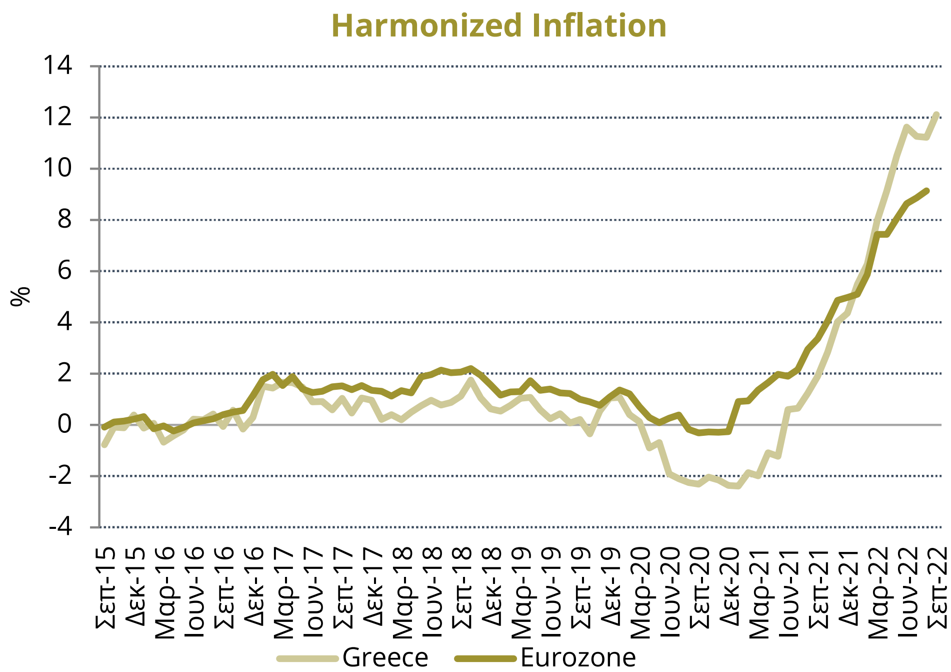
Seasonally adjusted GDP

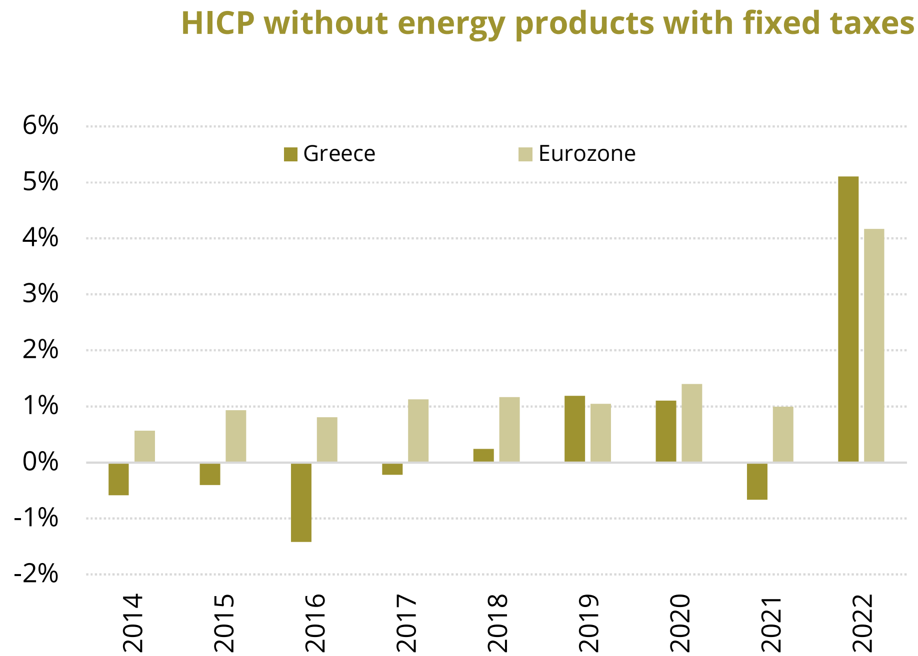


Annual % change of s.a. GDP, contribution per component (in pp.)



Inflation reached a 27-year high in the first nine months of 2022, mainly due to the rise in energy prices





Sources: ELSTAT, Eurostat

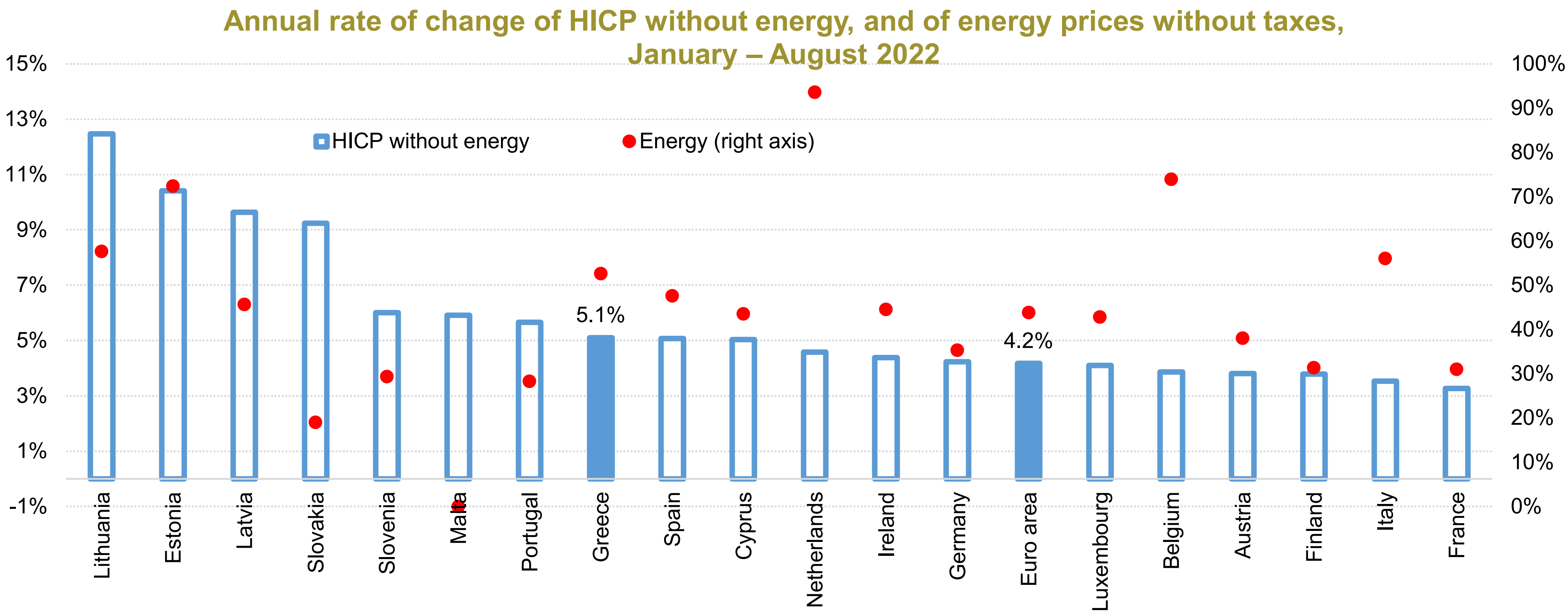
Eurozone: 25-year high level of inflation in the first eight months of 2022, 7.6%, up from 1.7% a year ago.

Greece: The Domestic Price Index increased by 12% in September, up from 11.4% in August.

- Jan.-Sep.: 9.5% rate of change for the HICP following a 0.5% decline in the corresponding period of 2021
- Jan.-Aug.: 9.2% HICP rate of change, following a 0.8% decline in the corresponding period of 2021 due to a strong energy goods effect (4.0%). Negligible effect from indirect taxes (-0.1%).

Producer price index (Jan. – Aug. 2022): 39.8% increase, mainly due to energy goods, up from an 8.5% increase a year ago

Domestic increases in energy prices and non-energy inflation are higher than those of the Eurozone average



Source: Eurostat

Rate of change of HICP without energy and taxes in the first eight months of 2022**:** 5.1% in Greece, 4.2% in the Eurozone. As a result, Greek products and services became less competitive within the monetary union.

6th highest increase of energy goods prices in the Eurozone, 52.6%; the Eurozone average was 43.8%.

Since demand is stable, high structural inflation may be highlighting distortions in competition in the domestic product and services markets compared to the Eurozone.

Public finances: targets exceeded in 2022, pressure for 2023

State Budget Balance Jan.-Aug. 2022

- €4.11 billion deficit (the target was €9.99 billion)
- €19 million primary surplus (the target was €5.94 billion)

Target exceeded due to higher revenue (+€5.70 billion)

- Higher tax collections (18.2% higher than the target)
- Change in the property tax payment dates

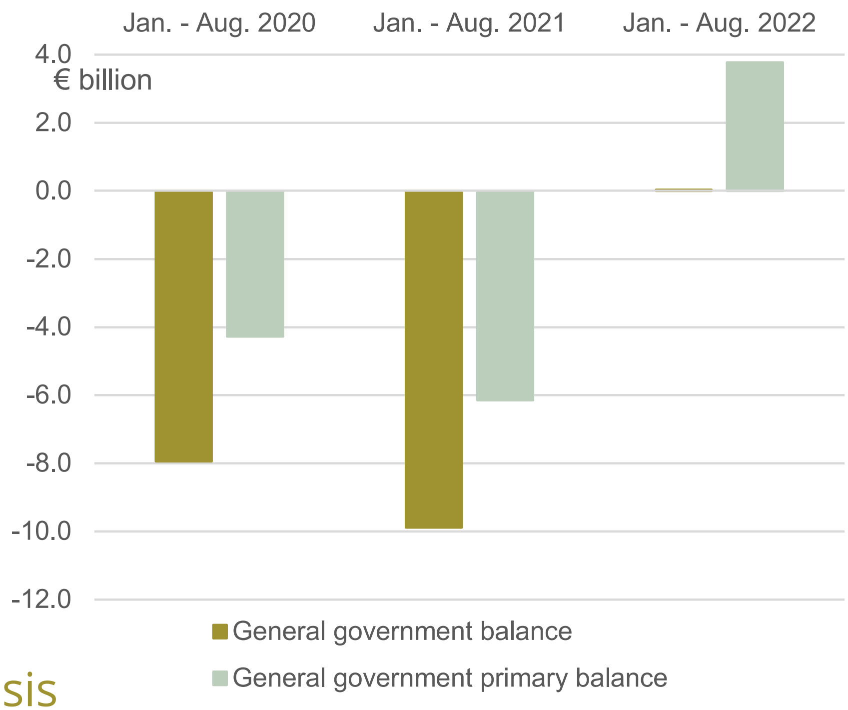
Reduced expenditure by €192 million

- Postponement of armament program payments (€803 million)

General Government Balance Jan.-Aug. 2022

- €36 million surplus
- €3.77 billion primary surplus

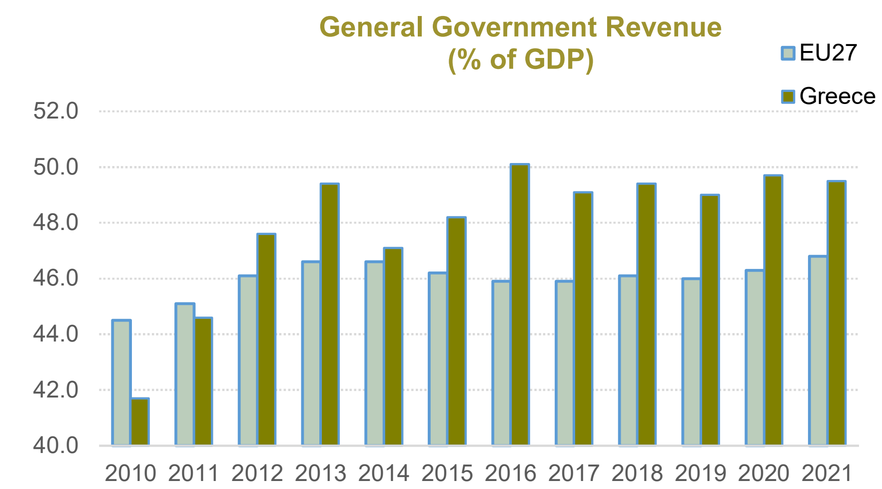
Government budget balance

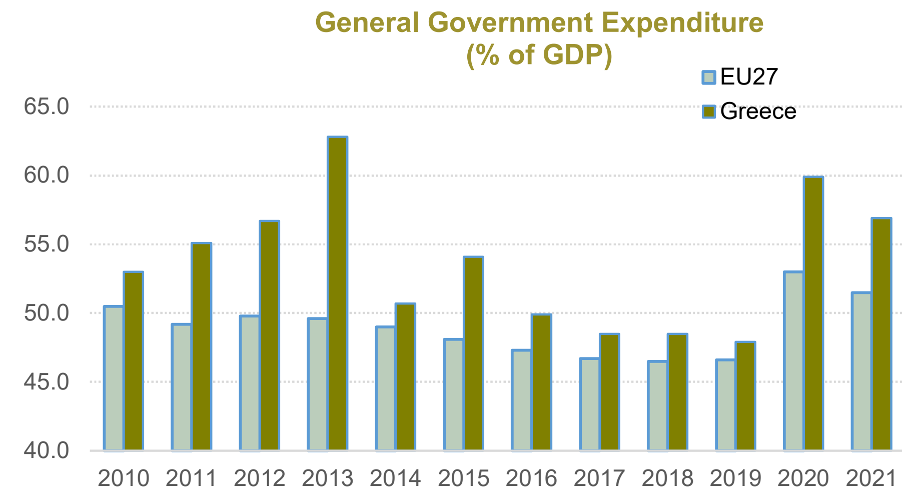


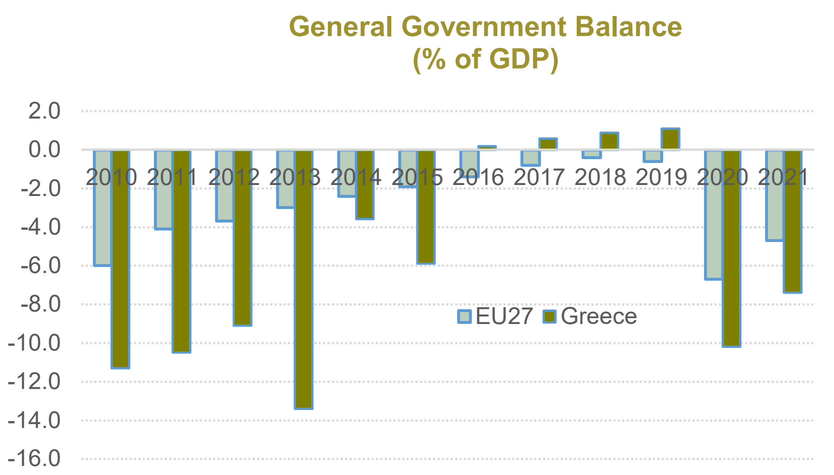
Pressure to increase spending due to the energy crisis

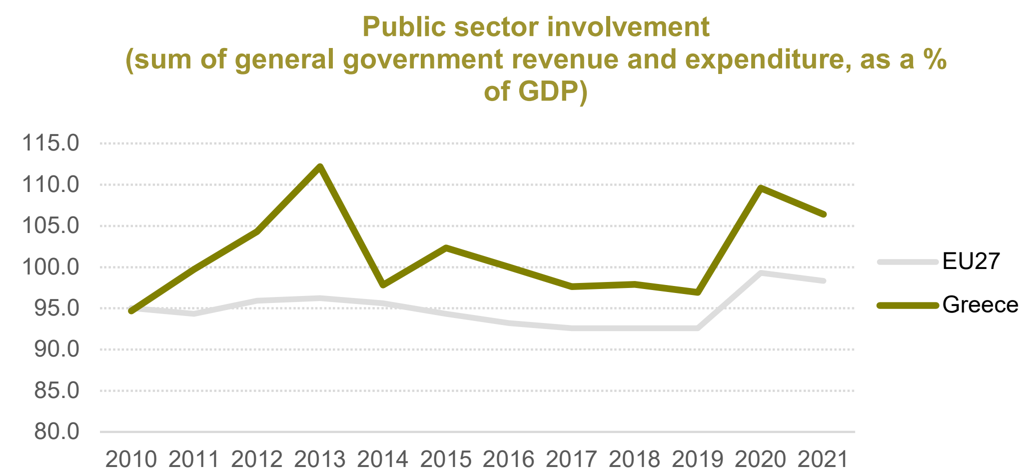
Revised target for general government primary surplus: -1.7% in 2022 (from -2.0%) and 0.7% in 2023 (from 1.1%)

Following the pandemic, government spending increased proportionately more than the EU average









Source: Eurostat **Data processing**: IOBE

...with public revenue also remaining at higher levels. As a result:

- the deviation of the fiscal deficit from the EU average was partly reduced
- Public sector participation in the economy increased proportionally more

The positive trends in short-term activity indicators continued in the third quarter

Industry

- Industrial production rose by 4.1% in the first seven months of 2022, down from a 9.5% increase in 2021
- The corresponding change in the Eurozone was 0.1%, down from a 13.0% increase in the first seven months of 2021

Construction

- Construction output rose by 23.9% in the first half of 2022, up from a 6.1% increase in the first half of 2021
- The number of construction projects increased by 22.2%, following a 6.2% increase in 2021

Tourism

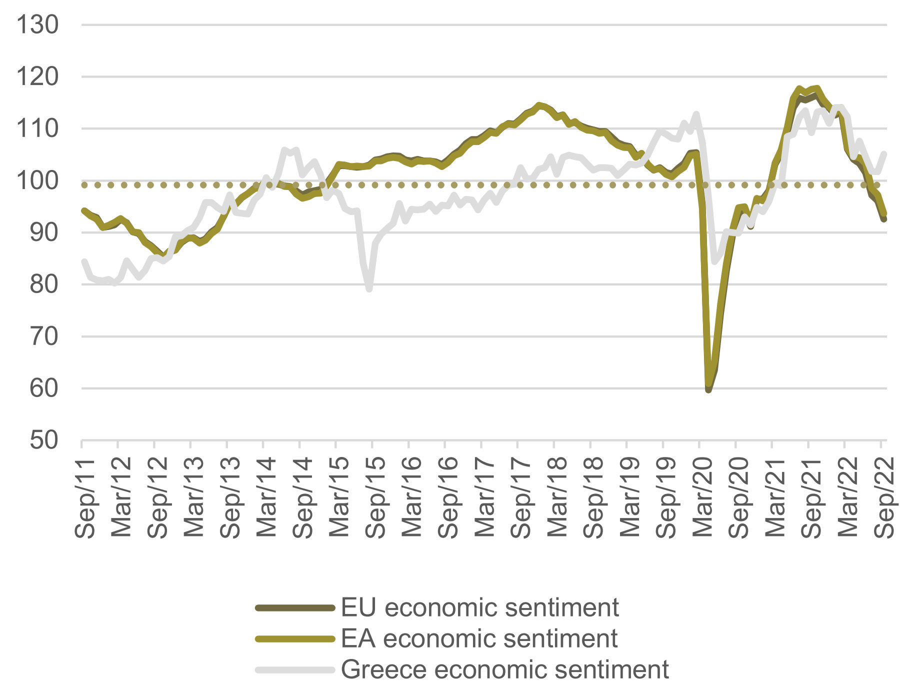
- The turnover index in Tourism more than doubled in the first half of 2022 (+146.8%)

Retail

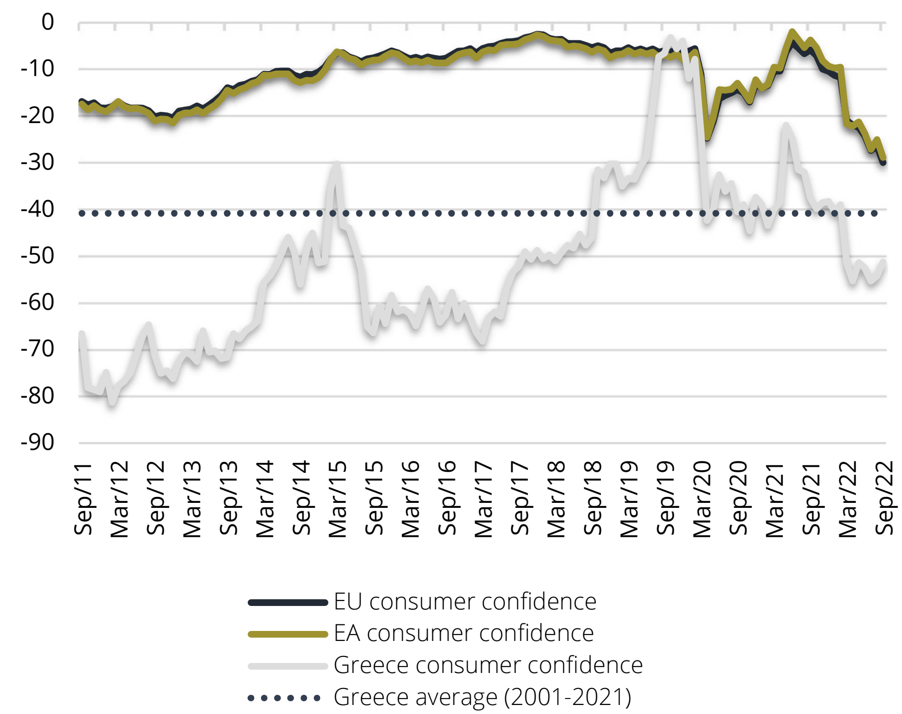
- 5.1% increase in Retail Trade volume in the first seven months of 2022, down from a 9.1% increase in 2021.
- Slight deterioration of expectations in the first nine months of 2022.

The Economic Sentiment Indicator declined in the third quarter of 2022, at a much lower level than last year.

Economic Sentiment Indicator



Consumer Confidence Index

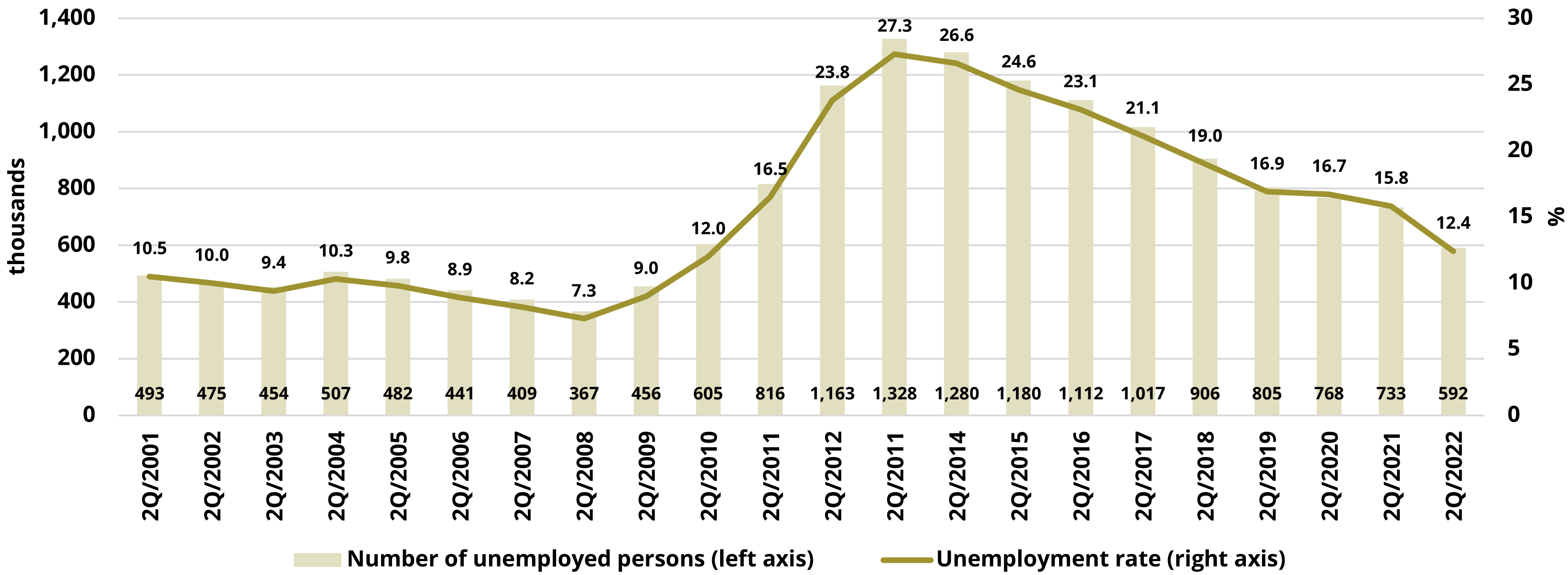


Sources**:** IOBE, European Commission

Smaller decline in Consumer Confidence; however, it is at a much lower level than in the Eurozone

The unemployment rate continued to decline in the second quarter of 2022; this trend may stop in the third quarter

Number of unemployed persons and unemployment rate in Greece

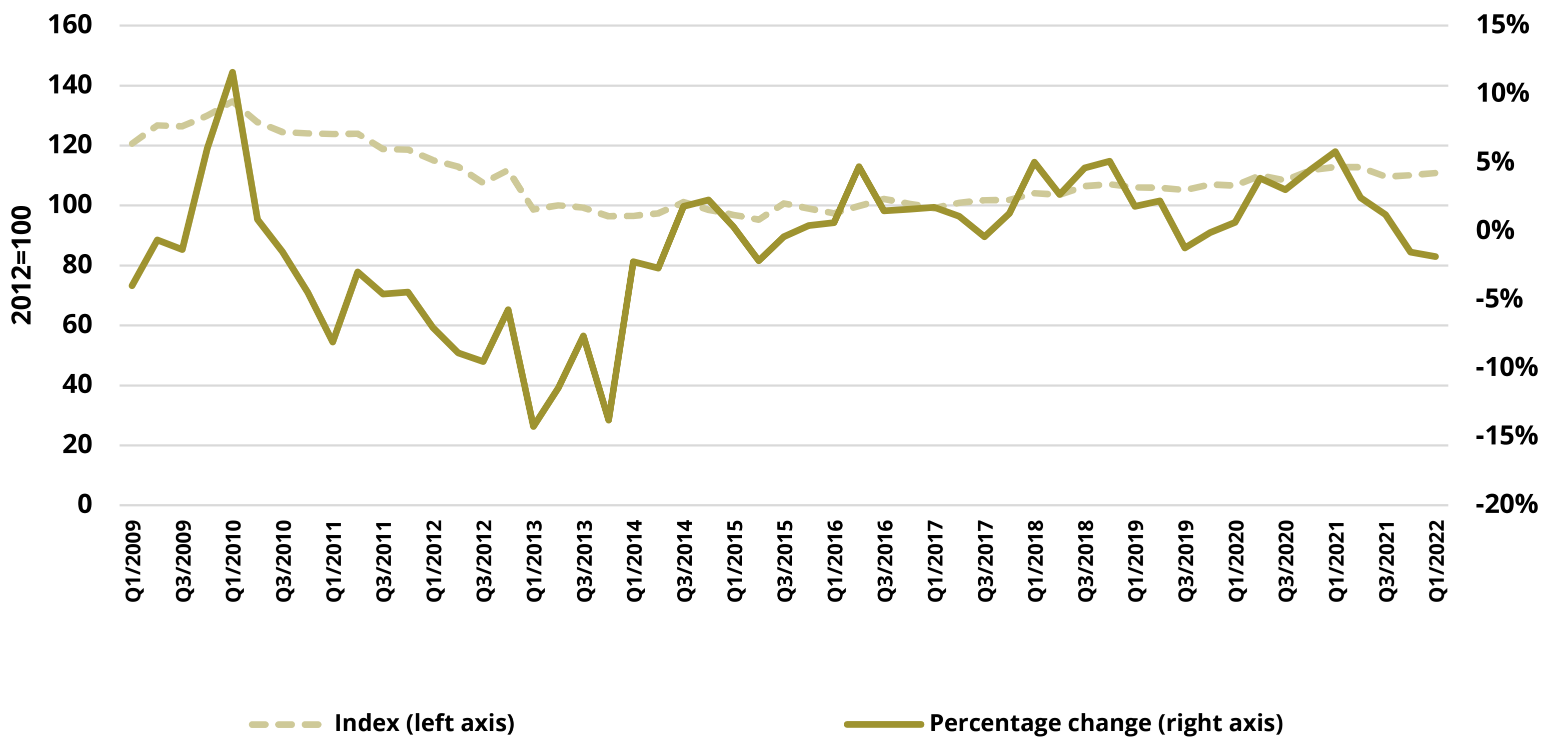


Source: ELSTAT

- The unemployment rate was 12.4% in the second quarter of 2022 , down from 15.8% in the second quarter of 2021 and 16.7% in the second quarter of 2020.
- But the seasonally unadjusted unemployment rate in August 2022 (11.6%) was 0.1% higher than the unemployment rate in July 2022 (11.5%).
- Employment increased in 16 industries. Indicatively: Tourism (+84.4 thousand), Education (+30.4 thousand), Manufacturing (+27.9 thousand).
- Employment decreased in 5 sectors. Indicatively: Public administration (-20.9 thousand), Supply of electricity-Natural gas-Steam-Air conditioning (-5.2 thousand).

Slight increase of the seasonally adjusted labor cost index for the third consecutive quarter…

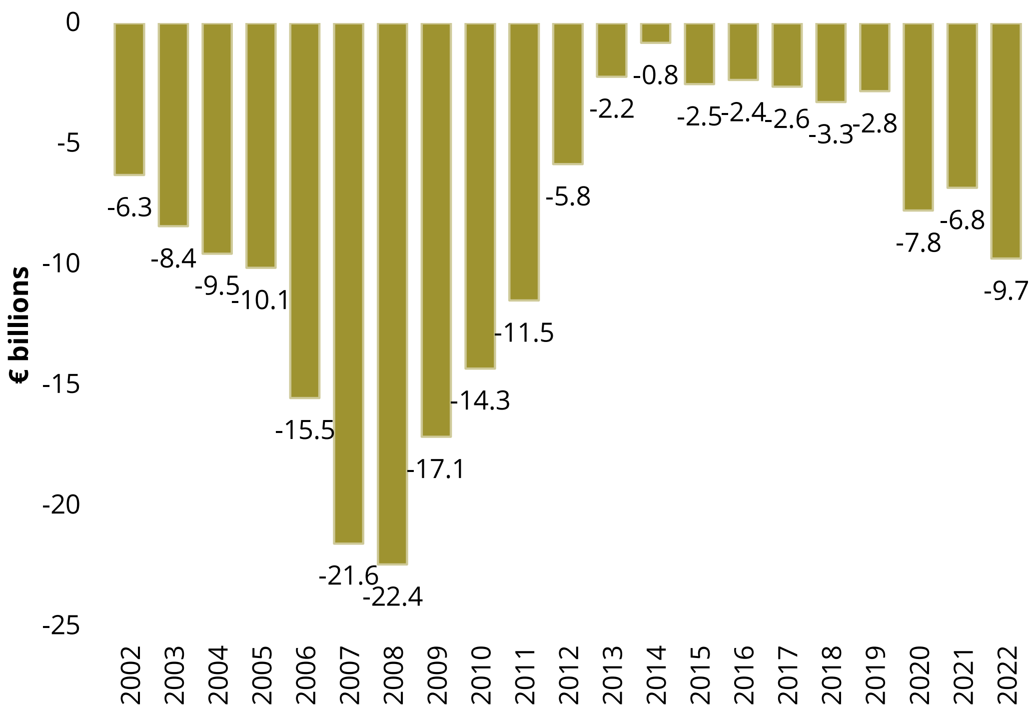
Evolution of seasonally adjusted labor cost index

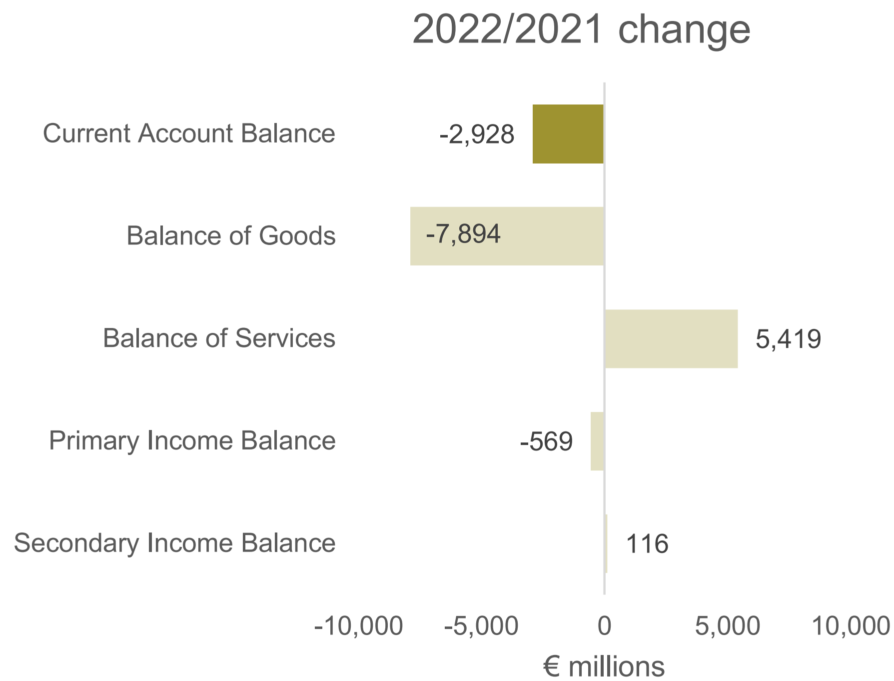


Source: ELSTAT

…however, the labor cost remains 0.9% lower in the second quarter of 2022 compared to the second quarter of 2021, following a sharp decline in mid-2021.

The Current Account deficit reached €9.7 billion in the first seven months of 2022…





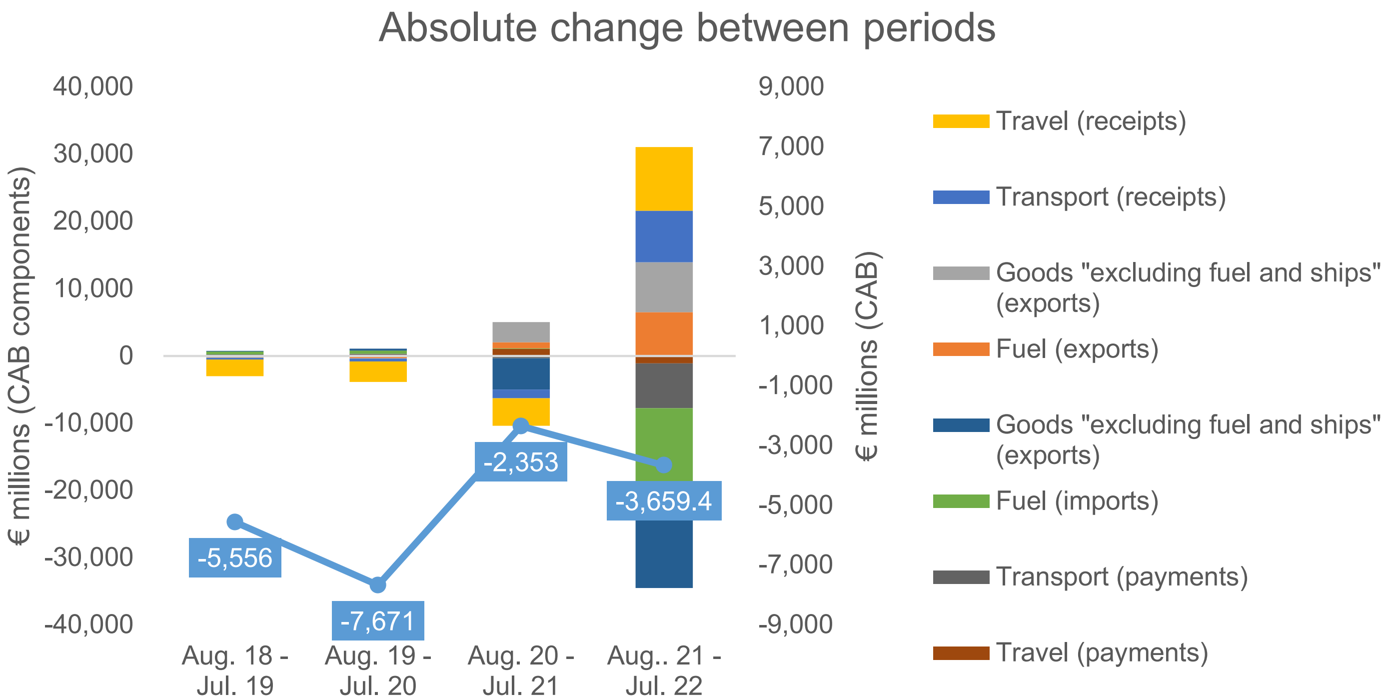
Source: BoG, **Data processing**: IOBE

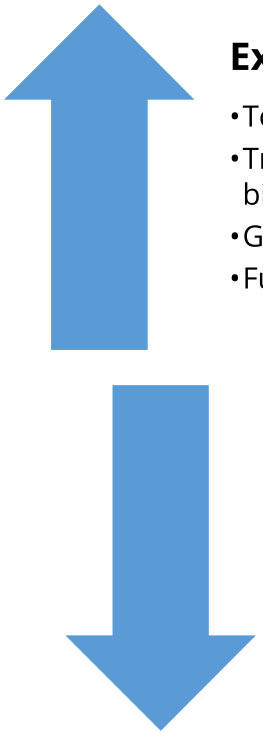
…a significant increase from 2021.

- The increase in goods imports was double the increase in goods exports; 50% of the increased goods flows concerned fuel.
- Significant increase in tourism (+€5.4 billion) and transport revenue (+3.8 billion). Tourism revenue almost reached its 2019 level.

Inflation has had a significant impact on the value of exports and imports in the last 12 months, with increases surpassing 20%

Contribution of selected components to the Current Account Balance (CAB) after the outbreak of the energy crisis





Exports (+)
- Tourism (€9.5 billion)
- Transport (€7.7 billion)
- Goods (€7.4 billion)
- Fuel (€6.5 billion)

Imports (-)
- Goods (€13.8 billion)
- Fuel (€13.0 billion)
- Transport (€6.7 billion)
- Tourism (€1.1 billion)

Sources: ELSTAT, Eurostat **Data Processing:** IOBE

August 2021 – July 2022

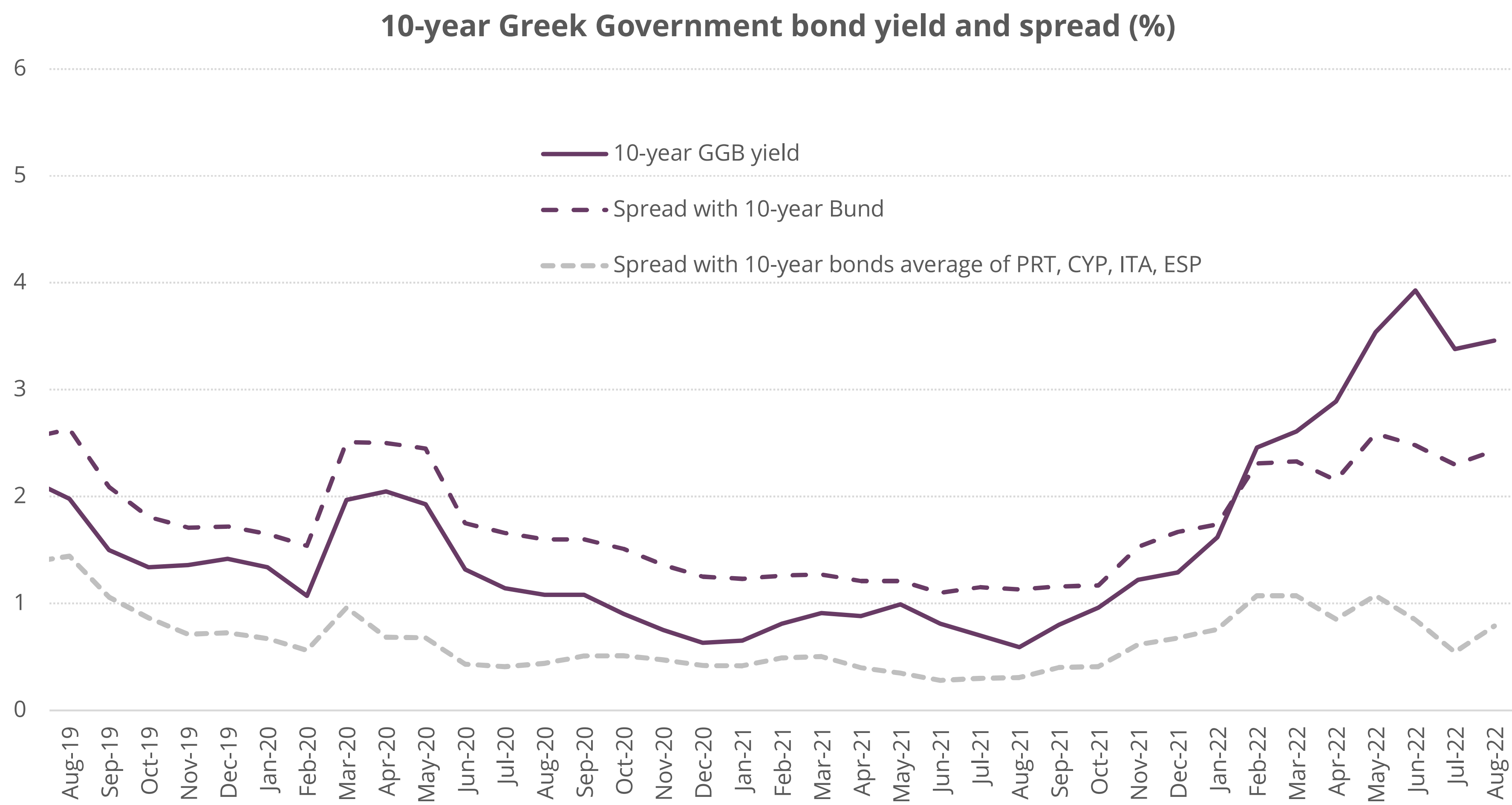
• Value of goods and fuel exports	+41%	(prices +31%)
• Value of service receipts	+81%	(prices +20%)
• Value of goods and fuel imports	+49%	(prices +24%)
• Value of service payments	+64%	(prices +20%)

The banking system is showing resilience, but will face increasing challenges in the medium term

Positive developments	Challenges	Priorities
• Continued decline of NPLs in the second quarter • Enhancement of credit expansion to businesses • Increase in private deposits, although the trend is starting to stabilize	• Rising borrowing costs and divergence from the Eurozone core • Risk of a new round of arrears due to the energy crisis • Credit contraction to households	• Acceleration in the utilization of the loan part of the Recovery Fund • Continued improvement of asset and equity quality • Effective implementation of the bankruptcy code

The ECB's tighter monetary stance, uncertainty, and risks to the real economy weigh on banks' profitability outlook

The cost of new government borrowing has reached a 5-year high...



Source: ECB

... while the spread in relation to other Eurozone countries is widening and remains larger than it was in the period before the Greek debt crisis

Investment as a key component of recovery in the medium term
The Recovery and Resilience Fund's opportunity

- Effective utilization of the European Recovery Fund's resources is necessary
- Challenges: burdened global environment, domestic investment "gap", and a noticeable decline in the utilization of the industry's factory potential

Recovery and Resilience Plan "Greece 2.0"

- Timeline: Pre-financing (€3.96 billion) on 9/8/2021, disbursement of first installment (€3.56 billion) on 8/4/22, second payment request (€3.56 billion) made on 30/8/22
- 150 investment projects have been submitted so far by interested parties with a total budget of €6.82 billion, of which €2.83 billion relate to RRF loans
- 23 investment projects have been contracted so far, with a total budget of €1.41 billion, of which €650 million are financed by RRF loans/resources
- A loan guarantee program, totaling €2.5 billion, for small and medium-sized enterprises through InvestEU will commence in early 2023
- These investments concern many different sectors of the economy including industry, telecommunications, energy, transport, tourism, services, and trade.
- In a period of rising interest rates, **the weighted average of signed loan agreements interest rates is just 0.9%, with an average repayment term of approximately 10 years**

Macroeconomic forecasts (October 2022)

Baseline Scenario

- The health crisis does not cause a significant disruption to economic activity.
- Geopolitical instability in Eastern Europe and the Mediterranean continues at a similar intensity to that of the third quarter of 2022.
- The ECB's baseline scenario for the regarding growth, inflation (3.1% and 8.1% in 2022, 0.9% and 5.5% in 2023), energy prices, and interest rates is realized.
- Small delay (1-2 quarters) in the implementation of the "Greece 2.0" Plan.
- Slightly higher public expenditure compared to the State budget draft.
- Higher probability of additional **positive developments in 2022** and **risk of negative developments in 2023.**

Predictions for 2022

- **Growth: ≈ 6.0%**
- Private consumption: ≈ 8.1%
- Public consumption: ≈ 2.2%
- Investment: ≈ 6.6%
- Exports: ≈ 12.5%
- Imports: ≈ 13.5%
- Unemployment: ≈ 12.3%
- Inflation: ≈ 9.7%

Prediction for 2023

- **Growth: ≈ 1.6%**
- Private consumption: ≈ 0.8%
- Public consumption: ≈ 0.6%
- Investment: ≈ 10.5%
- Exports: ≈ 3.8%
- Imports: ≈ 4.8%
- Unemployment: ≈ 11.5%
- Inflation: ≈ 4.2%

Risks and positive prospects

Risks

- Global recession risk in 2023
- Risk of meeting fiscal targets in a less favorable macroeconomic scenario
- Deterioration of the current account balance and macroeconomic imbalance
- Investment grade delay for Greece
- Extended election period
- Continuation of the war and risk of conflict
- Structural inflation and loss of competitiveness compared to the EA
- Signs of labor market fatigue
- Further delay in the implementation of "Greece 2.0" reforms
- Risk of a new surge in arrears due to rising interest rates and the higher cost of living

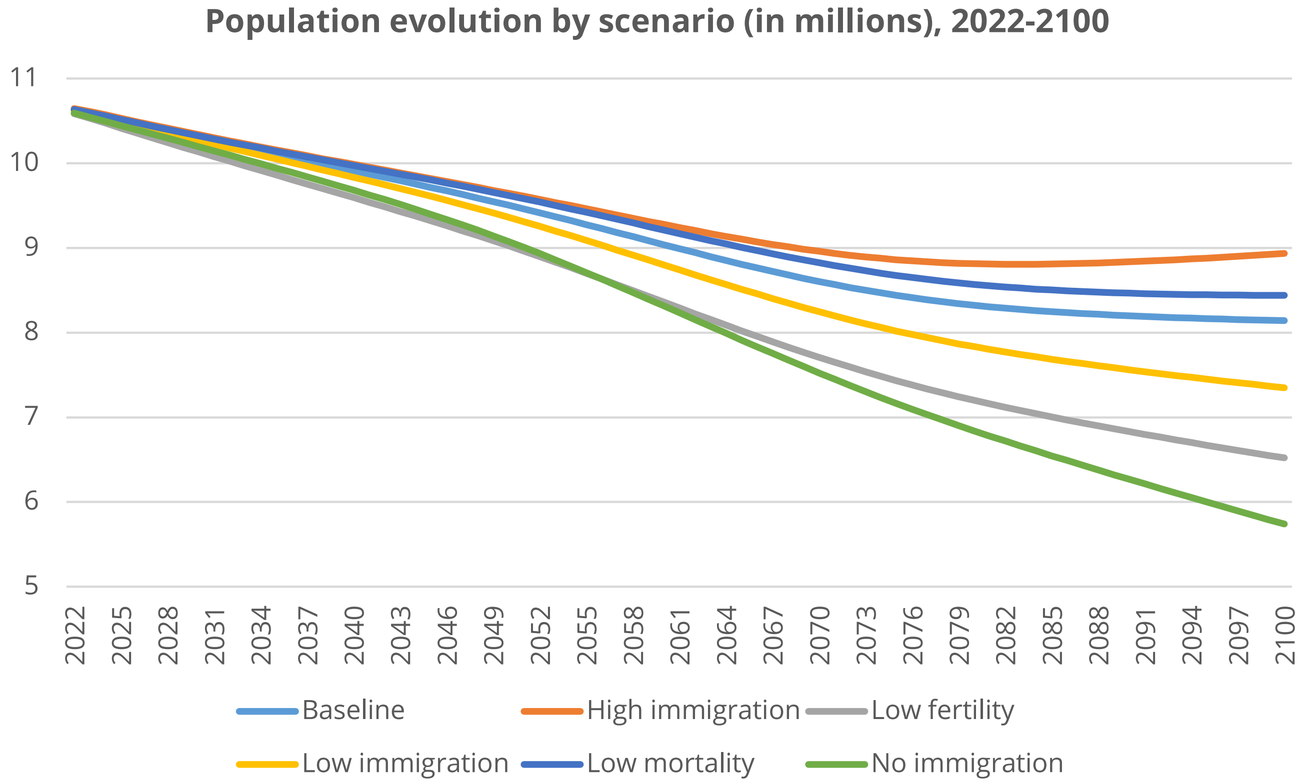
Positive prospects

- Increase of public revenue and decrease of public debt
- Systematic enhancement of extroversion
- The health crisis does not significantly disrupt economic activity
- Expansionary fiscal policy and support measures

Special study

Demographic change in Greece: Challenges and policy recommendations

The long-term demographic trends in Greece are dismal



Source: Eurostat

The population decline of recent years is expected to continue until 2050; there is little sensitivity to projection assumptions until then.

After 2050, however, different assumptions about immigration, fertility, and mortality lead to very large discrepancies (e.g., 3.2 million people difference between the high and no immigration scenarios).

- **Impacts and policies** in areas which are expected to be significantly affected by demographic developments are examined
- **Policy recommendations** are made regarding family support, labor market participation, reforming the healthcare, education, and pension systems, integration of immigrants, attracting highly skilled people (brain gain, digital nomads), reducing the negative effects of the demographic problem

Can aging be reversed or halted?

No

- Factors such as increased life expectancy or gender equality reflect progress and are desirable.
- Even if fertility rates above the replacement rate were achieved, the potential economic benefits would only be realized after, at least, 20 years

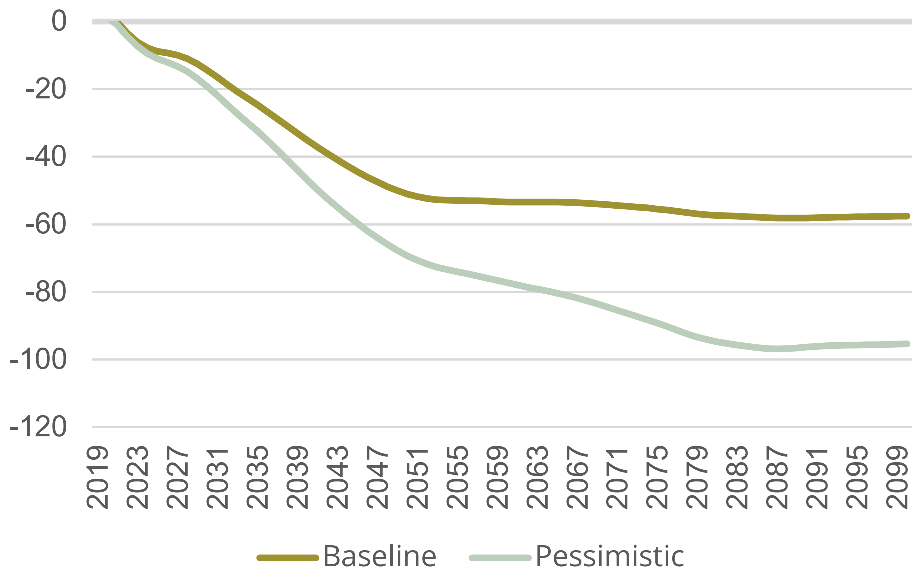
Yes

- Through long-term and coordinated policy planning in critical areas such as:
  - Gender equality
  - Employment relations
  - Social protection system
  - Immigration policy
  - Education
  - Accessibility of minorities and disadvantaged population groups

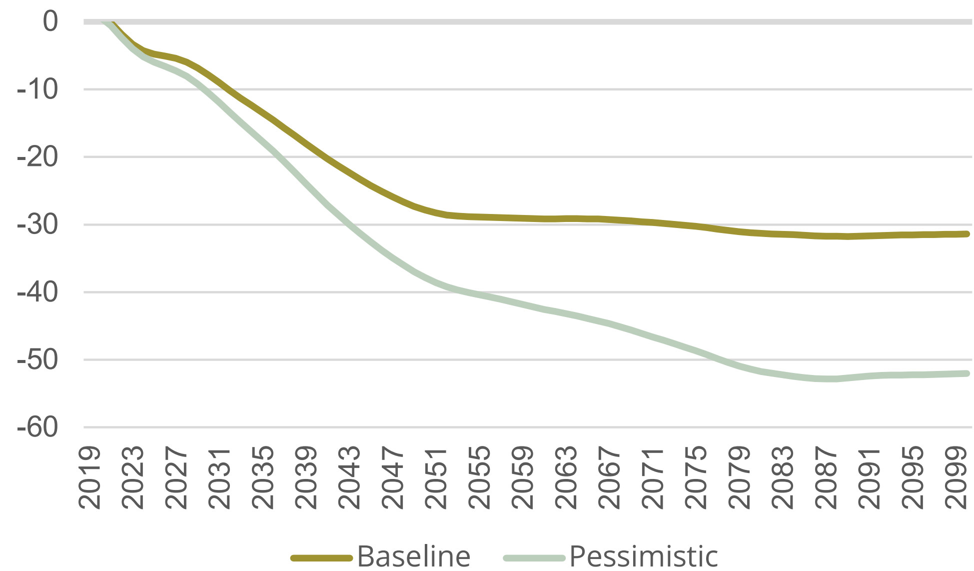
At the same time, critical aspects of the social protection system (healthcare, long-term care, pension system, etc.) will have to be adjusted in order to meet the upcoming challenges

Inaction in the face of demographic decline could lead to a loss of annual GDP of up to €95 billion by 2100

GDP (difference from 2019 level in real terms, € billion)



GDP (% difference from 2019 level in real terms, percentage points)



Source: IOBE estimates. **Assumptions**: Pension expenditure per elderly person remains constant in real terms, care expenditure per elderly person increases in real terms at an annual rate of 0.5%, additional public spending on care and pensions is financed by increasing income taxes, productivity declines when the percentage of elderly people in the population increases

…or 52% of 2019's GDP, in the pessimistic scenario. In the baseline scenario, the decline in real GDP reaches €58 billion in 2100, or 31% compared to 2019.

Fertility boosting policies and immigration policy interventions are critical; they could limit GDP losses in 2100 by up to 10 or 7 percentage points, respectively.

Thank you

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