EUROFI Macroeconomic Scoreboard

FEBRUARY 2024

Jacques de Larosière and Didier Cahen
with the support of Elias Krief

Inside

- Widening of the economic gap between the Euro area and its main global competitors
- Unlike the US IRA, NextGenerationEU has not stimulated productive investment in Europe so far
- Exacerbation of existing fiscal and economic heterogeneities across EU Member States
- Loss of competitiveness of firms in EU countries with the highest levels of government expenditure vs GDP
- Excessive public debt undermines productivity growth and employment

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Executive summary

A monetary union does not by itself create economic convergence. This Scoreboard* underlines that the Eurozone is a currency area comprising heterogeneous countries with a low level of federalism: their productivity levels, productive specialisation, level of fiscal deficits and indebtedness, and level of labour force skills being very different.

As one can observe in this document, many Member States have relaxed their macroeconomic discipline over the last twenty years, but it turned out that high levels of public debt do not favour economic growth or employment. Countries which played the card of fiscal vigilance ended up being the winners.

The Covid-19 crisis and the war in Ukraine hit the Eurozone harder than its main competitors. Since 2020, existing heterogeneities across EU Member States have been exacerbated. It is an illusion to try to solve the structural problems of our economies by prolonged increases in public debt or by using money creation. Yet, this is what has been too often tried by pursuing lax fiscal, monetary and economic policies that inevitably brought about systemic risks to financial stability and therefore to future growth.

NGEU is an unprecedented joint response to the Covid-19 crisis, making over €800 bn available to Member States to stimulate economic recovery by investing primarily in the green and digital transitions. However, unlike the IRA where investments in the US have increased by 4% over the period from July 2022 to June 2023 compared with the period June 2021-June 2022, productive investment in the European countries that benefit most from these European funds has not been boosted: investments recorded by Europe between July 2022 and June 2023 stood at -25%; this figure even reached -38% in the European Union (compared with the period June 2021-June 2022[1].

As long as it is not sufficiently understood, especially in highly indebted countries, that excessive debt is a source of under-competitiveness, the economic situation in these countries will continue to deteriorate and it will hamper the progress in the construction of an economic and financial European Union. Furthermore, fiscal and economic divergences between EU countries make it more difficult to define in Europe a common interest, encouraging a policy of "every man for himself", and creating a climate of distrust between Member States which hinders progress in terms of public and private risk sharing and weakens the Eurozone.

If Europe and the Eurozone are to correct their growth disadvantage compared to the United States and China and not be relegated to the rank of second-rate powers, a considerable investment effort in research and development, in industrial equipment, in decarbonization, in digital technology, in improving the education system and the skills of the population will therefore be necessary. And the sooner the better, as the gap continues to widen, demanding ever-bigger investment and supply-side oriented efforts.

Consequently, the Eurozone has to embark on the right course: fighting inflation, having more fiscal responsibility, more equity financing and more supply side oriented reforms geared to increase productivity, as well as taking steps to complete the Banking Union and implement the Capital Market Union. But this move can only be contemplated if sufficient discipline starts reversing the trend of ever-growing economic heterogeneities across Member States.

* The authors thank Pr. Philippe d'Arvisenet for his wise remarks.

1. Trendeo, Fives, Institut de la réindustrialisation & McKinsey, "Baromètre mondial des investissements industriels 2023", December 2023

1. The economic gap between the Euro area and its main global competitors has widened

Since the mid-1990s, the Eurozone has been experiencing a structural growth shortfall compared to the United States and China, due to structural weaknesses: between 1995 and 2022, real GDP in the US grew by 94%, while that of the Euro area rose by just 51%[2].

The economic consequences of the Covid-19 crisis have been more severe in Europe than in the US and China and have amplified the heterogeneity of economic performance across EU Member States. The economic and social impacts of the war in Ukraine are also greater in Europe due to its exposure to energy imports.

The United States and China are fighting for the position of the world's dominant economic power. Together, they account for 42% of the global GDP and nearly 60% of the global military spending; they also control 80% of the world's unicorns and 100% of the major global platforms, namely the US GAFAM and the Chinese BATHX[3].

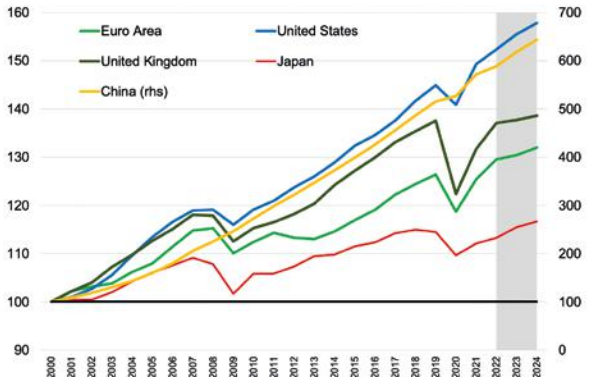
If Europe, and the Eurozone in particular, does not reduce its growth lag behind the United States and China, it will be relegated to to second-rate power.

1.1 Over the last few decades, real GDP growth in the Euro area has failed to catch up with the levels in the United States and China

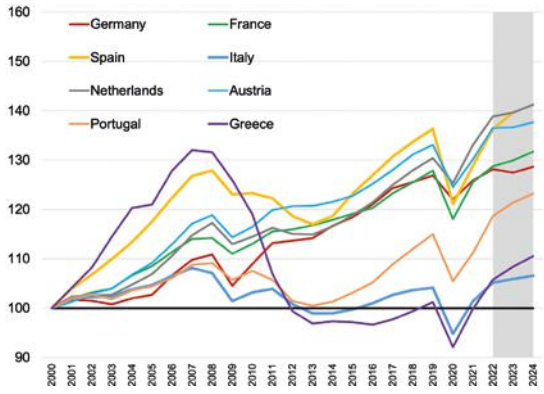
Since 2008, the EU economy has grown at a pedestrian pace of just over 1% a year. This means that it is now around 15% larger than it was at the start of the global financial crisis. By comparison, the US economy grew by around 28% over the same period.[4]

CHART 1.
Real GDP Growth Trend, 2000=100

1a. Major Advanced Economies



1b. Selected EU Member States



Source: IMF World Economic Outlook, October 2023

The EU economy, in dollar terms, is 65% of the size of the US economy[5]. This figure is down from 91% in 2013.

In 2000, the GDP per capita of US consumers was $10,000 higher than that of Europeans. In 2022, this gap has widened further to $22,000 according to the World Bank[6].

Europe's industrial contribution to the global economy had declined significantly since 2000. The European Round Table for Industry (ERT) stated that "Europe's share of global industry gross value added declined from almost 25 per cent in 2000 to 16.3% in 2020... Between 2014 and 2019, large European companies were 20% less profitable

2. P. Artus, "The growth gap between the United States and the Eurozone and its consequences", Economics, Natixis Research (September 2023).

3. Figures quoted in the article: C. Saint Etienne, "Le nouvel ordre stratégique mondial", Les Échos, 4 March 2023.

4. See C. Di Noia, The challenges and role for EU capital markets in the context of the green and digital transitions, Eurofi Summary, Stockholm, April 2023.

5. H. Foy and I. Johnston, "The EU's plan to regain its competitive edge", Financial Times, 5 November 2023.

6. Data are expressed in dollars Purchasing power parity (PPP); for further details, see GDP per capita, PPP (current international $) - United States, European Union | Data (worldbank.org).

than their US counterparts, increased revenue about 40% more slowly, invested 8% less, and spent about 40% less on research and development"[7].

The US also has technological superiority. Out of the world's twenty most valuable technology companies, only two are listed in the EU (ASML and SAP). Fifteen are in the US and the remaining three are in Asia.

In military terms, Europe is overwhelmingly outpaced. The figures speak for themselves[8]: the US spends $830 billion a year on its military, and China spent almost $300 billion in 2022. Aggregating all military spending by its member states puts the EU roughly on a par with China: a sum that, while not to be sniffed at, is somewhat misleading since there is no unity of operational action across the bloc.

America's outperformance has translated into higher wealth for its people. Income per person in America was 24% higher than in Western Europe in 1990 in terms of Purchasing Power Parity (PPP); today it is about 30% higher[9].

Real GDP growth and productivity gains in the Euro area have failed to catch up with the US and China over the past two decades and productivity gaps across member countries remain significant.

Europe has become much weaker over the last 15 years: since 2008, the EU's share of the world economy has declined. The EU, which held the largest share of the global economy in 2009, has been overtaken by the US and China in recent years. According to the World Bank, the EU's share of the world GDP was 31.6% in 2007, against 24.4% for the US. In 2022, the EU's share of the world GDP declined to 16,8% while it stood at 25.3% for the US and 18,3% for China.

Such a growth gap between Europe and the US can be attributed to (i) the US single market and the freer and less regulated institutional environment in which firms operate in the US, (ii) lower productivity gains and investments in Europe than in the US, (iii) a decline in labor force in the Eurozone compared to an increase in the US, and (iv) the prominent role of financial markets in the financing of the US economy.

Enterprises are freer to work and make profits in the US than in Europe:

- Less regulation and more flexible markets: Europe imposes administrative burdens on creating new firms or on growing beyond arbitrary thresholds that trigger an increase in compliance costs. This is not observed in the United States.
- Tax and social contributions are higher in Europe given the size of the welfare states and the high level of social spending in European countries, which weighs on the competitiveness of European companies.

Unlike Europe, the United States benefit from a truly single market

- The US benefits from a large consumer market at home has many multinational companies around the world, over which it can spread the costs of R&D, and a deep capital market from which it can raise finance. Consequently, US businesses can be scaled up more quickly, as it offers a large market supporting innovation with a consistent language and regulatory system. In addition, risk aversion is greater for EU than for the US households, making the latter more inclined to invest their savings in equities or other risky financial assets.
- Contrarily, Europe is struggling to implement a true single market. Linguistic, administrative and cultural differences, heterogeneous bankruptcy laws and contractual conditions, as well as various regulatory barriers and protectionist policies, prevent bankers and companies from operating across borders easily.

Lower investment and productivity gains in Europe than in the US

- Underinvestment in Europe leads to low productivity gains and weakens potential growth.
- Low per capita productivity gains in Europe are due to low spending on research and development (R&D) (*see Chart 2.b*) and the decline in industry in some Member States (*see Chapter 4*). Moreover, in the US, labor force is better-skilled, works more hours and increases while it declines in the Eurozone (these last points are developed on the following pages).
- Labor per capita productivity increased in the Eurozone by only 14% between 1998 and 2022 compared to 62% in the US[10].

7. ERT, "Securing Europe's place in a new world order", October 2023.

8. Sylvie Goulard, "Climate, Finance and Geopolitics", IFRI, 11 December 2023.

9. Figure quoted in The Economist's study on The American economy published on 17 April 2023.

10. P. Artus : "Croissance : pourquoi les États-Unis battent toujours la zone euro", 26 janvier 2023.

Chart 2.
R&D Spending and Corporate Investment trend in the United States and the Eurozone

2a. Net total corporate investment (as % of real GDP)

2b. Total R&D spending (as % of nominal GDP))

Source: P. Artus, "How large is the shortfall in corporate investment?", Natixis Economic Research (October 2023)
For chart 2.a, 'net' corporate investment means that investment is net capital depreciation

Chart 3.
Productivity dynamics in the US and the Euro area

3a. Level of labour productivity (thousands of constant 2022 dollars, at purchasing power parity)

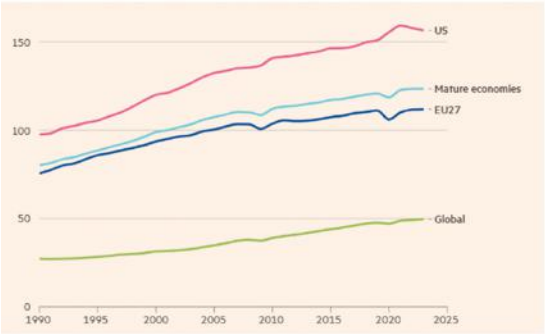
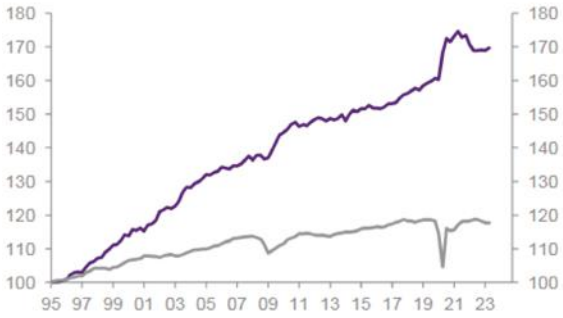


Chart 3.b : Per capita productivity(1995:1=100)



Sources: The Conference Board via the FT & P. Artus, "The growth gap between the United States and the Eurozone and its consequences" (September 2023)

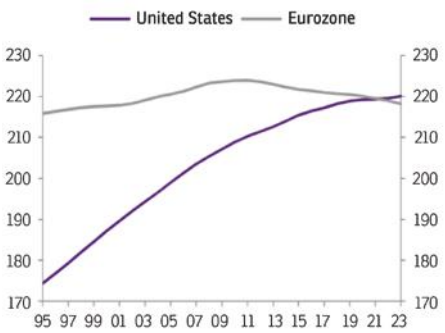
Labor force and population have grown faster in the United States than in Europe since 2000.

Demographics are also less dynamic in the Eurozone than in the United States leading to a future decline in the labor force (*see Chart 4*) that will reduce potential production, tax revenues, etc.

Chart 4.
Demographics dynamics in the US and the Euro area

4a. Labour force (2002:1=100)

4b. Population aged 15 to 64 (millions)



Source: P. Artus, "The Eurozone's numerous disadvantages", Natixis Economic Research (February 2023)
& "The growth gap between the United States and the Eurozone and its consequences" (September 2023)

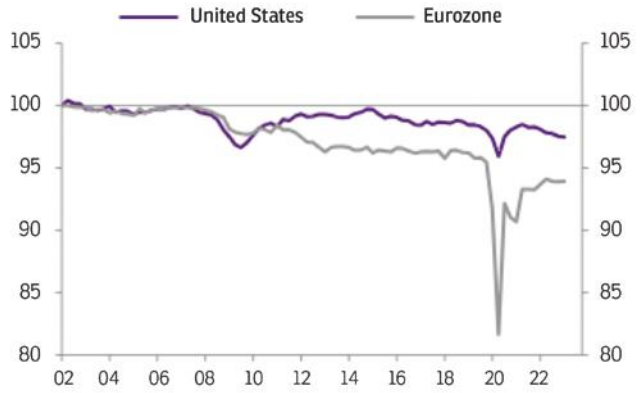
An article published in April 2023 in *The Economist*[11] confirms this analysis. The article states that a higher fertility rate and a more open immigration system have long given America a demographic advantage over most other developed countries, and that continues to be true today. "America's working age population – those between 25 and 64 – rose from 127 million in 1990 to 175 million in 2022, an increase of 38%. By contrast, in Western Europe, the working-age population rose by 9% during that period, from 94 million to 102 million. Even with lower participation rate, the past three decades have seen America's labor force grow by 30% against 13% in Europe and 7% in Japan".

In addition, Charts 4.a and 4.b highlight the ageing of the working-age population in the Eurozone compared with the United States and the slower growth of the working population in Europe compared with the United States. This ageing of the working population in Europe contributes to a slowdown in productivity (less agility with new technologies among older employees).

Americans work more than Europeans and are highly skilled.

The volume of worked hours is lower in Europe than in the United States (*see Chart 5*). An American works on average 1800 hours per year (a 36-hour per week with four weeks of holidays), roughly 200 hours more than a European, though 500 less than a Chinese.[12]

CHART 5.
Working time per employee
(January 2002=100)



Source: P. Artus, "What account for the slowdown (stagnation) in productivity in the United States and the Eurozone?", Natixis Economic Research, June 2023

In addition, American workers are skilled[13]. America is home to 11 of the world's 15 top-ranked universities and America's economy makes good use of its highly educated workforce. Spending on R&D across the public and private sectors has risen over the past decade to 3.5% of GDP, well ahead of most other countries.

Unlike the EU, the United States enjoys energy independence that protects it from external energy shocks, like the one triggered in 2022 by the war in Ukraine (*see Part 1.4*).

By 2021, Europe was importing 55% of its energy needs. The United States, on the other hand, is a net exporter of energy. They became the world's largest oil producer by 2018. This represents in 2022 almost a fifth (21%) of the world's oil supply, according to the EIA[14].

Energy costs are much higher in Europe than in the United States: for instance, the retail cost of electricity in many EU member countries can be two to three times the cost of electricity in US states.

In spite of abundant savings in Europe, financial markets are three times more important in the US than in the EU in financing the economy.

America also has the world deepest and most liquid financial markets, providing efficient channels for financing businesses. Stock market capitalization represents about 170% of GDP; in most other countries, it comes below 100%. Funding for potentially high-growth startups is particularly bountiful: about half of the world's venture capital is granted to American firms.

European enterprises rely on banks for almost three quarters of their financing (compared to ¼ in the US). Therefore, in the wake of the Great Financial Crisis, capital requirements for banks have doubled; such a huge

11. The American Economy, *The Economist*, 17 April 2023.

12. Figure quoted in *The Economist*'s study on *The American economy* published on 17 April 2023.

13. According to OECD data, the level of skills of average US workers is in line with the median of OECD countries.

14. Frequently Asked Questions (FAQs) - U.S. Energy Information Administration (EIA).

recapitalisation effort was bound to have a more significant impact on the financing of the European economy than on the US.

Moreover, the structure of bank financing and the absence of an integrated capital market in Europe hinder an optimal allocation of capital for the financing of long-term investments such as transport infrastructure, sustainable energy generation or distribution[15]. Furthermore, the government debt market is fragmented in Europe, with sovereign issuers of unequal quality (*see the widely divergent ratios of government debt to GDP between Eurozone countries*), whereas the US sovereign debt market ("Treasuries") is unified and liquid.

Equity-based financing is also a better-suited solution for high growth sectors (such as digital and high-tech) where most capital is intangible.

Europe is lagging in areas such as artificial intelligence and quantum computing. In AI alone, venture capital investment over the past decade has topped $450 bn in the US, nearly 10 times that of the Eurozone or the UK, according to the OECD[16]. Yet in 2023, Europe invested $1.7 bn in gen AI, compared with $23 bn in US venture capital and private equity that went into these technologies, according to McKinsey[17].

Europe will not have the ability to raise large sums and to finance quite risky investment projects as long as the capital markets union remains a dream.

To quote Joan Robinson, "while it is surely true that good ideas go where there is money to finance them, money also follows good ideas and growth". "Therefore, the growth of capital markets and real economies go hand in hand."[18]

Money is not everything. It is often argued that Europeans make a different tradeoff between extra pay and a nicer way of life. They have longer vacations and generous maternity leaves. As shown in *The Economist* study quoted above, "America has been devoting a little more of its national treasure to helping its people. America's social spending was just 14% of GDP in 1990 but had risen to 18% by the end of 2019 thanks in part to more medical insurance for the poor and elderly." The gap is narrowing, not widening with countries like Sweden, which are known to spend about a quarter of their GDP on social programs.

Will the United States dominate China and the Eurozone economically in the coming years?

P. Artus[19] explains that the US economy could dominate China and the Eurozone in the coming years as China could be penalized by its demography and Europe will suffer from insufficient modernization and technical progress.

If the situation described above does not change, the Eurozone risks becoming a second-rate economic power compared to the United States.

A considerable investment effort in research and development, in industrial equipment, in decarbonization, in digital technology, in improving the education system and the skills of the population, in promoting selective immigration of people who can occupy sufficiently skilled jobs, will therefore be necessary if Europe and the Eurozone are to correct their growth disadvantage in comparison to the United States and China.

As the latest BIS annual report[20] reminds us, higher sustainable growth can be achieved only through decisive measures to improve the supply side of the economy. Conducting structural – supply side oriented – reforms is essential to rekindle productivity growth and alleviate supply constraints in EU countries.

As emphasized by the BIS recommendations, a comprehensive approach to reap the potential benefits of the green transition and digitalization involves an array of structural policies. "First and foremost, targeted investments in education should aim at continuous upskilling and re-skilling of the workforce… In addition to education and training, policymakers should invest in healthcare, not only to mitigate any scarring effects from the pandemic and be prepared for other public health emergencies but also to maximize the productive potential of the workforce. Investments in human capital could be complemented by investments in physical

15. Capital market underdevelopment in Europe is evident when comparing company financing structures to other advanced economies. Even listed companies in Europe are substantially more bank-financed than in the United States, while the aggregate market capitalisation of listed firms is much smaller relative to GDP. In 2019, the capitalisation of the EU-27 stock market accounted for 70%, compared to 194% in US.
Venture capital investments are ten times higher in the US than in Europe (as a share of GDP), and even more so in a handful of Asian countries (Singapore, China, India). European companies, especially in tech, are much more likely to be acquired by American firms than the other way around.

16. V. Romen & C. Smith, "How is the US economy managing to power ahead of Europe", Financial Times, 20 October 2023.

17. M. Giordanno & al, "Accelerating Europe : Competitivness for a new era", McKinsey Global Institute (January 2024).

18. C. Di Noia, speech quoted above.

19. P. Artus, "Les États-Unis vont dominer la Chine et la zone Euro", *Les Échos*, 5 décembre 2022.

20. Annual Economic Report, BIS (June 2023).

capital. Infrastructure projects to improve connectivity and access to markets and services, when chosen carefully and implemented efficiently, could prop up productivity growth and enhance economies' resilience. These investments may require not only better but also more public spending, further underscoring the need for fiscal consolidation through broadening of the tax base and entitlement reforms.

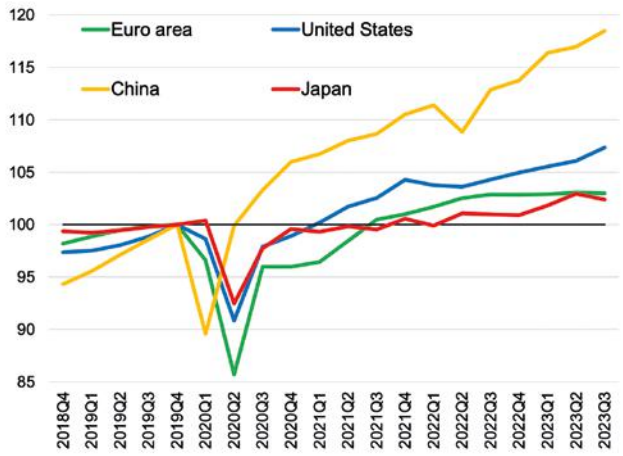
The other area of focus is maintaining competitive and open markets, both domestically and internationally... Lowering barriers to entry would bring in new, innovative firms and help improve the outcomes of these transformations."

1.2 The consequences of the Covid-19 crisis have been more severe in Europe than in the US, China and Japan

1.2.1 In 2020, the Euro area suffered the largest GDP contraction among advanced economies

In 2020, the Eurozone GDP fell by 6.1%, more than twice as the US (-2.8%). Japan has also experienced a lower output fall than the Eurozone, and China has even recorded a 2.2% rise in GDP.

CHART 6.
Real GDP growth, 2019-Q4=100

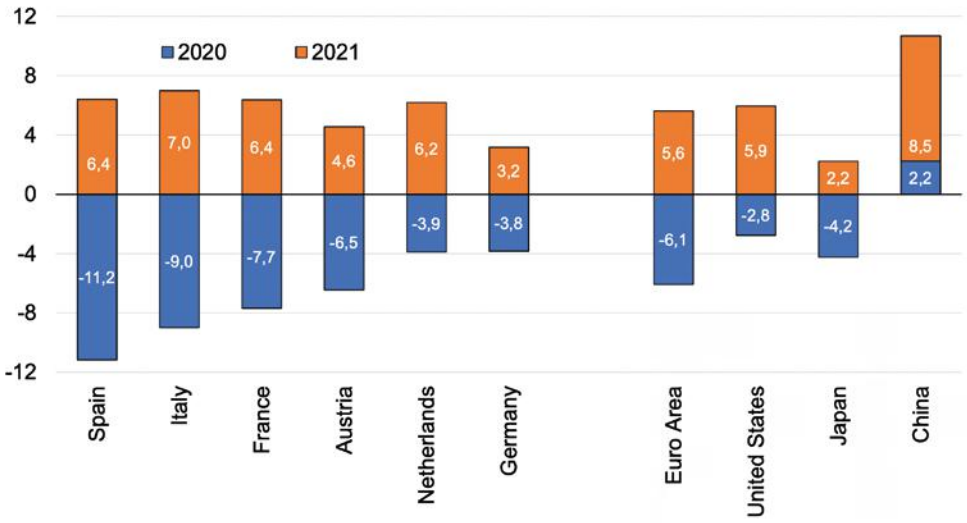


Sources: OECD, Eurostat
Last observation = 2023-Q3

1.2.2 In 2021, Europe recovered at a slower pace than the United States and China

The rebound in growth of the Eurozone in 2021 was 5.6% compared to 8.5% in China and 5.9% in the United States (*see Chart 7*). As of the first quarter of 2022, the Eurozone GDP was just 1.7 percentage points above its pre-pandemic level, while it was up by 3.8 pp in the US, and 11.4 pp in China (*see Chart 9*).

CHART 7.
Real GDP Growth, Annual Change



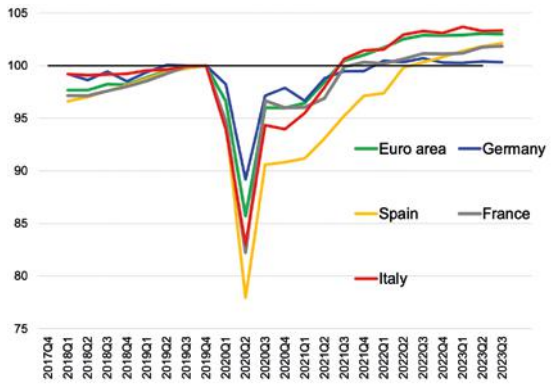
Sources: IMF, Eurostat

The recovery among Member States of the Eurozone was uneven. Most of them experienced a fast rebound in 2021, notably France, the Netherlands and Belgium whose real quarterly GDP already exceeded their pre-pandemic levels as of the fourth quarter of 2021 (*see Chart 8*).

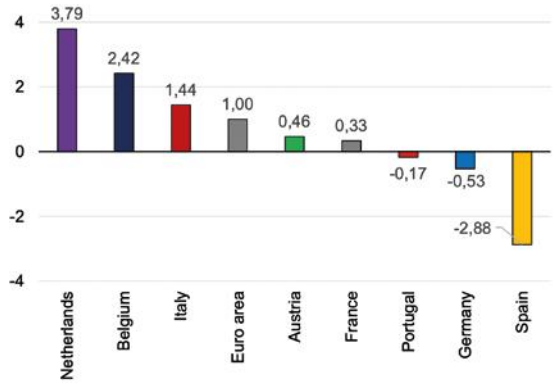
Sixteen Euro area Member States returned to pre-pandemic quarterly levels of output by the end of 2021. In the last quarter of 2021, the output of three Member States, including Germany, Spain and Portugal, had not reached pre-pandemic levels from the fourth quarter of 2019.

CHART 8.
Real GDP Growth in Selected EU Member States

8a. Real GDP Growth Trend, 2019-Q4 = 100



8b. Distance with 2019-Q4 GDP as of 2021-Q4, percentage points

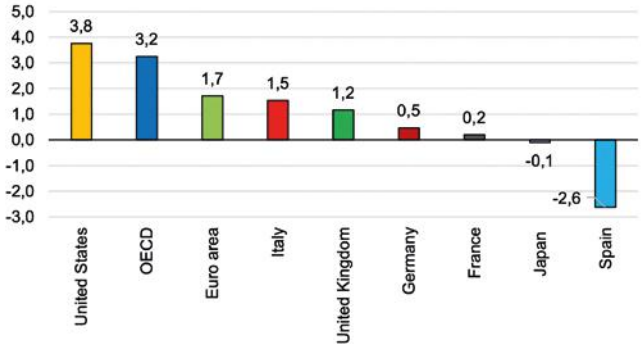


Source: Eurostat

1.2.3 GDP growth exceeded its pre-pandemic levels in the first quarter of 2022 in many advanced economies

The United Kingdom exceeded its pre-pandemic (Q4 2019) level of GDP for the first time in Q1 2022 by 1.2%. In the United States, France and Canada, GDP remained higher than before the pandemic; these countries exceeded their Q4 2019 GDP levels for the first time in the second, third and fourth quarters of 2021 respectively. However, in Japan and Spain, GDP was still below pre-pandemic levels (by 0.1% and 2.6% respectively) in Q1 2022.

CHART 9.
Real GDP (Distance with 2019-Q4 GDP as of 2022-Q1, percentage points)



Sources: OECD, Eurostat

1.3 The economic impact of the war in Ukraine has been more damaging in Europe than in the United States or China

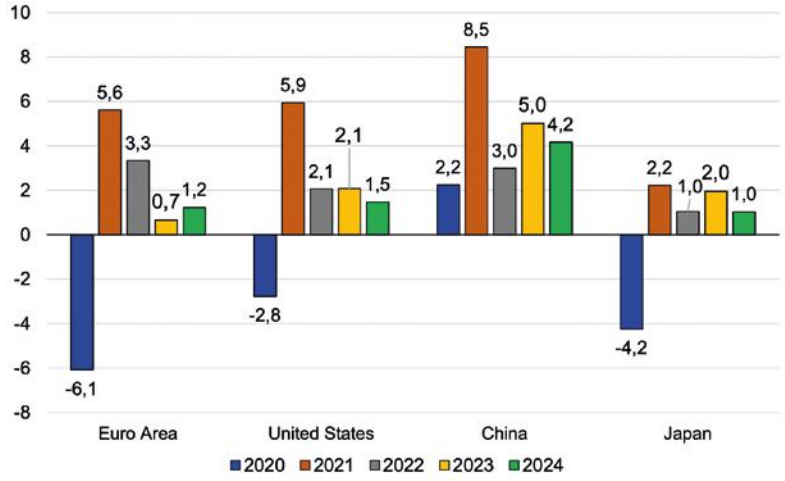
According to the IMF, the Eurozone real GDP grew by 3.3% in 2022, compared to 2.1% in the US, and 3% in China (*see Chart 10*).

The resilience of the European economy to the 2022 energy shock is partly due to the significant recourse to public spending. Indeed, growth coincided with high fiscal deficits across Member States (*see Part 3.5*), which mainly helped to support consumer spending.

In 2023, the Euro area economy is expected to have grown by 0.7%, three times less than the US (+2.1%) and Japan (2%) and more than 7 times less than China (+5%) according to the IMF[21]. The weakness of the Euro area growth in 2023 relative to the US can be attributed to several factors, including the stagnation of private consumption in the context of high inflation and the slowdown in non-residential investment (*see Part 4.2*).

For 2024, the IMF expects growth in the Eurozone to rebound to 1.2%. It would nevertheless lag behind that of the US (+1.5%) and China (4.2%).

CHART 10.
Real GDP Growth rate,
% change



Source: IMF World Economic Outlook (October 2023)

1.4 Unlike the United States, which is energy independent, Europe has been hit hard by the rise in energy prices in 2022

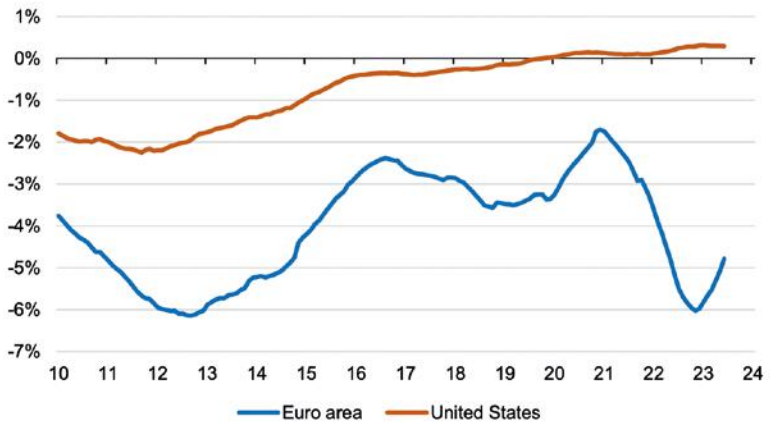
The war in Ukraine has created another negative supply shock for the world economy, which has particularly affected Europe.

The major difference between the United States and the Euro area is that the former produces its energy, whereas the latter imports its. Therefore, the United States benefits from an external surplus for energy (*see charts 11*), which is a very different situation from that of the Eurozone.

The energy crisis has widened the structural competitiveness gap between Europe and the US for at least two reasons: (i) gas prices remain higher and more volatile in Europe, whereas they have returned to pre-war levels in the US; (ii) Europe has replaced its gas and oil imports from Russia with imports partly from the United States. This transfer of wealth has resulted in a widening of Europe's energy balance deficit with the United States.

Accordingly, the surge in energy prices triggered a negative terms-of-trade shock for the Euro area in 2022, amounting to 1.9% of GDP (*see Chart 12*).

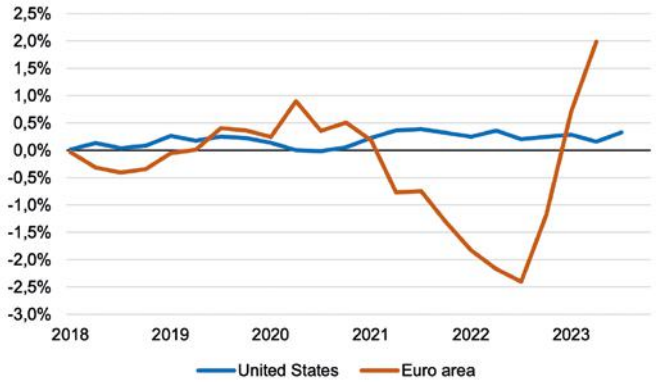
CHART 11.
Trade balance in energy
(as % of nominal GDP)



Source: Eurostat, US Energy Information Administration. Last observation from
Note : balances are expressed as 12-month sum; Last observation from August 2023

21. IMF World Economic Outlook (October 2023).

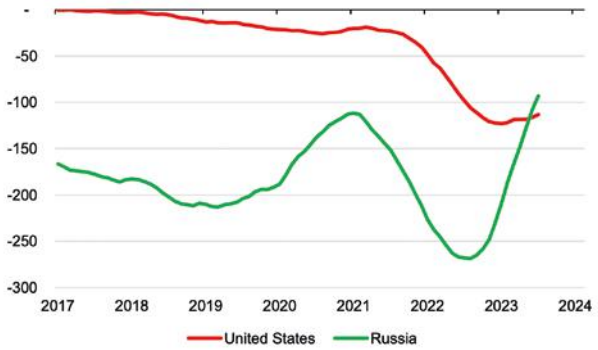
CHART 12.
Income effect of the terms-of-trade shock: Euro area versus United States (impact on year-on-year GDP growth in percentage points)



Sources: Eurostat, US Bureau of Economic Analysis
Notes: The income effect of terms of trade is calculated by weighting export and import price changes by their respective past values (one-year lag) and is expressed as a percentage share of GDP. The latest observations are from June 2023 for the Euro area and September 2023 for the United States.

The United States comes out as a winner after the EU has banned Russian gas imports. Indeed, the United States has become the leading supplier of gas to the Old Continent. Nearly 64% of US exports of Liquefied Natural Gas (LNG) went to Europe in 2022, compared to 34% in 2021, according to the US Energy Information Administration[22]. In September 2023, Europe remained the principal buyer of US's LNG, still accounting for 60% of all US LNG exports according to Reuters[23].

CHART 13.
Euro area's Trade balance in energy with Russia and the United States, € bn (12-month sum)

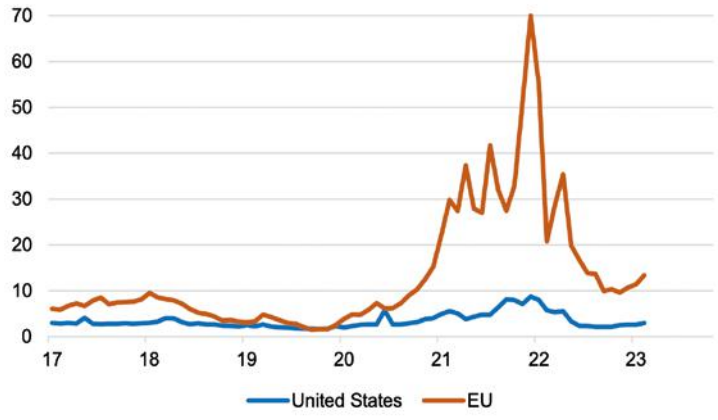


Sources: Eurostat
Last observation from September 2023

Another advantage in favor of the United States is its low and stable price of gas compared to Europe. While they were roughly similar in 2019, gas prices in the two regions have diverged sharply since early 2021 (*see Chart 14*): in August 2022, when European gas prices peaked at 70 USD/ MMBtu[24], US gas prices were 8 times lower, at 8.5 USD/ MMBtu.

Even if the price of energy has fallen significantly since the end of 2022, it is still higher than in the past in Europe and much higher than in the United States: as of October 2023, European gas prices averaged 13.3 USD/ MMBtu, more than twice higher than their 2019 level (4.71 USD/ MMBtu), and nearly four times higher than the US level (2.97 USD/ MMBtu).

CHART 14.
Natural gas prices (US Dollars per Million British Thermal Unit)



Sources: IMF, EIA

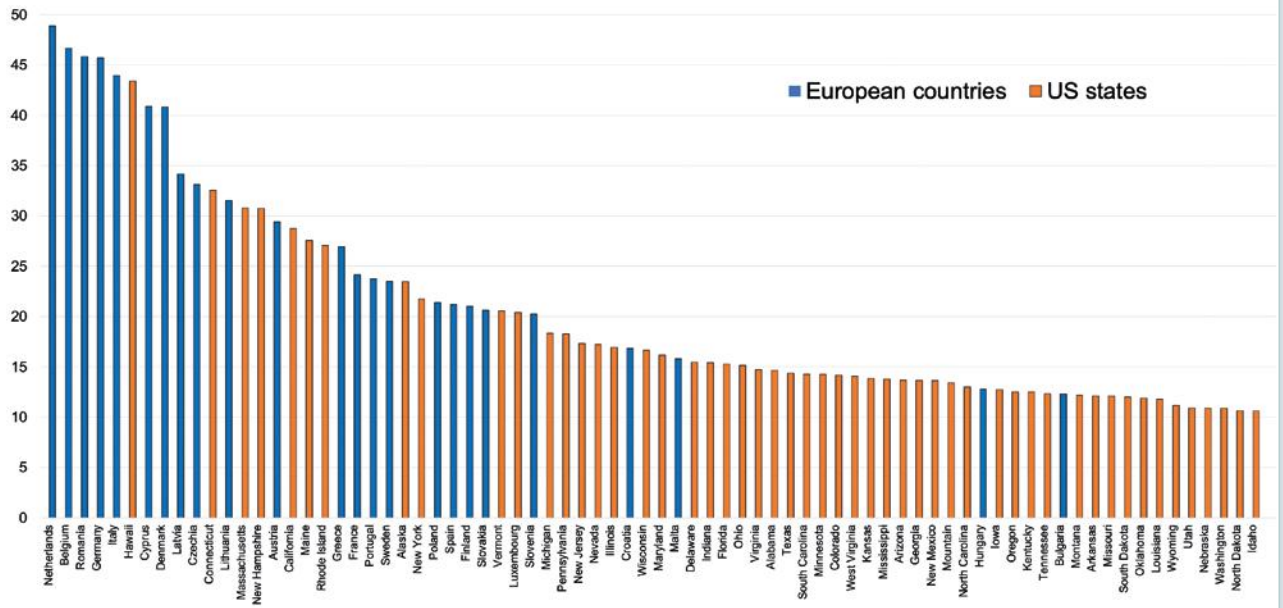
22. "Europe was the main destination for U.S. LNG exports in 2022", Report from the US Energy Information Administration (March 2023).
23. US October LNG exports climb to second highest level on record | Reuters.
24. To compare the European TTF gas price – denominated in euro per megawatt-hour – with the US price, it should be converted into dollars per million British thermal units (MMBtu).

Another illustration of the difference in energy costs between the two regions lies in the price of electricity paid by household's consumers. In the first half of 2023, one kilowatt-hour (kWh) of electricity paid by a European household cost 30 US cents (28.9 € cents), twice as much as in the US (15.9 US cents).

Nevertheless, the two prices are calculated as global averages of several countries or federal states, potentially masking some heterogeneities across jurisdictions in terms of energy mix and consumption. Comparing the 27 EU member states with the 50 US states (*see Chart 15*), we note that European countries have higher overall retail electricity prices than the US states: at 48 ¢/ kWh, the price of electricity in the Netherlands, the highest in Europe, is 10 cent higher than in Hawaii, the US state with the highest electricity prices. Belgium (46.7¢), Germany (45.7¢) and Italy (43.9¢) also have higher prices than Hawaii and the other 49 US states.

Thanks to nuclear power, France benefits from relatively lower prices, averaging 24¢/kWh in the first half 2023. Still, it remains higher than 40 American states, such as New York (21.7¢), Texas (14.4¢) and Nebraska (10.9¢).

CHART 15.
Average residential electricity prices across European and US Federal States in the first half 2023, $ cents/kWh



Sources: Eurostat, EIA

This difference in price levels is sufficiently high to create a problem of competitiveness for the European industry and a movement of relocation of energy-intensive companies (chemicals, fertilizers, etc.) to countries where energy is cheaper, such as the United States, especially with the implementation of the Inflation Reduction Act.

2. The Covid-19 crisis has exacerbated existing fiscal heterogeneities across EU Members States

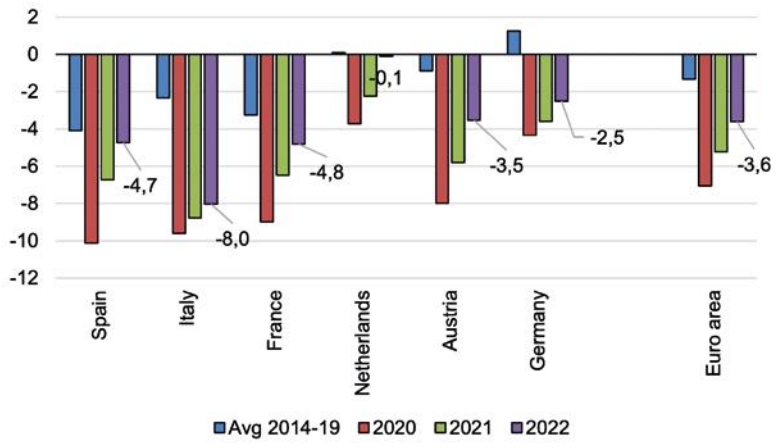
2.1 EU countries that have best managed their public finances after the Global Financial Crisis (2008) and the EU Sovereign crisis (2011-13) are those that have suffered the least from the Covid-19 shock

In 2019, after several years of efforts to reduce their general government deficit and debt, the Netherlands and Germany brought back their public finance stance in line with EU fiscal rules. Indeed, between 2014 and 2019, they ensured an average fiscal surplus of respectively 1.3% and 0.1% of their GDP. These fiscal efforts have enabled them to gradually reduce and stabilise their public debt, at respectively 59.6% and 48.6% of GDP in 2019, from 78.3% and 67.7% in 2013. Austria has made similar efforts over this period, helping to reduce its public debt burden by nearly 11 pp to 70.6% of GDP in 2019.

Thanks to the fiscal discipline achieved since 2013, Germany and the Netherlands have largely contained the shock induced by the Covid-19 crisis. At 4.3% of GDP and 3.7% respectively, their fiscal deficits in 2020 remained below the Eurozone average (7.1%). This contrasts with the close to double-digit levels of deficit seen in France (-9% of GDP), Spain (-10.1%) and Italy (-9.6%) during the crisis (*see Chart 16*).

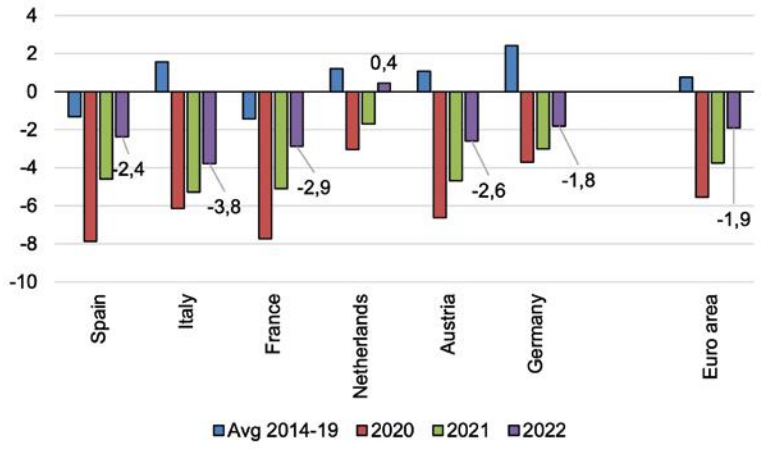
By 2021, EU member states' budget balances have returned to their pre-crisis configuration: countries with healthy public finances prior to the Covid-19 crisis have recorded fiscal deficits well below the Eurozone average of 5.2%. This is particularly true of Germany and the Netherlands, whose total fiscal deficit were reduced to 3.6% of GDP and 2.2% in 2021 respectively. By contrast, the figure remained above 5% of GDP in Spain (-6.7%), France (-6.5%) and Italy (-8.8%) in 2021.

CHART 16.
General Governement Budget Balance, % of GDP



Source : Eurostat, EU Commission's Autumn Forecast (November 2023)
Notes : Labels relate data for 2022

CHART 17.
General Governement Primary Budget Balance, % of GDP



Source : Eurostat, EU Commission's Autumn Forecast (November 2023)
Notes : Labels relate data for 2022

2.2 By contrast, the most indebted countries on the eve of the Covid-19 crisis have been the most severely hit in terms of output shortfall in 2020

Since the global financial crisis, the public debt-to-GDP ratios of Spain, Italy and France have continued to rise. Between 2012 and 2019, France increased its public debt ratio from 90.6% to 97.4%; Italy's jumped from 126.5% to 134.2%, and Spain's from 90% to 98.2%.

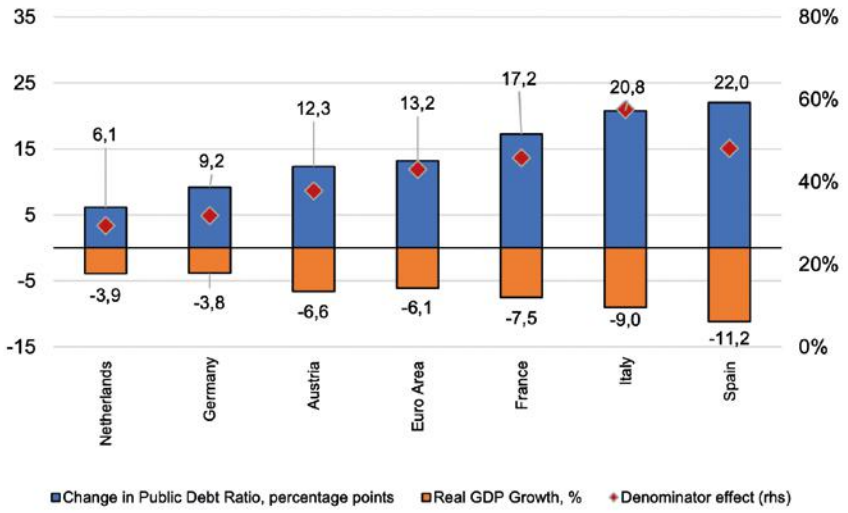
The sustained increase in public debt-to-GDP ratio in these three Member States is mainly due to the accumulation of fiscal deficits. As Chart 16 shows, the average deficit of France and Spain exceeded 3% of GDP – the threshold of Maastricht fiscal rules – between 2014 and 2019. Unlike Italy, these two countries have not delivered any primary surplus since 2002 for France and 2008 for Spain. Between 2014 and 2019, the average primary deficits reached 1.4% of GDP in France, and 1.3% in Spain respectively, while Italy posted a primary surplus of 1.6% over the same period (*see Chart 17*).

During the Covid-19 crisis, France, Italy and Spain were the hardest hit in terms of output shortfall in the Euro area. In 2020, Spain's real GDP fell by 11.2%. It collapsed by 9% and 7.5% respectively in Italy and France.

With public finances already deteriorated on the eve of the pandemic, all three countries recorded the biggest increase in their public debt-to-GDP ratio between 2019 and 2020. Spain saw the biggest increase (+22 pp, versus 13.2 pp for the Euro area). Italy and France followed, their public debt rising by 20.8 pp and 17.2 pp respectively (*see Chart 18*).

However, around 40% of the increase in public debt-to-GDP ratio in 2020 was due to the fall of GDP itself in the Euro area, the so-called "denominator effect". In Spain, for instance, the "denominator effect" was responsible for 47.9% of the increase in the Spanish public debt ratio in 2020. This figure rose to 57.5% in Italy – the highest level in the Eurozone – and 44.9% in France. It represents 29.3% in the Netherlands, 31.9% in Germany and 37.8% in Austria.

CHART 18.
Real GDP Growth, Change in Public Debt Ratio and Denominator Effect in 2020



Source: Eurostat

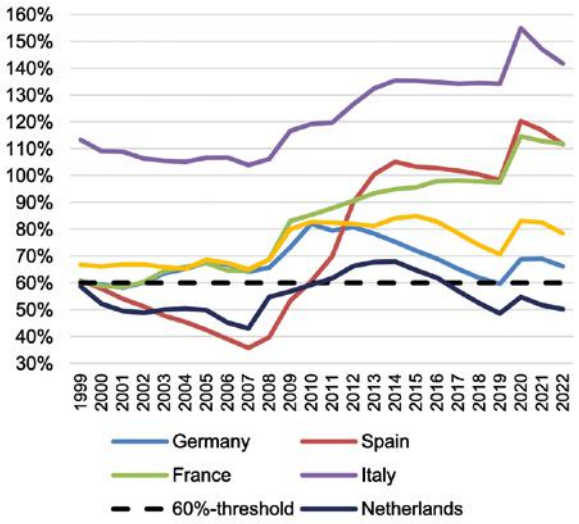
2.3 Countries whose public finances deteriorated the most in 2020 still registered high fiscal deficits in 2021

Although significantly lower than in 2020, budget deficits remained high in 2021 in some Southern Member States. Among the major EU Member States, Italy recorded the highest deficit, with 8.8% of GDP in 2021, from 9.6% in 2020 (*see Chart 16*). France and Spain posted budget deficits of 6.5% of GDP and 6.7% respectively in 2021, compared with 9% and 10.1% in 2020.

The figure was lower in the major Northern Member States. In Germany, the fiscal deficit fell to 3.6% of GDP, compared with 4.3% in 2020. It fell back below 3% of GDP in the Netherlands (-2.2% of GDP), compared with 3.7% a year earlier.

By 2021, the public debt-to-GDP ratio stabilized at high levels in some of these EU Member States. Thanks to strong GDP growth performance (*see Part 1*), the ratio fell slightly in France from 114.7% of GDP in 2020 to 112.9% in 2021 (*see Chart 19*). It fell by 3.4 pp in Spain (from 120.3% to 116.8%) and by 7.9 pp in Italy (from 154.9% to 147.1%). Still, these figures remained almost twice as high in Germany (69% of GDP) and the Netherlands (51.7% of GDP) in 2021.

CHART 19.
Evolution of Gross Public Debt to GDP ratio in Major Economies, %



Source: EU Commission

2.4 In 2021, the fiscal heterogeneity worsened across EU members in terms of public debt-to-GDP

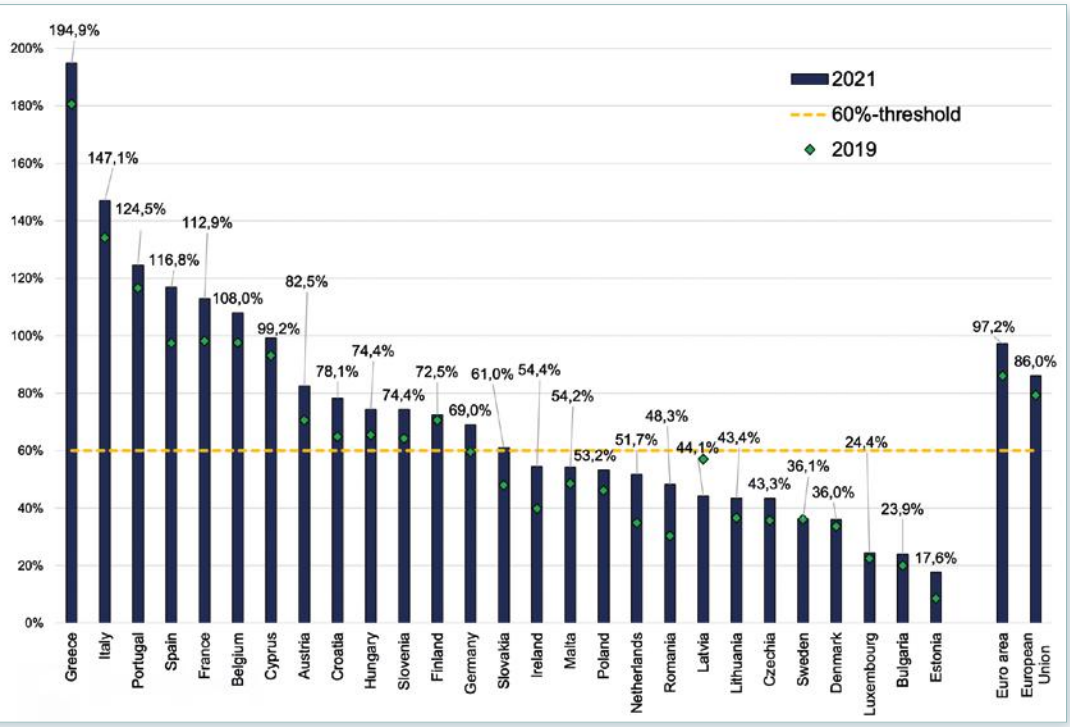
In 2021, the level of public debt ranged from 17.6% of GDP in Estonia to 194.9% in Greece. Within this range, three groups of countries can be distinguished in the European Union (*see Chart 20*).

The first group comprises six Member States whose debt remained above 100% of GDP at the end of 2021. This ratio reached 194.9% in Greece, 149.1%, in Italy and over 105% in Portugal (124.5%), Spain (116.8%) and France (112.9%) and Belgium (108%). With a public debt of 99.2%, Cyprus can also be included in this group.

Eighteen EU countries kept their ratio of public debt below 75% of GDP in 2021. Among them, Germany and the Netherlands saw their public debt hovering at respectively 69% and 51.7% of GDP in 2021. Along with the Netherlands, twelve other countries had a public-debt-to-GDP ratio below the Maastricht threshold of 60% in 2021: Malta (54.2%), Ireland (54.4%), Poland (53.2%), Romania (48.3%), Latvia (44.1%), Lithuania (43.4%), Czech Republic (43.3%), Denmark (36%), Sweden (36.1%), Luxembourg (24.4%), Bulgaria (23.9%) and Estonia (17.6%).

Two other countries, *i.e.* Austria and Croatia recorded public debt levels ranging from 75% of GDP to 83% in 2021.

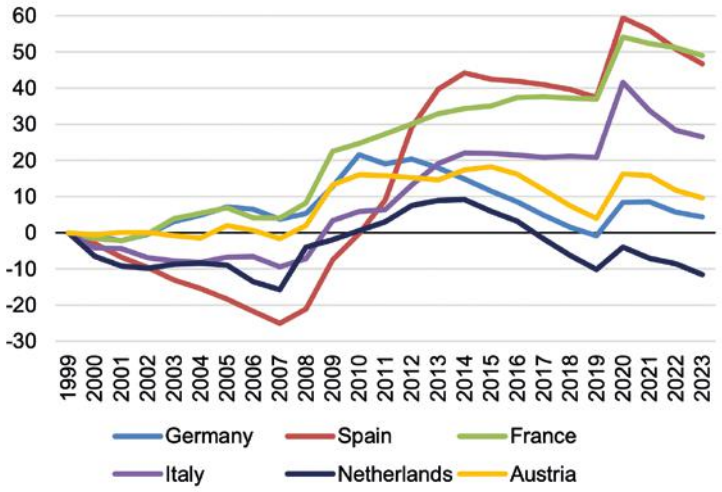
CHART 20.
Gross Public Debt, as % of GDP



Source: EU Comission
Labels refer to 2021

The heterogeneity of the level of government debt relative to GDP across Euro area Member States has increased significantly since the creation of the Euro area in 1999. As Chart 21 shows, the public debt-to-GDP ratio has risen moderately by 8.6 pp in Germany, 15.8 pp in Austria and has even fallen by 7 pp in the Netherlands over the past two decades to 2021. In the meantime, the level has risen by 33.7 pp in Italy, 52.3 pp in France and 56 pp in Spain.

CHART 21.
Cumulative change of Public debt to GDP ratio since 1999, percentage points



Source: EU Commission

3. The war in Ukraine has had significant economic impacts on EU countries in 2022

Eurozone economies have been hard hit by the conflict in Ukraine. The negative impact of the energy shock on the terms of trade of Eurozone countries was significant in 2022, and led to the disappearance of the Eurozone's external surplus that year.

European economic growth in 2022 has proved more resilient than expected thanks in particular to lower energy prices since the third quarter of 2022, rapid diversification of energy supplies and government support for households and businesses.

In many countries, inflation has reached levels not seen for decades. In the Eurozone, headline inflation reached double-digit levels in October 2022 (10.6%) and November (10.1%) and averaged 8.4% for the whole of 2022, the highest level recorded since the creation of the monetary union in 1999.

Despite measures taken by governments to support households' purchasing power, the divergence in budget deficits and public debt between Member States did not increase in 2022, but the ratio of public debt to GDP stabilized at high levels in many EU countries.

3.1 A major energy shock for Europe in 2022

Following the war in Ukraine, the economies of the European Union have suffered from a loss of income due to the rise in prices of energy and other imported commodities in 2022. Indeed, unlike the United States which produces its energy, EU countries import it.

3.1.1 The Russian war in Ukraine has caused energy prices to soar in 2022

As François Villeroy de Galhau explained[25], "the first peaks on gas and electricity prices took place in the summer of 2021 in the context of the global post-pandemic recovery, when European countries had to build up their gas stocks for the winter and when demand for natural gas in Asia and the United States strongly increased. In this context the price of metals for example almost doubled from 2020 to mid-2021. Tensions in the oil market also emerged during the second half of 2021".

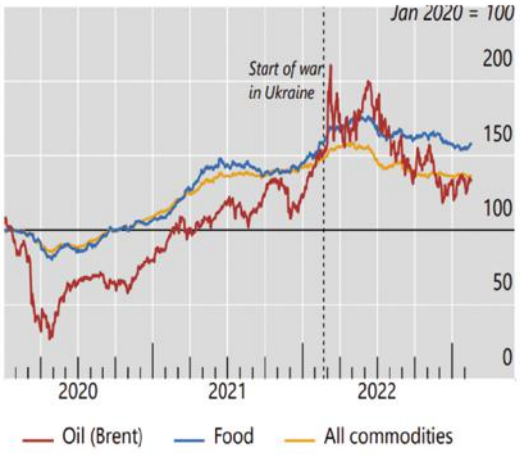
Then, the Russian war in Ukraine has caused gas prices to keep soaring. From slightly above 10€/MWh in early 2020, the price of natural gas delivered in Europe increased to 80€/MWh before the start of the war in Ukraine. In February 2022, it soared to peak at €339 in August 2022 and has then stabilized at around €50[26] since January 2023 (*see Chart 22*), helped by demand restraint, diversification of supply sources and exceptionally mild weather.

Oil prices have also risen sharply since the start of the war in Ukraine. As of late January 2023, futures for Brent oil stood at $85, 40% above their 2019 average of $60.

CHART 22.
Commodity prices

22a. Gas & Oil Market prices since January 2021

22b. Commodity price indexes since January 2020



Sources: Refinitiv, St Louis Fed, Bloomberg; BIS
For chart 22.a Last observation are from 11 January 2023
Chart 20.b is taken from the presentation of Hyun Song Shin "Global value chains under the shadow of Covid-19", BIS (February 2023); Brent oil price in US dollars/barrel. Food price index measures price movements of butter, cocoa beans, corn, cottonseed oil, hogs, lard, steers, sugar and wheat

25. François Villeroy de Galhau, "The magnitude and distribution of the energy and trade shocks in the Euro area and in France", Toulouse, 8 December 2022.
26. See I. Visco, Monetary policy and the return of inflation".

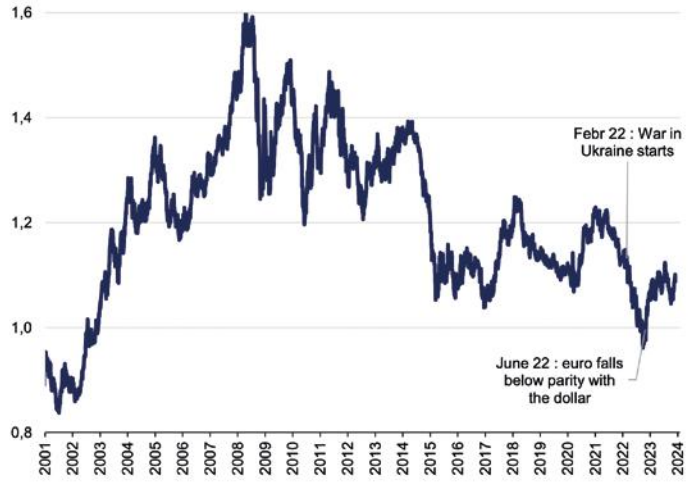
Electricity prices have also reached record levels: the price of electricity on the wholesale market is indeed closely correlated to the price of gas paid by the marginal electricity producer.

The rise in commodity price has coincided with the appreciation of the US dollar. In the past, commodity prices and the dollar typically moved in opposite directions: the dollar depreciated when commodity prices rose. Given that invoices are issued in dollars, these moves dampened the price increase in non-dollar terms. Nevertheless, when this phenomenon materialized in 2022, the BIS explained[27] that "the unusual sequence of shocks (the Covid-19 pandemic and then the war in Ukraine) have resulted in a positive co-movement of the dollar and commodity prices.

As a result, commodity prices in local currencies have surged much more strongly than in US dollar terms. One reason for changes in the co-movement is that the United States has become a net energy exporter, especially of natural gas. Increases in oil and gas prices now improve the US terms of trade and tend to boost the US dollar, with any related monetary tightening further bolstering the currency."

Chart 23 shows that the euro depreciated sharply against the US dollar as monetary policy diverged between the Euro area and the United States between January 2022 and September 2022. Over that period, the euro plunged by 13.3% against the USD, bringing the value to its lowest level since 2002.

CHART 23.
US Dollar vs Euro exchange rate



Source : ECB
Last data from 5 December 2023

The past depreciation of the euro has amplified the rise in imported prices, particularly those of commodities which are set in dollars. According to François Villeroy de Galhau[28], the 16% fall in the euro against the dollar between mid-2021 and mid-2022 would, if it had stayed at this level, have had an estimated impact of roughly +0.6 percentage points on the level of consumer prices over the long term. The monetary policy conducted since then by the Eurosystem has contributed to the recent re-appreciation of around 8% in the euro, which should gradually have the opposite effect.

3.1.2 The impact of the energy crisis on the terms-of-trade of Euro area countries was significant in 2022

The movements in international prices have triggered significant transfers of wealth between net commodity importing and exporting countries. From the point of view of European economies, this has resulted in a real income shock that reduces household purchasing power and corporate margins, while deteriorating the competitiveness of exporting firms.

Several ways of measuring this external tax can be envisaged. To measure it, we use the «terms of trade» approach[29], *i.e.* the ratio of export prices to import prices.

27. BIS Bulletin, "Energy markets: shock, economic fallout and policy response", 13 December 2022.

28. F. Villeroy de Galhau, "How monetary policy will defeat inflation: channels and locks", Centre des Professions Financières, 17 February 2023.

29. We calculated the terms of trade shock, using the Banque de France's following methodology:

$$shock = -\left(\frac{\frac{P_t^M}{P_t^{GDP}}}{\frac{P_{t-4}^M}{P_{t-4}^{GDP}}} - 1\right) \times \frac{Val_{t-4}^M}{Val_{t-4}^{GDP}} + \left(\frac{\frac{P_t^X}{P_t^{GDP}}}{\frac{P_{t-4}^X}{P_{t-4}^{GDP}}} - 1\right) \times \frac{Val_{t-4}^X}{Val_{t-4}^{GDP}}$$

With P_t^M (resp.P_t^X), the import price (resp. exports) of quarter t, P_t^{GDP} the GDP deflator of quarter t, Val_t^M (resp. Val_t^X), the nominal value of imports (resp. exports) of quarter t et, Val_t^{GDP}, the nominal GDP of quarter t.

In the Euro area, this ratio has deteriorated sharply since the second quarter of 2021, reflecting the faster rise in import prices than in export prices. For the full year of 2022, the income loss associated to the terms-of-trade shock represented 1.9% of GDP of the Euro area.

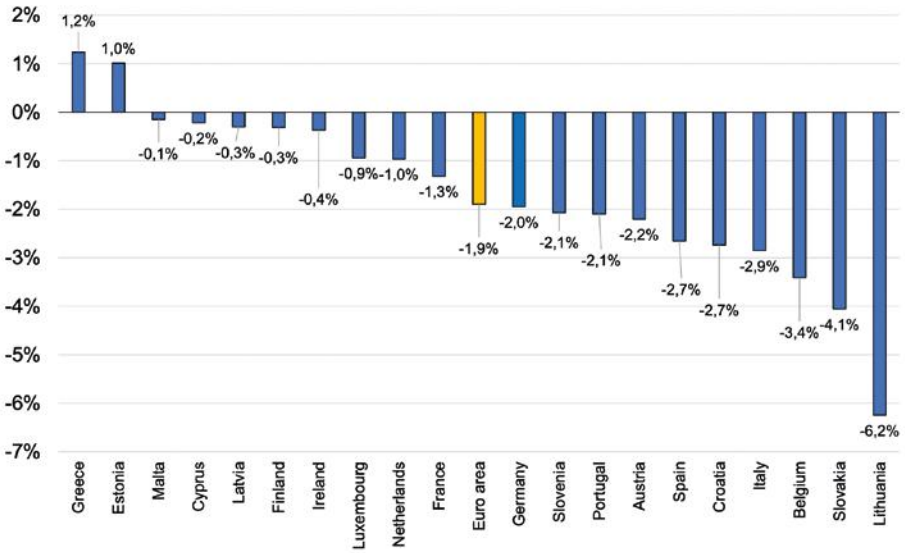
The impact of the energy crisis on the terms of trade differed across Member States.

As shown in Chart 24, the terms of trade shock for 2022 amounted to 1.3% in France, 2% in Germany, 2.7% in Spain and 2.9% in Italy.

For France, this shock on the terms of trade could be the second largest since the first oil shock of 1974.

As the *Banque de France* points out in its December 2022 macroeconomic forecasts, this shock is somewhat smaller for France than that experienced by the other major countries in the Eurozone. France's lower dependence on fossil fuels and the lower weight of industry (compared to countries like Germany or Italy) mitigate the magnitude of import price shocks. In addition, France also benefits from dynamic export prices in the maritime transport and agricultural products sectors.

CHART 24.
Terms-of-trade shock across Euro area Member States recorded in 2022



Source: Eurostat
The income effect of terms of trade is calculated by weighting export and import price changes by their respective past values (one-year lag) and is expressed as a percentage share of GDP

3.1.3 High energy prices and lower exports to China have led to the disappearance of the Euro area's external surplus in 2022

In 2022, the Euro area current account recorded a deficit of €106 billion (0.7% of GDP), compared with a surplus of €282 billion (2.3% of GDP) in 2021.

According to the ECB[30], this change in the current account balance was mainly driven by a switch from a surplus (€287 bn) to a deficit (€60 bn) for goods, and, to a lesser extent, by a reduction in the surplus for primary income (down from €63 bn to €7 bn) and a slightly larger deficit for secondary income (up from €160 bn to €166 bn). These developments were partly offset by a larger surplus for services (up from €92 bn to €114 bn).

The energy bill in Europe has risen in a differentiated way according to Member States' dependence on fossil fuels and their industrial specialization. Energy imports have increased in the Euro area countries:

- From €40 to 50 bn in France in the years 2019 - 2020 and 2021 (2% of GDP), it rose to €100 billion in 2022 (*i.e.* 4% of GDP)
- In Italy and Spain, the cost of energy imports reached respectively €100 bn (5.3% of GDP) and €47 bn in 2022 (6% of GDP), compared with an average of €30 bn in these two countries in the years before the war (*i.e.* 2% of GDP in these countries).
- Italy's current account surplus has turned into a deficit, joining France and Belgium which have also reached a current account deficit.
- Germany and the Netherlands have lost most of their current account surplus due to the sharp increase in energy bills.

30. ECB, "Euro area monthly balance of payments: December 2022", 17 February 2023.

CHART 25.
Current Account Balance in the Euro area, € Billion (Cumulated figure for the 12 previous months)

Source: Eurostat
Last observation from September 2023

3.2 European economic growth in 2022 was more resilient than expected, although some Member States have been particularly affected

3.2.1 European economic growth in 2022 was more resilient than expected in facing the large negative terms-of-trade shock from the war in Ukraine

The Eurozone real GDP has grown by 3.3% in 2022, compared to 2.1% in the US, and 3% in China (*see Chart 10*).

According to the IMF[31], "this resilience partly reflects government support of about 1.2% of EU GDP (net budgetary cost) to households and firms hit by the energy crisis, as well as dynamism from economies reopening. Gas prices have declined by more than expected amid higher non-Russian pipeline and liquefied natural gas flows, compression of demand for gas, and a warmer-than-usual winter.

However, the boost from reopening appears to be fading. High-frequency indicators for the fourth quarter suggest that the manufacturing and services sectors are contracting. Consumer confidence and business sentiment have worsened".

In December 2022, the unemployment rate stood at 6,1% in the EU (since April) and 6,6% in the Euro area – unchanged since October.

3.2.2 Within the EU, Germany and some countries in Eastern Europe are particularly affected economically

Germany was the hardest-hit EU country due to its relatively large manufacturing sectors and greater dependence on energy imports from Russia. In 2022, the German GDP grew by 1.8% in real terms, nearly half of the Eurozone average (+3.3%), according to the EU Commission.

Relatively less exposed to Russian commodity imports and more service-oriented, France (+2,5%), the Netherlands (+4,3%) and Spain (+5,8%) were less affected by the energy shock. Portugal was the second fastest-growing country in Europe, with real GDP up by 6.8% in 2022.

3.3 The energy crisis has triggered an acceleration in inflation in the Eurozone, which has exceeded double-digit levels by 2022

As K. Knot reminds us[32] "the decade of below-target inflation swiftly came to an end in the course of 2021. Our economies rebounded from the pandemic with households disturbing their growing deposit balances, but also with supply still severely constrained after a long period of pandemic contagion measures".

The Russian invasion of Ukraine has put further pressure on energy prices, raising costs of the energy input and creating additional distortions of supply chains.

But the inflation problem may also be explained by monetary causes (*see Eurofi monetary Scoreboard*). Indeed, "the excessive monetary growth of the previous years emanating from aggressive central banks' quantitative easing policies (in particular in 2020 and 2021) may have exacerbated supply chain issues by inflating overall

31. IMF, "World Economic Outlook Update", January 2023.
32. K. Knot, "Staying the course", speech addressed at MNI Market News, London, (February 2023).

spending and demand, reflecting a policy failure and not just the "teething problems of an economy recovering from the pandemic slump"[33].

3.3.1 Even before the war in Ukraine, inflation was already an issue for OECD countries

Between March 2021 and February 2022, Consumer Price Index inflation (CPI) has been running above 2% in many advanced economies.

At the OECD level, inflation increased from 2.4% in March 2021, to 4% in June 2021 and 7.8% in February 2022 (*see Chart 32*).

In the Euro area, the Harmonized Index Consumer Price (HICP) annual growth rate exceeded 2% for the first time in July 2021. Since November 2021, the headline inflation has been above 2% in all Eurozone Member States and kept rising until February 2022. In the United States, inflation has been exceeding 2% annually since March 2021, and increased to 7.9% until February 2022.

Lasting supply chain bottlenecks as well as supply and demand imbalances continued to contribute to elevated levels of inflation.

In a speech delivered in August 2022, the President of the Bundesbank[34] explained this return of inflation: "one major factor driving this momentum was the global economy's unexpectedly swift recovery from the pandemic-induced recession. The fiscal and monetary policy support measures taken around the globe to limit the economic damage caused by the pandemic played a part in this. The rapid revival of economic activity then sent commodity prices soaring.

Another contributing factor was the shift in consumer demand away from services and towards goods during the pandemic – instead of heading to the cinema or the gym, people were ordering laptops and exercise bikes. That left industry struggling to produce enough to keep up in some cases. This has further exacerbated price inflation, both for final products and at upstream stages.

In addition, the pandemic disrupted global supply chains and transport routes. Some of these supply disruptions have proved to be more persistent than initially expected. This, too, has had a hand in pushing up prices. And, with a robust demand, energy prices were already on the rise before the war began."

Central bankers were slow to respond to the surge in inflation in the EU, UK and US.

Central bankers' initial insistence that inflation would prove itself short-lived led to delays in discarding decades of aggressive and ultra-loose monetary policy. As C. Giles, V. Romei and A. Smith highlight in an article issued in the Financial Times, those delays may have made inflation all the more difficult to vanquish with higher rates, as price pressures broadened from a problem affecting a small number of products hit by supply chain bottlenecks to a far more spread phenomenon, affecting almost all goods and services.

3.3.2 Inflation has reached levels not seen in decades in many countries in 2022

At the **OECD** level, the aggregated consumer price index rose by 9.6% in 2022 compared to 2021, its highest level since 1988.

In the **US**, year-on-year headline inflation was on average 8.1% for 2022.

The war in Ukraine and associated pressures on energy and food supplies have pushed the **Euro area** headline inflation into unprecedented double-digit territory in October 2022 (10.6%) and November (10.1%) and to 8.4% for the whole of 2022 – the highest level recorded since the creation of the monetary union in 1999.

As P. Hernandez de Cos explained[35], "in the case of the Euro area, higher energy and food prices have added to the effect of other supply-side factors related, in particular to supply-chain disruptions. The increased demand, mainly due to the reopening of the economy, met an inelastic supply. This and the depreciation of the euro have also played a role in the increase in inflation."

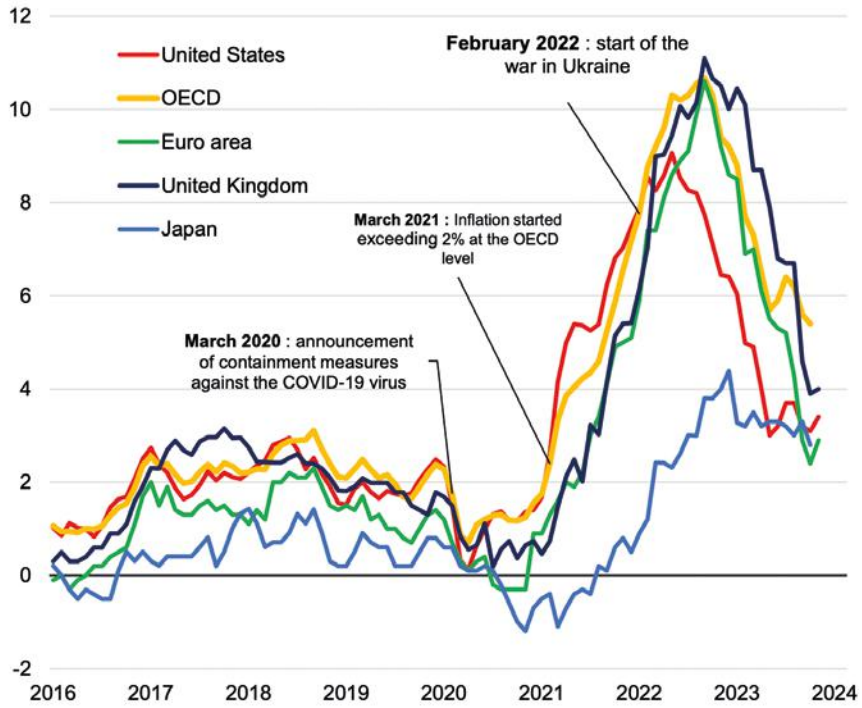
In the **UK**, inflation was on average 9% in 2022, a level not recorded since 1982. In Japan, headline inflation reached 2.5% in 2022, a low level compared to international standards but uncommon in this country that has fought deflation for decades.

33. P. Krugman, "The year of inflation infamy", the New-York Times, 16 December 2021.

34. J. Nagel, "Monetary policy in times of geopolitical crises and high inflation", Speech at European School of Management and Technology, (August 2022).

35. P. Hernandez de Cos, "Consistent economic policies – a prerequisite for macroeconomic stability", Madrid, 16 January 2023.

CHART 26.
Consumer Price Index growth in key advanced economies, % annual change



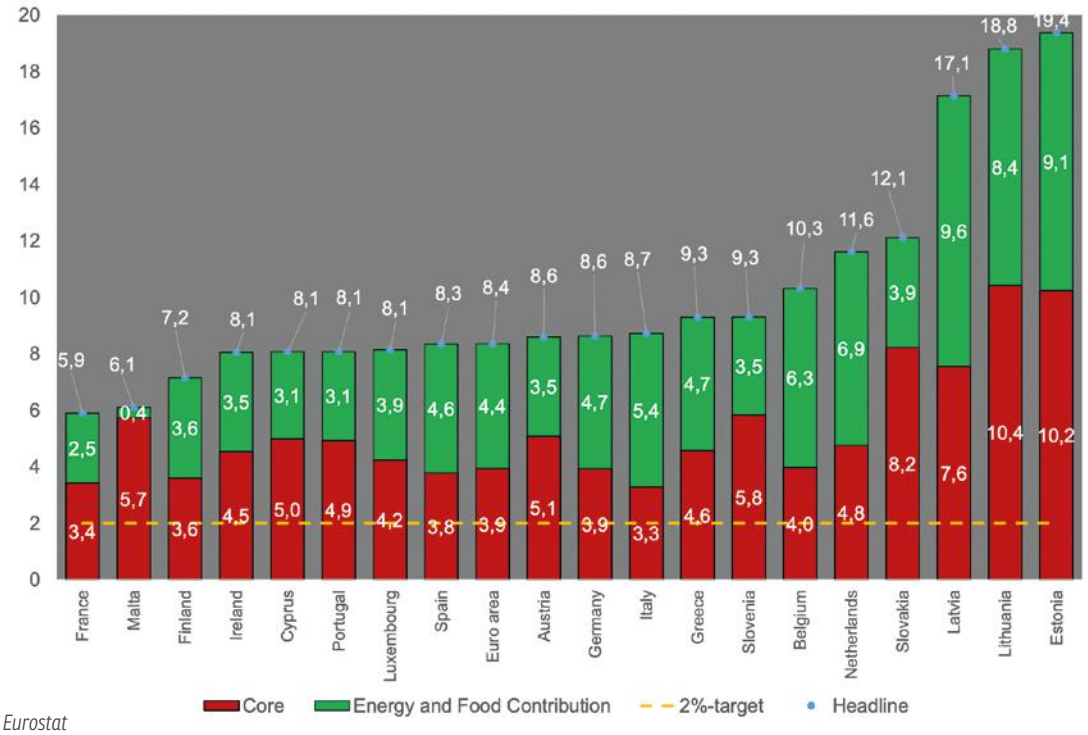
Sources : OECD, Eurostat
Latest data from December 2023 for the Euro area, US & UK and November 2023 for the OECD and Japan

3.3.3 The inflationary impacts of the current energy crisis have been uneven across Eurozone Member states, reflecting their different exposure to supply-shocks (energy, supply-chain)

The large import price shock has led to the highest inflation rates in the Baltics among Euro area countries. In Estonia, headline inflation doubled from 11.6% in February to peak at 25.2% in August 2022. It jumped to 22.5% in Lithuania, and 22% in Latvia, both in September 2022.

Headline inflation also jumped significantly in Germany, which peaked to 11.6% in October 2022. It also exceeded 10% in Spain (10.7% in July 2022), Italy (12.6% in October 2022) and the Netherlands (16.8% in October 2022).

CHART 27.
Headline & Core Inflation across Eurozone Member States – Average for 2022 - annual change (%)



Source : Eurostat

3.4 Governments have absorbed more than a third of the income loss in 2022

The increase in energy prices has prompted most Member States to implement several measures to mitigate the social and economic impact on households and firms, while fiscal policies were already expansionary.

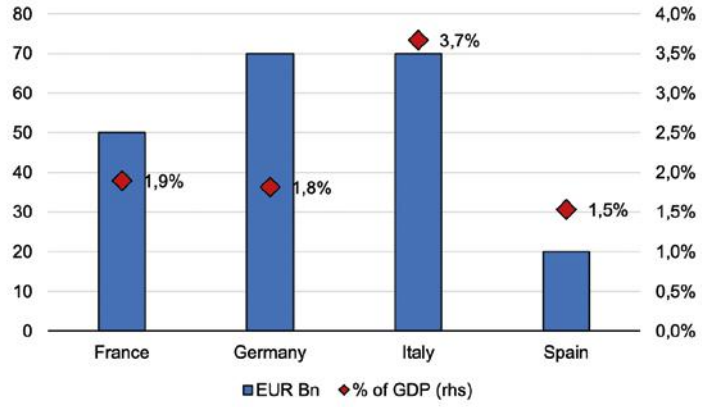
According to the EU Commission[36], the net budgetary cost of these measures is estimated at 1.3% of GDP in 2022 for the Euro area, although there are large differences depending on Member States.

These energy-related government measures took the form of broad-based tax cuts or subsidies, and outright energy price caps, either with the aims to temporally protect their purchasing power of income (**'income measures'**) or reduce the marginal cost of energy consumption for households and/or firms (**'price measures'**). The measures depend on revenues, taxes or levies on windfall profits by energy companies.

The measures implemented in **France** essentially consisted in limiting energy price increases through the tariff shield – concerning gas and electricity – and rebate on a fuel prices. Support in **Germany** has been mainly conducted through transfers to households and a reduction in energy taxation. In **Italy**, measures included household income support, business subsidies and energy price regulation. In **Spain**, measures focused on consumer energy prices, including tax cuts and lower fuel prices.

According to the French Treasury, the French government allocated €50 bn (1.9% of GDP) to protecting households and firms' purchasing power, less than Italy (3.6% of GDP) and Germany (1.8% of GDP) which each spent €70 bn, but more than Spain (€20 bn, or 1.5% of GDP) – *see Chart 28*.

CHART 28.
Total amount of Government measures implemented to offset rising energy prices in 2022



Source: Eurofi calculations, updated from the French Treasury's note "Répartition des pertes dues à la dégradation des termes de l'échange énergétiques", Trésor Eco, December 2022

These measures have contributed to partially offsetting the rise in energy prices for households and firms. In France where energy fiscal measures accounted for 1.9% of GDP in 2022, without any compensatory measures, households would have incurred more than one third of the revenue loss generated by the energy shock, while companies would have incurred a bit less than two thirds, according to the Banque de France[37].

With respect to 2021, these measures have stabilized the households' purchasing power in 2022, which would have dropped by 3.5% in the absence of government support[38].

3.5 The divergence in terms of fiscal deficits and public debts between Member States has not increased with the war in Ukraine but the public-debt-to-GDP ratio has stabilized at elevated levels in many EU countries

To mitigate the impact of skyrocketing energy prices on households and firms, governments of the EU have adopted several fiscal measures in 2022 in the form of temporary tax cuts, fiscal transfers or energy price caps. These measures contributed to the divergences in inflation across countries in 2022 (*see Part 3.3.3 above*).

However, public deficits in EU countries have been reduced due to the strong nominal GDP growth and the phasing out of the pandemic-related measures in 2022.

36. "Fiscal policy measures to mitigate the impact of high energy prices", EU Commission – Autumn Forecast (November 2022).

37. F. Villeroy de Galhau, "The magnitude and distribution of the energy and trade shocks in the Euro area and in France", Banque de France (December 2022).

38. G. Claveres, "Répartition des pertes dues à la dégradation des termes de l'échange énergétiques", TresorEco n°318, French Treasury (December 2022).

In this context, public debts as a proportion of GDP have stabilized at high levels. In 2022, the ratio has contracted slightly in France from 112.9% of GDP in 2021 to 111.8% in 2022. It has fallen by 4.3 pp in Spain (from 118.3% to 114%) and by 5.7 pp in Italy (from 150.3% to 144.6%), according to the EU Commission. The public debt of these countries remained well above the levels of Germany and the Netherlands, at 67.4% and 50.3% respectively in 2022.

In 2022, the reduction in the public debt-to-GDP ratio was most pronounced in the countries with the highest inflation. In Italy, where GDP deflator exceeded 3%, the ratio fell by 5.4 pp compared to 2021 – the largest change among the major Euro area economies – ahead of Spain (-5.2), France (-1.1) and Germany (-2.9).

As we shall see below, the differences in measures to fight inflation also explain the slight differences in the decline in public debt ratio across the EU Member States.

Despite offsetting some of the burden, these non-targeted measures have weakened the incentives to lower energy consumption and weighed on the public finances of the most indebted Member States.

Only a small share of the temporary fiscal measures implemented to alleviate the burden of rising energy prices targeted low-income households. The EU Commission estimates that less than 30% of these measures have been targeted in 2022, *i.e.* to the poorest strata of the population.

Moreover, many measures supported short-run fossil fuel consumption, thereby working against efforts to move away from fossil energy sources. According to the EU Commission, roughly two-thirds of the energy measures were price measures. This may have distorted the price signal and reduce incentives to contain energy consumption and improve energy efficiency. In terms of budgetary impact, only 1% of the total measures contributed directly to the green transition, as underlined by I. Schnabel[39].

Another side-effect of these measures concerns the fiscal cost for public finances. Mainly financed by borrowing, government-measures have added to the historically high public debt burden across countries.

As noted by the EU Commission[40], energy-related measures have been an important driver behind the expansionary developments in net primary current spending in most Member States in 2022.

In 2022, twelve Member States experienced a deficit higher than 3% of GDP. The Spanish fiscal deficit stood at 4.7% in 2022 slightly below France (-4.8%). Italy's fiscal deficit reached 8% of GDP in 2022, mainly as a result of statistical reclassification[41]. By contrast, fiscal deficits in Germany (-2.5%) and the Netherlands (-0.1%) remained below 3% of GDP in 2022.

39. I. Schnabel, "Finding the right mix: monetary-fiscal interaction at times of high inflation", ECB Speech (November 2022).

40. "Communication from the commission to the European Parliament, the Council and the European Central Bank on the 2023 Draft Budgetary Plans: Overall Assessment", European Commission (November 2022).

41. The very large impact on Italy's fiscal deficit figures results from the widespread use of tax credits related to building renovation bonuses, including those related to the "Superbonus 110" programme.(for further details, see Italy: deficit revisions show cost of past fiscal policies, call for prudence | Scope Ratings | European Rating Agency)

4. Despite the fall in energy prices since late 2022, growth has significantly declined in 2023 in the Euro area while inflation has eased but remained high

Since the end of 2022, the fall in energy prices and the appreciation of the euro have partially reversed the negative effects of the terms-of-trade shock, enabling the Euro area's current account balance to return to surplus in 2023.

Nevertheless, lower energy prices have not translated into better growth performance in 2023. According to the IMF, GDP in the Euro area grew by just 0.6% in 2023, down from 3.4% in 2022, and three times less than in the United States (+2.1%). The stagnation of private consumption and investment partly explains this economic underperformance compared with the US in 2023.

Headline Inflation fell sharply in 2023 in the Eurozone but remained almost twice the 2% target for the year as a whole. The persistence of core inflation proved harder to tackle. Indeed wages have become a central driver of domestic prices pressures. In the Euro area, wage growth accelerated sharply over the past year as employees tried to compensate for the loss of purchasing power in a context a tight labour market.

The combination of high inflation and weak growth prospects has led to a stagflationary environment in the Eurozone, unlike in the United States. This situation is due in particular to the disappearance of gains in labor productivity in the main Eurozone countries, which is worrying for the future of their potential growth. Furthermore, the German model, the engine of European growth, is facing structural difficulties that are also weighing on the EU potential. In addition, real interest rates are still too low in the Eurozone compared to the United States, which could discourage investment in Europe and exacerbate capital outflows from European countries to non-European countries.

4.1 The Euro area current account balance returned to surplus in 2023

4.1.1 A substantial reduction in European gas prices has occurred after its peak in August 2022

Energy prices have fallen sharply since the summer of 2022, with a particularly marked decline in the price of natural gas in Europe.

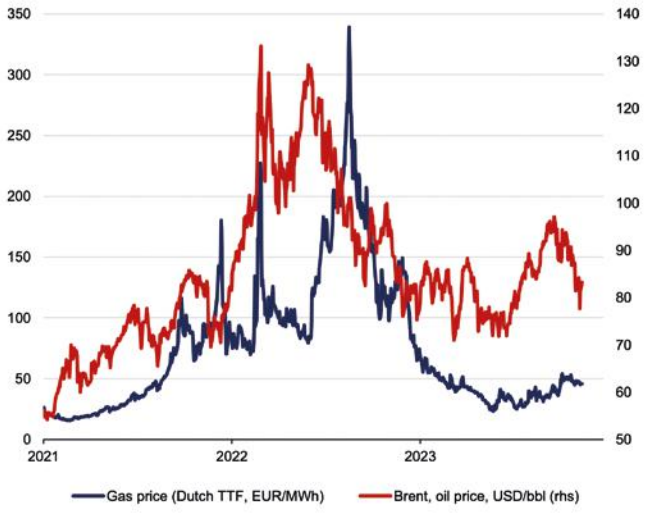
After peaking at 339€/MWh in August 2022, the price of European TTF gas fell to 30€/MWh mid-June 2023, a level broadly back to the values observed in autumn 2021 (*see Chart 29*).

The drop observed between mid-2022 and the second quarter of 2023 is explained by the diversification of gas supply and its storage which was higher than expected, as well as the mild winter temperatures, the energy savings and the weak industrial activity.

Energy prices have increased moderately since the summer of 2023. Following the situation in the Middle East, European TTF gas prices exceeded €50/MWh in October 2023 but remained stable since then. The Brent oil price rebounded immediately following the terrorist attacks on Israel, but it retracted back below $90 per barrel, similar to the level seen in late August.

The euro's appreciation has also helped reduce the cost of imports for European countries. Between October 2022 and November 2023, the euro gained 10% against the dollar (*see Chart 22*).

CHART 29.
Gas & Oil Market prices since January 2021



Sources: Refinitiv, St Louis Fed
Last data from 26 November 2023

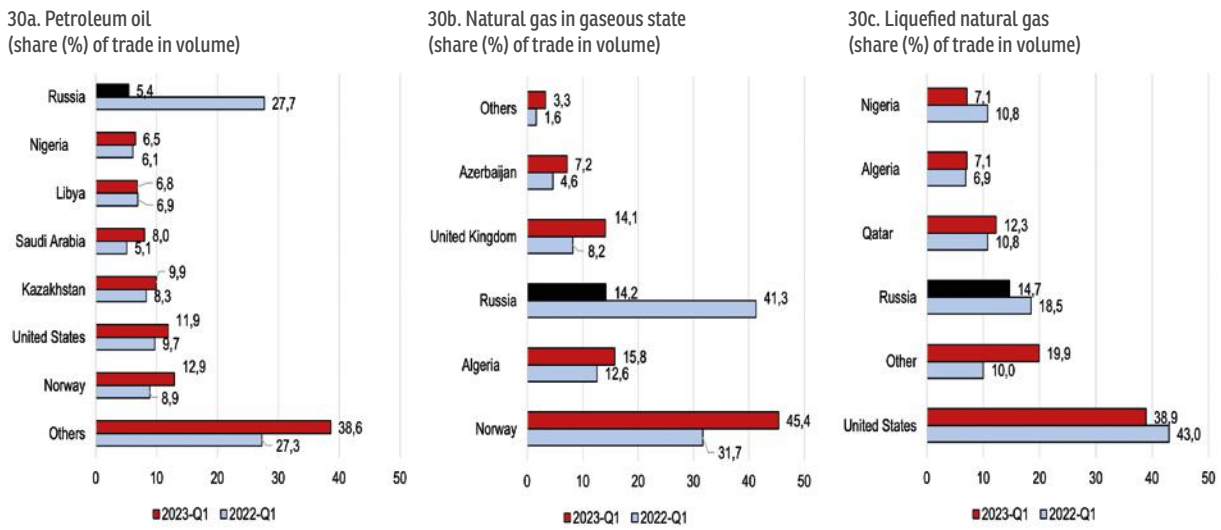
4.1.2 Europe has succeeded in rapidly doing without Russian oil and gas

In the first quarter of 2022, Russian oil accounted for over a quarter of the European Union's imports of oil, according to Comext and Eurostat estimates[42]. The embargo on Russian crude oil imposed in December 2022, followed by a cap on refined products in February 2023, has had the desired effect. With 5,4% of import volumes in the first quarter of 2023, Russia is now only the EU's eighth-largest oil supplier (*see Chart 30*).

Natural gas imports have followed the same path – albeit less radically, due to the greater logistical complexity of changing supply routes. Before the war, Russian gas accounted for 41% of European supplies in the first quarter of 2022. A year later, this share had fallen to 14%.

However, Europe is now more exposed to developments in the global liquefied natural gas (LNG) market, with tankers from the US accounting for over 40% of liquefied gas imports. An acceleration in activity in China could lead to tensions on the gas market in particular.

CHART 30.
Eu-27 imports of energy products, by partner, Q1 2022 vs Q1 2023



Source: Eurostat database (Comext)

4.1.3 Falling energy prices have reduced the cost of goods imports of Euro area Member States, improving their terms-of-trade since late 2022

With the rapid fall in energy prices, the Eurozone has experienced a positive terms-of-trade shock equivalent to 0.7% of GDP in 2023-Q1, and 2% in 2023-Q2.

With the exception of Slovakia, Luxembourg, Finland, Malta and Ireland, all Euro area Member States recorded a positive terms-of-trade shock in the second quarter of 2023. Among the major EU economies, Italy experienced the highest external gain (3%), above Spain (2.7%), Germany (1.8%) and France (1.5%).

4.1.4 The Euro area current account balance was back to surplus in 2023

In 2023, the current account balance surplus is expected to reach 1.2% in the Euro area, after a deficit of 0.7% in 2022, according to the IMF[43].

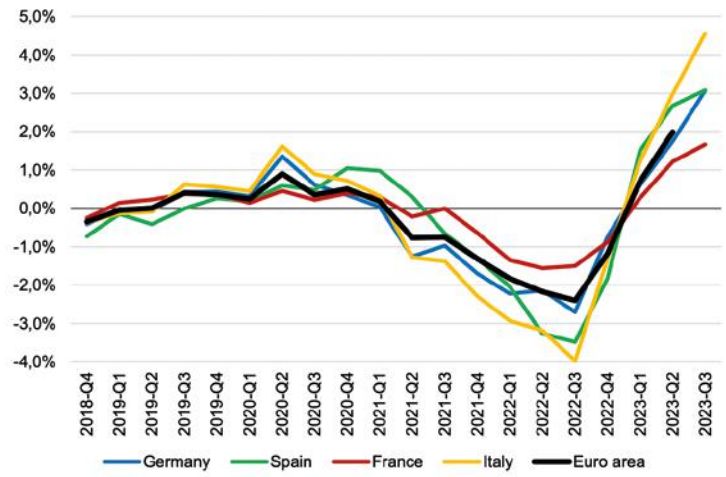
This improvement should be mainly due to the trade balance of goods, which should have become positive in 2023, as a result of falling import energy prices and an easing of supply disruptions. The trade balance in services – tourism in particular – should also play a role in the recovery in the current account balance.

According to the EU Commission, the current account surplus should reach 5.9% of GDP in Germany and 1.9% in Spain in 2023, rebounding from respectively 4.2% and 0.6% in 2022. In Italy, the current account is expected to be 0.8% in 2023, following a deficit of 1.3% in 2022. In France, the deficit is expected to narrow to 0.5% of GDP in 2023, from 2% in 2022.

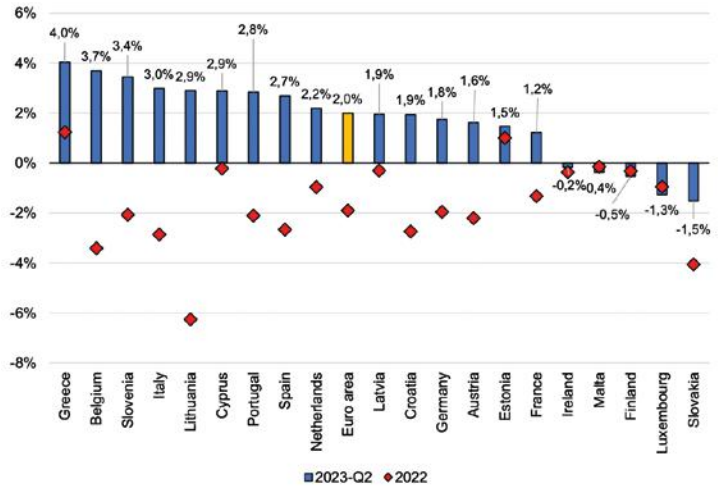
42. Eurostat, "EU imports of energy products continued to drop in Q2 2023" (September 2023).
43. IMF World Economic Outlook (April 2023).

CHART 31.
Terms-of-trade shock across Euro area Member States

31a. Terms-of-trade shock, quartely data



31b. Terms-of-trade recorded in 2022 versus 2023-Q2



Source : Eurostat
The income effect of terms of trade is calculated by weighting export and import price changes by their respective past values (one-year lag) and is expressed as a percentage share of GDP. Chart 31.b illustrates the average terms-of-trade shock for the four quarters of 2022, and the one recorded in 2023-Q2

However, as global energy prices are assumed to persist at elevated levels and consequently to weigh on import prices, the current account balances in EU countries are expected to remain well below their pre-pandemic levels. Expected at 6.3% of GDP in 2024, the German current account balance is set to be lower than its 2014-19 average of 8.1% according to the EU Commission. In Spain, it should reach 1.7% in 2023, compared to 2.3% over the period 2014-19.

TABLE 1.
Current account balance, % of GDP

	Current Account Balance, % of GDP						
	2007	2011	2012	2019	2021	2022	2023
Germany	6,9%	6,2%	7,1%	8,2%	7,7%	4,2%	5,9%
France	-0,1%	-0,9%	-1,0%	0,5%	0,4%	-2,0%	-0,5%
Italy	-1,4%	-2,8%	-0,2%	3,3%	2,4%	-1,5%	0,8%
Spain	-9,4%	-2,7%	0,1%	2,1%	0,8%	0,6%	1,9%
Netherlands	6,9%	8,6%	10,2%	6,9%	12,1%	9,3%	9,2%
Portugal	-9,6%	-6,0%	-1,6%	0,4%	-0,7%	-1,2%	1,6%
Belgium	1,9%	-1,9%	-0,1%	0,1%	1,3%	-1,0%	0,2%
Greece	-15,2%	-8,8%	-3,6%	-1,5%	-6,8%	-10,3%	-6,7%
Euro area	0,0%	-0,4%	1,0%	2,4%	2,8%	-0,7%	1,2%

Source: Eurostat, data for 2023 are projections taken from the Autumn Forecast of the EU Commission (November 2023); projections for the Euro area in 2023 are taken from the IMF World Economic Outlook (October 2023).

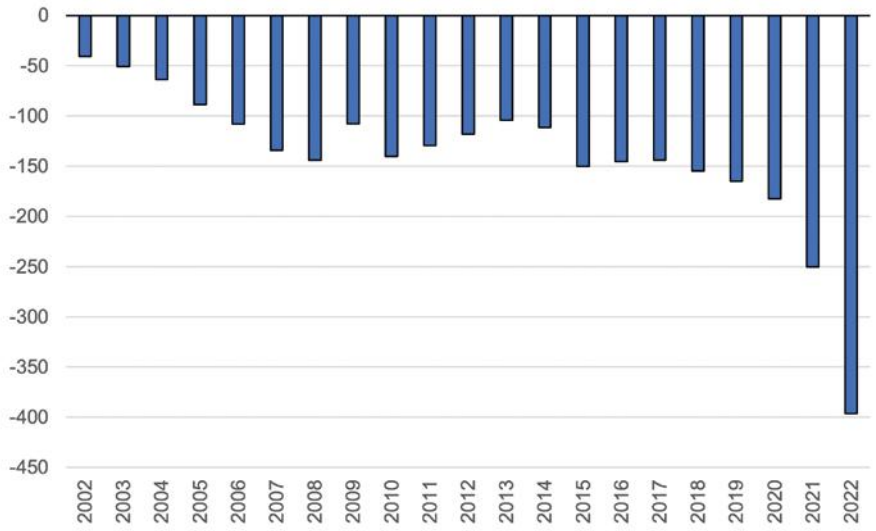
In addition to higher energy prices, another reason for the Eurozone's current account to remain below its pre-Covid level in the years ahead would be its growing trade deficit with China. The EU's trade deficit with China doubled between 2021 and 2022 reaching €395 bn according to Eurostat (*see Chart 32*). Chinese exports to Europe are three times higher than in the opposite direction. In 2022, 21% of EU goods imports came from China – China

was the largest partner for EU imports of goods, up to 40% of active pharmaceutical ingredients, and 90% or even 100% of certain critical raw materials.

Among EU Member states, the Netherlands was the largest importer of goods from China and Germany was the largest exporter of goods to China in 2022.

According to J. Leahys[44], there are several reasons for this deficit, including restricted access to the Chinese market, hidden public subsidies and major overcapacity in Chinese production. This overcapacity is due to the slowdown in Chinese domestic consumption and the closure of certain countries to imports from China (United States, India, Japan, South Korea).

CHART 32.
EU's goods trade balance with China, € bn



Sources: Eurostat

4.2 Unlike in the United States, economic growth has significantly declined in the Euro area in 2023

4.2.1 Growth in the Euro area slows in 2023

The Euro area's real GDP is projected to slow to 0.6% in 2023 down from 3.4% in 2022 according to the IMF[45]. This overall weakening of growth contrasts with developments in the United States, where the real GDP is projected to have increased by 2.1%.

Between 2019 and 2023, US GDP grew by 7.4% against only 3% in the Eurozone. Accordingly, the positive effects of lower energy prices, equivalent for the Euro area countries to an increase in their real income, have not resulted in greater growth performance in 2023.

At least two factors explain the weak growth performance of the Euro area relative to the US in 2023.

One is the **trend in private consumption**. In Europe, private consumption stagnated on aggregate, showing that high and still increasing consumer prices for most goods and services is weighing on households' purchasing power. In contrast, consumption has been surprisingly robust in the US, as nominal wage growth started exceeding inflation since early 2023. Indeed, US households have drawn on their excess savings accumulated during the pandemic to finance consumption, unlike more risk-averse Europeans, who preferred to preserve their precautionary savings[46].

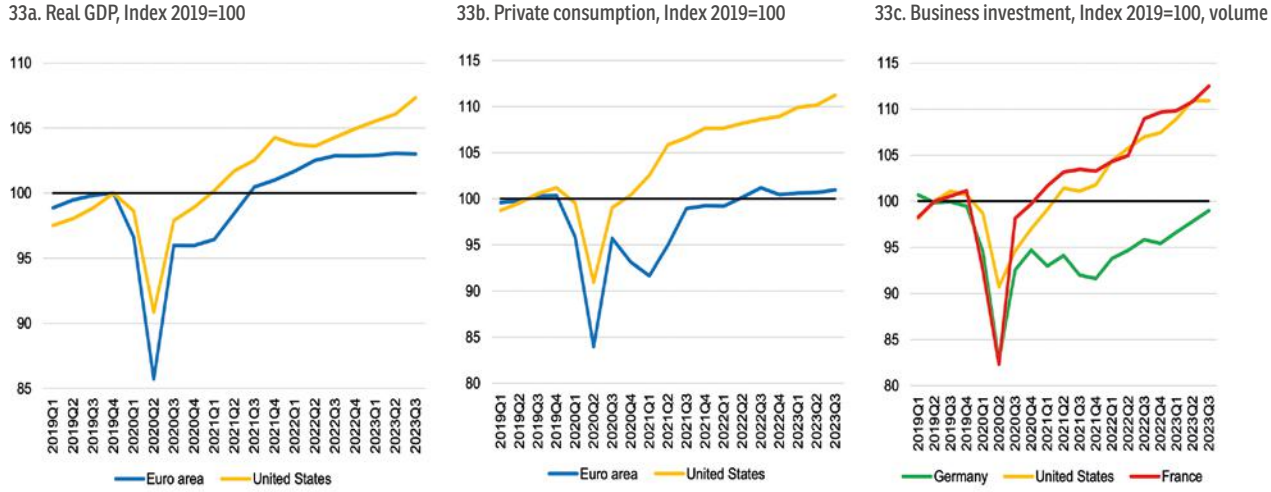
The other one is investment – both public and private – which increased marginally in the first half of 2023 in the Euro area, while it increased sharply in the United States, mainly supported by non-residential investments. According to the US Census Bureau, infrastructure spending is estimated to have increased by 73% between October 2022 and October 2023, following the introduction of the Inflation Reduction Act (*see Chapter 8*).

44. J. Leahy, "China's Xi Jinping meets EU leaders for high stakes talks", Financial Times (December 2023).

45. World Economic Outlook, November 2023.

46. See P. Robert, "Croissance : pourquoi l'Europe patine face aux États-Unis", Le Point (November 2023).

CHART 33.
Recent trends in real GDP, private consumption and business investment : Euro area vs United States



Source: OECD, Eurostat

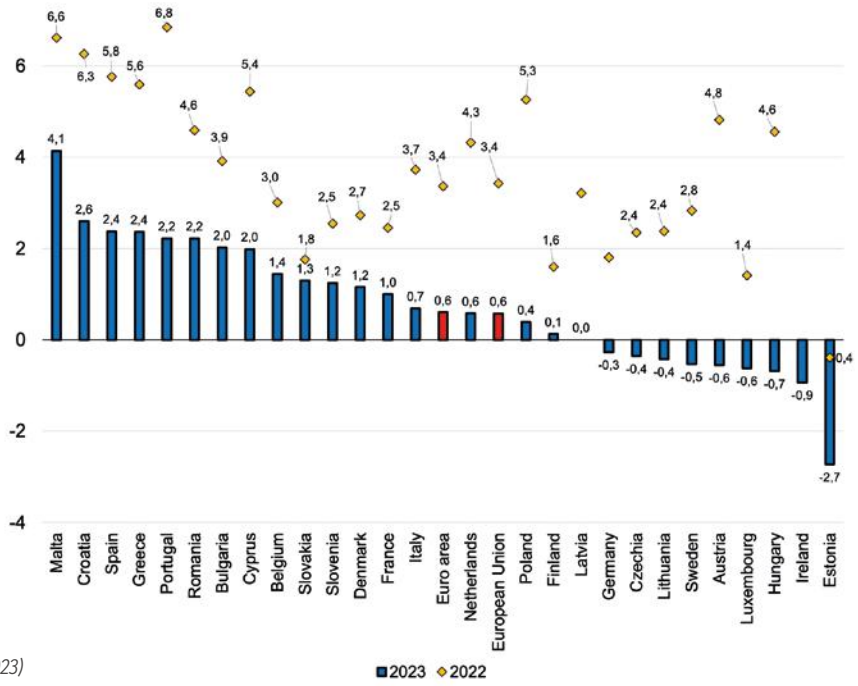
4.2.2 Heterogeneity in the growth performance across Member States remains large in 2023

While all member countries are expected to record lower GDP growth in 2023 compared to 2022, the differences in growth across countries are significant: according to European Commission forecasts, real GDP is set to contract in 9 Member States, while it is set to increase by more than 2% in 8 countries.

According to the IMF Regional Outlook[47], manufacturing-dependent advanced European economies (for example, Germany) recorded downsides, while countries that depend on services and tourism have performed better (for example, Portugal and Spain), largely because of the ongoing normalization of travel activity in the summer.

Across the major economies, Spain and Portugal are among the most dynamic countries in the region, with real GDP expected to grow by respectively 2.6% and 2.2% in 2023[48]. France's GDP set to grow half as fast as Spain's (1%), while Italy and the Netherlands are expected to grow at the European average of 0.6% in 2023. With GDP set to contract by 0.3% compared to 2022, Germany is among Europe's worst performers in 2023.

CHART 34.
Real GDP Growth rate across EU Member States in 2022 and 2023 (%)



Source: AMECO Autumn Forecast (November 2023)

47. IMF European Regional Outlook (November 2023).
48. EU Commission Autumn Forecasts (November 2023).

4.3 Although it has fallen from its peak of October 2022, headline inflation in the Euro area has remained almost twice higher than the 2%-target for the full year of 2023

4.3.1 While headline inflation has peaked on both sides of the Atlantic, core inflation remains persistent

At the OECD level, headline inflation than halved, from a peak of 10.7% in September 2022 to 5.4% in November 2023. The drop was even more pronounced in the **United States**, where headline inflation fell to 3.1% in November 2023, from its June 2022 peak of 9,1%.

The **Euro area** also saw a sharp fall, with headline inflation setting at 2.4% in November 2023, five times lower than the peak of 10.6% reached in October 2023. It rebounded slightly in December 2023 to 2.9%.

Headline inflation has remained higher in the **United Kingdom**, reaching 4.2% in November 2023, although it has been falling since peaking at 10.7% in October 2022. Among the most advanced economies, only **Japan** is experiencing a higher inflation rate: although it has fallen back from its peak of 4.3% reached in January 2023, headline inflation has been fluctuating between 2.8% and 3.5% since then.

The OECD[49] attributes this recent fall in headline inflation to the "partial reversal of the very sharp rise in energy prices over the previous two years", as detailed in section 3.1. Indeed, the fall in energy and, to some extent, food prices directly reduces the prices of goods in the consumer price index basket and has brought down headline inflation from its peak.

Nevertheless, the persistence of core inflation has proved more difficult to tackle. In the major advanced economies, core inflation remains well above central bank targets and has fallen more slowly than headline inflation since its peak. In the Euro area for instance, core inflation peaked at 5.8% in March 2023. In November 2023, it still stood at 3.6%. In the United States, core inflation stood at 4% in October 2023, having peaked at 5.6% in March 2023.

The persistence of domestic prices pressures is also reflected in the distribution of price changes within the inflation basket. According to the OECD, over half of the items still have annual inflation rates above 4% in the United States, the Euro area and the United Kingdom as of August 2023.

According to I. Schnabel[50], this slow process of disinflation is linked to the way in which wages and prices are set: in the context of rapidly rising input costs last year, "firms raised their selling prices, sometimes beyond the increase in costs, bolstering unit profits last year in the context". [...] But when input costs are falling, or when conditions are broadly stable, most firms behave differently. They then revise their prices more reluctantly, which makes underlying inflation stickier and disinflation slower".

Wages also contribute to keeping inflation pressures high. In the Euro area, wage growth has accelerated sharply over the past year as employees try to compensate for the loss of purchasing power (*see Section 4.3.3*). Given that the share of labor in total costs is twice as high in services as in manufacturing, higher labor costs have a more direct impact on companies' pricing behavior. This tightens the link between prices and wages and suggests that wage pressures are becoming an important source of inflation.

These two rigidities make the current disinflation process more "uncertain, slower and bumpier" in Schnabel's words. Therefore, from a monetary policy point of view, the current fall in inflation should not be seen as a victory yet, at the risk of celebrating it prematurely.

4.3.2 In 2023, inflation declined but remained above target in most Eurozone Member States

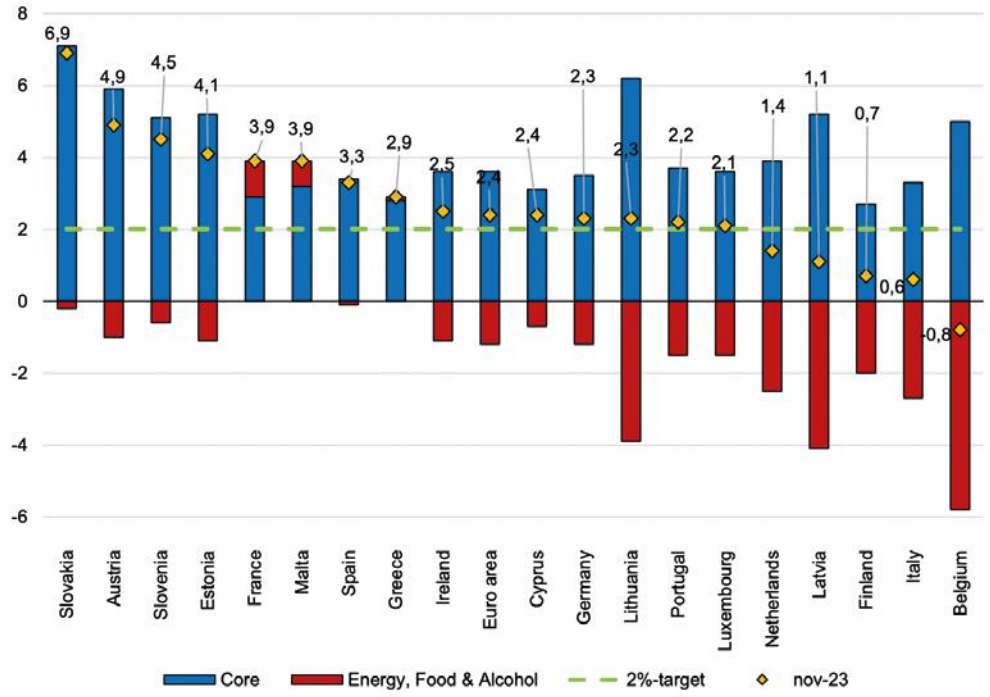
In the Euro area, year-on-year headline inflation fell to 2.4% in November 2023, after peaking at 10.6% in October 2022.

Significant differences persist between Member States. In November 2023, it fell below 1% in three countries including Belgium (-0.8%), Finland (0.7%) and Italy (0.6%). By contrast, headline inflation remained above 2% in 14 Member states; Slovakia (6.9%) Slovenia (4.5%) and Estonia (4.1%) recorded the highest figures. With the exception of Italy, headline inflation was above 2% in all major Member States including France (3.9%), Spain (3.3%) and Germany (2.3%).

49. OECD Economic Outlook, November 2023.

50. I. Schnabel, "The last mile", Speech at at the annual Homer Jones Memorial Lecture (November 2023).

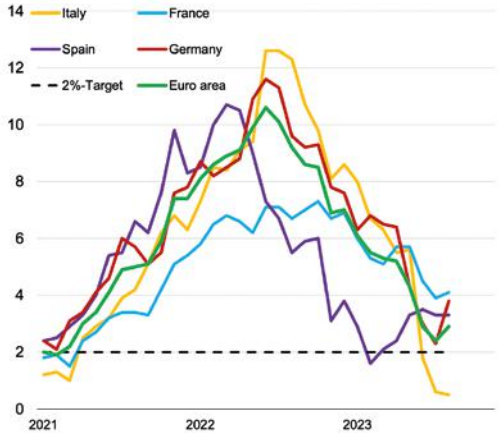
CHART 35.
Headline Inflation across Eurozone Member States as of November 2023 – annual change (%)



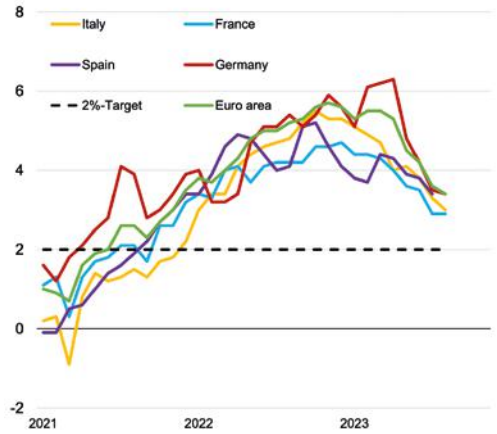
Source: Eurostat

CHART 36.
Headline and Core Inflation, % annual change across key Euro area Member States

36a. Headline Inflation, annual change, %



36b. Core Inflation, annnual change, %



Source: Eurostat
Last data from December 2023, except for Spanish core inflation which dates from November 2023

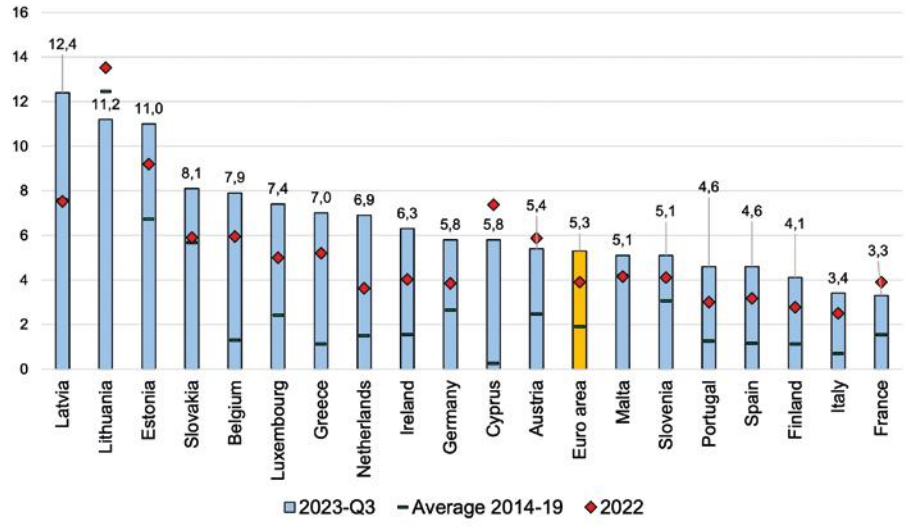
4.3.3 Wage pressures continue to be a strong source of domestic inflation

The latest information available on wage agreements since the start of 2022 points to a further strengthening of wage growth. At the Euro area level, compensation per employee rose by 5.3% in Q3-2023 compared with an average of 3.9% in 2022. The ECB indicator of negotiated wage growth in the Euro area rose to an annual rate of 4.7% as of Q3-2023, the highest since the series began in Q1-2005.

In 2022, wage growth exceeded its 2014-19 average in most Eurozone member states (*see Chart 37*). At the Euro area level, wages grew by 4.1% in 2022, above their 2014-19 average of 2%. They rose by 3.2% in Spain, and 3.9% in France, more than double their pre-crisis pace, at respectively 1.1% and 1.6%.

Nominal wages continued to rise in the second quarter of 2023 in most Member States. In the Eurozone, annual wage growth reached 5.3%, and at least 14 member states experienced an increase of over 5% in the first quarter of 2023. It exceeded 6% in the Netherlands (6.9%) and Belgium (7.9%).

CHART 37.
Nominal wage growth, total economy (year-on-year change, %) across Eurozone Member States



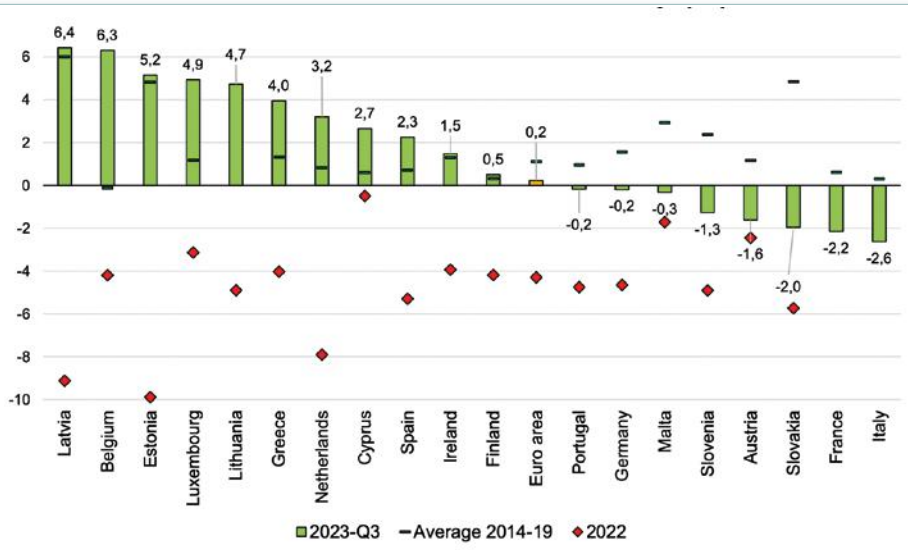
Source : Eurostat
Notes : label data are assigned to 2023-Q3

Yet, wage increases have not kept pace with price inflation in many Member States, weakening real incomes despite the actions taken by governments to cushion the impact of higher food and energy prices on households and businesses.

Real wage growth was negative for all Eurozone Member States on average in 2022 (*see Graph 38*). Germany (-4.7%), Italy (-5.8%), Spain (-5.3%), Latvia (-9.1%), the Netherlands (-7.9%) and Estonia (-9.9%) saw the sharpest decline in real wages in the Eurozone (*see Chart 38*).

Real wages' growth was heterogeneous across Member States in the first half of 2023. In the third quarter of 2023, workers in 11 countries saw their nominal wage rising faster than inflation. These notably included Belgium (+6.3%), Spain (+2.3%) and the Netherlands (+3.2%). By contrast, real wages remained negative in France (-2.2%), Portugal (-3.8%), Germany (-0.2%) and Italy (-2.6%).

CHART 38.
Real wages growth, total economy (%)



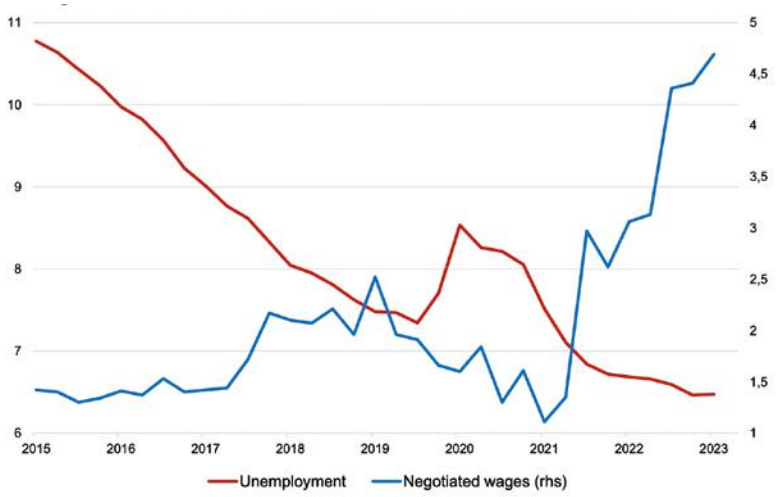
Source : Eurostat
Notes : calculated as annual nominal wage growth minus inflation ; label data are assigned to 2023-Q3

As the BIS Annual Economic Report[51] points out, "negotiated wage growth is now at its highest level since the inception of the common currency... It would be unreasonable to expect that wage earners would not try to catch up, all the more so since labor markets remain very tight". Indeed, in September 2023, the Euro area unemployment rate reached a record low level of 6.4% (*see Chart 39*). From this perspective, labor market has become decisive for the pace of disinflation and the return of inflation to the ECB's target.

For core inflation to evolve in line with ECB staff projections, two key conditions need to be met, according to I Schnabel: "one is that the growth in unit labor costs eventually falls back to levels that are broadly consistent with 2% medium-term inflation. The second is that firms will use their profit margins as a buffer to limit the pass-through of the current strong wage increases to consumer prices."

51. Annual Economic report, June 2023.

CHART 39.
Unemployment rate and negociated wages in the Euro area



Source: ECB, last data from 2023-Q3

4.4 In 2023, the public finances of most EU Member States have improved compared to 2022, although they remain worse than before the pandemic

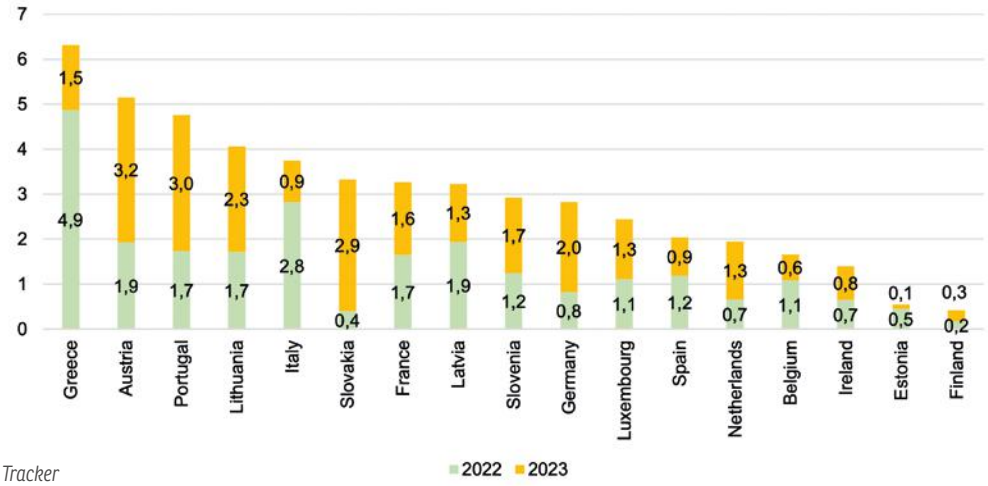
Twelve EU Member States are set to have a fiscal deficit above 3% of GDP in 2023, according to the EU Commission[52]. Among the largest EU economies, fiscal deficit is still expected to exceed 4% of GDP in France (-4.8%), Italy (-5.3%) and Spain (-4.1%), while it should remain below 3% in Germany (-2.2%) and the Netherlands (-0.5%).

Unlike its European peers, the French deficit is expected to remain unchanged at 4.8% of GDP in 2023, while it should decrease by 0.7 percentage points in Spain, 2.7 pp in Italy and 0.3 pp in Germany.

For the EU Commission (2023), the budget deficit reduction expected in many member states in 2023 is the result of the complete phase-out of pandemic-related temporary measures, the reduction in subsidies for private investment and the reduction in the net budgetary impact of energy-related measures. Data from the OECD[53] confirms the decline in energy support-measures across Member States. Nevertheless, it indicates that the amount of energy support measures should still exceed 1% of GDP in 11 Eurozone Member states in 2023, and even increase in 10 of them, compared to 2022.

In France, announced measures should still amount to 1.6% of GDP in 2023, barely unchanged compared to 2022 (1.7% of GDP). To give an order of magnitude, the cost of measures dedicated to energy support in 2023 are almost equivalent to those dedicated to unemployment benefits in 2019 (1.58% of GDP) or family and child allowance (1.89% of GDP). According to the EU Commission (2023), the drop in fiscal deficit expected in many Member States in 2023 should have been driven by some decline in the budgetary cost of measures to mitigate the impact of high energy prices (primary current expenditure net of discretionary revenue measures).

CHART 40.
Estimated budget cost of energy measures in 2022 (% of GDP)



Source: OECD Energy Support Tracker

52. EU Commission Autumn Forecasts (May 2023).

53. OECD Energy Support Measures Tracker - OECD.

In this context, the public debt to GDP ratio is expected to stabilize at elevated levels. In France, the ratio is projected to decrease marginally to 109.6% of GDP in 2023, from 111.8% in 2022, and 97.4% in 2019. It is expected to fall by 4.1 pp in Spain (from 111.6% to 107.5%) and by 1.8 pp in Italy (from 141.7% to 139.8%). Despite this drop, the ratio is expected to remain 9.3 points higher than its pre-pandemic level in Spain and 5.7 points higher in Italy, and close to 50 points higher than in Germany and the Netherlands. In these two countries, public debt is expected to reach 64.8% in Germany and 47.1% in the Netherlands in 2023, down from 66.1% and 50.1% a year earlier.

All in all, public debt ratios are set to remain above their 2019 level in all Member States excluding Ireland, Greece, Croatia, Cyprus, the Netherlands, Portugal, Denmark and Sweden. However, five Member States (Belgium, Greece, Spain, France, Portugal and Italy) are expected to have debt ratios still exceeding 100% of GDP in 2023.

TABLE 2.
Public finances forecast for 2023 across the main EU Member States

	Budget Balance (% of GDP			Primary Budget Balance (% of GDP			Gross Public Debt (% of GDP)			Real GDP Growth (%)		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Germany	-3,7	-2,6	-2,3	-3,2	-1,9	-1,5	69,3	66,3	65,2	2,6	1,8	0,2
France	-6,5	-4,7	-4,7	-5,1	-2,8	-2,7	112,9	111,6	109,6	6,8	2,6	0,7
Italy	-9,0	-8,0	-4,5	-5,5	-3,6	-0,5	149,9	144,4	140,4	7,0	3,7	1,2
Spain	-6,9	-4,8	-4,1	-4,7	-2,4	-1,6	118,3	113,2	110,6	5,5	5,5	1,9
Netherlands	-2,4	0,0	-2,1	-1,8	0,6	-1,4	52,5	51,0	49,3	4,9	4,5	1,8
Portugal	-2,9	-0,4	-0,2	-0,5	1,5	2,0	125,4	113,9	106,2	5,5	6,7	2,4
Austria	-5,8	-3,2	-2,4	-4,7	-2,3	-1,3	82,3	78,4	75,4	4,6	5,0	0,4

Source: EU Commission Autumn Forecast (November 2023)

According to the European Commission's latest report on public debt sustainability[54] published in April 2023, nine European countries – Belgium (rated AA by S&P), Greece (BB+), Spain (A), France (AA), Croatia (BBB+), Italy (BBB), Hungary (BBB+), Portugal (BBB+) and Slovakia (A+) – face a high risk of debt crisis.

Belgium, Greece, Spain, France and Italy and are all likely to have long-term debt ratios in excess of 100% of GDP. In these countries in particular, the budget imbalance has further increased the already high levels of public debt.

4.5 Unlike in the US, the economic environment in the Euro area is stagflationary

Although Europe will narrowly escape recession in 2023, growth is likely to be weak, while inflation will remain high compared to the US. According to IMF forecasts, real GDP growth is unlikely to exceed 0.6% in 2023 in the Euro area, compared with 2.1% in the US. Inflation is expected to remain above 5% in 2023 in the Eurozone (5.6% on average over 12 months), compared with 4.1% in the United States.

This trend of low growth and high inflation is set to continue in 2024 in the Eurozone. Still according to the IMF, growth in the Eurozone will reach 1.2%, versus 1.5% in the US. Inflation, meanwhile, is expected to fall to 3.3% in the Eurozone, still above the ECB's target and that of the US (2.8%).

The economic divergence between the two regions reveals several structural weaknesses in Eurozone countries, which are less saliant in the US.

- **Lower productivity gains in Europe than in the United States:** the stagnation of labor productivity in Europe can be attributed to the decline in the number of hours worked, the high proportion of unskilled workers, a phenomenon which is more pronounced in the Euro area than in the US (*see Part 1.1*) and insufficient level private and public investment in productive capacity (R&D, non-residential capital expenditures, etc.).

  Except for Italy, the level of productivity per capita remains below its pre-pandemic crisis level in the largest Eurozone economies as of the first quarter of 2023 (*see Chart 41*).

Weak productivity growth causes upward pressure on firms' unit labor costs, which deteriorates their competitiveness and growth potential.

On top of that, low productivity growth may be inflationary. "Should weak productivity growth persist, the further increase in unit labor costs raises the probability that firms will pass on parts of the increase in their costs to final consumer prices, setting in motion a perilous wage-price spiral", according to I. Schnabel in June 2023[55].

54. EU Commission, "Debt Sustainability Monitor 2022" (April 2023).

55. 'I. Schnabel, 'The risks of stubborn inflation", Speech at the Euro50 Group conference (June 2023).

CHART 41.
Labour Productivity : United States vs Euro area

Chart 41.a : Per capita productivity (Q1-2010 = 100)

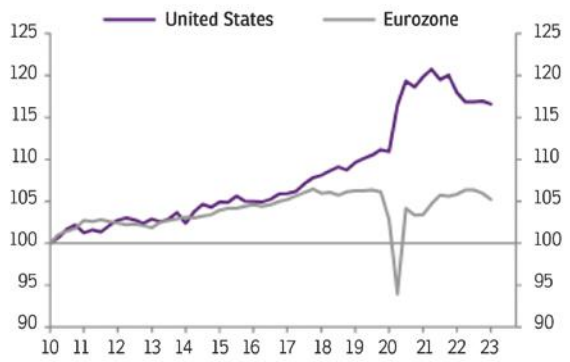
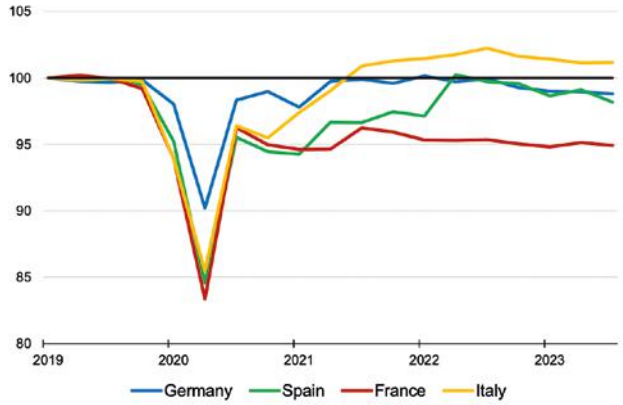


Chart 41.b : Real labour productivity per person, 2019-Q1 = 100

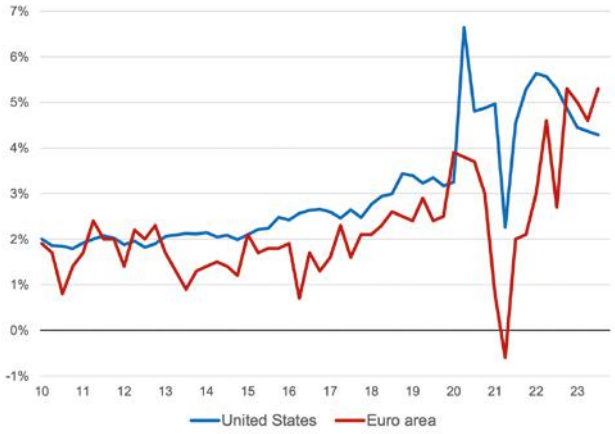


Source 41a: taken from P.Artus "What accounts for the slowdown (stagnation) in productivity in the United States and the Eurozone?". Flash Economics Natixis (May 2023). Source 41b: : Eurostat
Last data from December 2023, except for Spanish core inflation which dates from November 2023

Another reason why low productivity is inflationary is that firms require more workers, which contributes to higher nominal wages and therefore inflation.

According to P. Artus[56], the presence of sizeable productivity gains in the US leads to a reduction in job creation and an easing in the labor market: the proportion of US companies experiencing recruitment difficulties has fallen from 50% at the start of 2022 to 40% today. On the contrary, in the context of falling productivity gains the proportion of companies experiencing recruitment difficulties in the Eurozone has remained at the same high level since the start of 2022. The fact that the labor market is easing in the US and remains very tight in the Eurozone has a clear effect on wage increases: annual wage growth is slowing in the US, from 5.3% at the start of 2022 to 4.3% in Q3-2023; they are accelerating in the Eurozone, from 3% at the start of 2022 to 5.3% in Q3-2023 (*see Chart 42*).

CHART 42.
Average Hourly Earnings of All Employees, year-on-year change (%): US vs Eurozone



Sources : BLS, Eurostat
Last observation from 2023-Q3

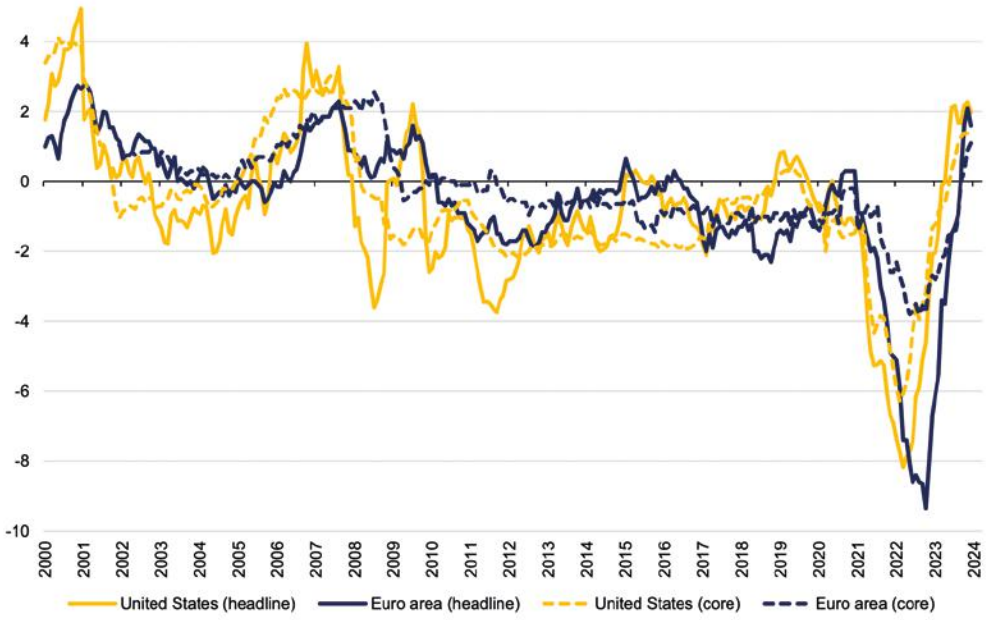
- **As the engine of European growth, the German model is facing structural difficulties that are weighing on its potential.** In 2023, Germany's GDP is set to contract by 0.3% according to the European Commission. And even if it were to rebound at 0.8% in 2024, German growth would remain well below its 2014-19 level of 1.8% per year on average. Because it relied heavily on Russian oil and gas, Germany was one of the most affected by the energy crisis in 2022 and is still suffering the consequences of high energy prices. Coupled with recurring labor shortages, rising and increasingly volatile input costs are weighing on the competitiveness of its industry, particularly the automotive sector. This loss of competitiveness materialized in 2022, when Germany lost its status as the world's leading car exporter to China (2.6 million cars exported by Germany worldwide vs. 3.1 million for China)[57].

56. P. Artus, "La productivité, facteur clé des écarts d'inflation", Les Échos (December 2023).
57. La Chine devient le premier exportateur mondial d'automobiles (rexecode.fr).

- **Even though they have recently turned positive, real interest rates are still too low in the Eurozone.** As the ECB has raised its nominal policy rates by 450 basis points since July 2022, real rates have recently turned positive in August 2023. Nevertheless, they remain weak from a historical standard, when looking at interest rates adjusted for core inflation (*see Chart 43*).

A lower risk remuneration in Europe discourages investors from investing in Europe, which reduces the sources of financing and investment, and ultimately weighs on potential growth.

CHART 43.
Real Interest rates in the United States and the Euro area, percentage points



Sources: Fed, ECB
Real policy rates are calculated as the difference between the nominal interest rates and year-on-year headline/core inflation of the corresponding period ; Last observation from December 2023

•

A decline in labor productivity in the major Euro area countries is a worrying development: it leads to a decline in corporate profits or a decline in real wages. It also implies a decline in production capacity, even when employment is rising. Additionally, it raises core inflation in the Euro area and complexifies the situation for the ECB.

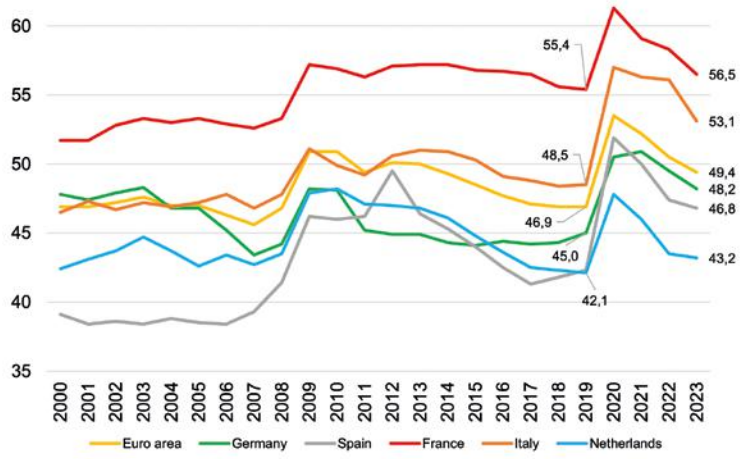
This calls for adapting strategies and, above all, mindsets. Policymakers need to dispel a kind of "growth illusion" – based on a reliance on expansionary monetary and fiscal policies to stimulate growth. The only possible source of robust growth is to reboot the supply side of the economy. This is why the implementation of the NGEU is important as the allocation of European funds to Member States is conditional on the implementation of structural reforms.

5. EU countries with the highest level of government expenditure as percentage of GDP have the least competitive firms

5.1 With 56,5% of GDP in 2023, France holds the record for the highest level of public spending in the EU

France already had the highest level of public spending in the EU before the COVID crisis, with 55.4% of GDP in 2019. Finland (53.3%) and Belgium (51.9%) were the only two other countries in the Union where this ratio exceeded 50% of GDP in 2019. By contrast, the level of public spending in Germany, the Netherlands, Spain and 17 other EU members remained below the EU average of 47% of GDP.

CHART 44.
Total Public Expenditure, as % of GDP



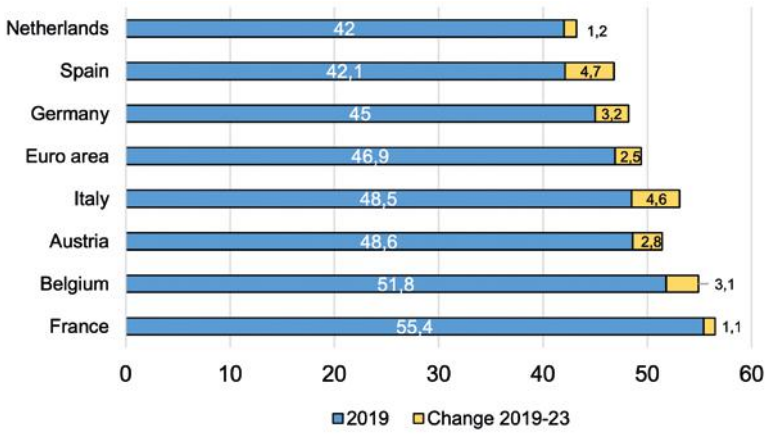
Source: EU Commission Autumn Forecast, November 2023

Following the Covid-19 crisis, government expenditure rose by 1.1 pp in France from 2019 to 2023, compared with 2.5 pp in the Eurozone (*see Chart 45*). France is one of the EU countries with the lowest increase in spending as a percentage of GDP: it was 3.2 percentage points in Germany, 4.7 pp in Italy, 4.1 pp in Austria, 4.7 pp in Spain and 1.2 pp in the Netherlands.

The recent decline in government expenditure between 2020 and 2022 in EU Member States reflects mainly the phasing out of pandemic-related measures. Except for Denmark, Croatia and Ireland, public spending to GDP ratios remained above their pre-pandemic levels in all EU Member States in 2022. The implementation of energy support measures by governments in response to the energy crisis contributed to keep public spending elevated in the EU (*see Parts 3 & 4*).

Starting from a much higher level of spending than the other countries in 2019, France remained at the top of the Eurozone and the European Union, with public spending equal to 56.5% of GDP in 2023. This is more than seven points above the Eurozone average of 49.4% of GDP, 8.3 pp above the German's level of 48.2% of GDP and 13.3 pp above the Dutch's level of 43.2%. In Italy, public expenditures still exceeded 53.1% of GDP in 2023.

CHART 45.
Government expenditure before and after the COVID-19 crisis, as % of GDP



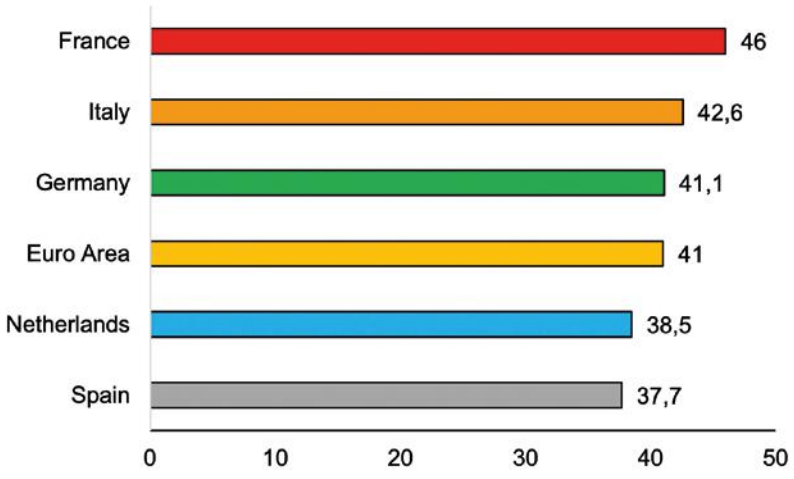
Source : EU Commission Autumn Forecast (November 2023)

5.2 High levels of government expenditure imply a heavy tax burden on firms, increasing their production costs and thus making them less competitive

France, followed by Denmark, displays the taxation rate in the European Union. Its current tax burden – the amount of tax collected on firms and households[58] – accounted for 46.7% of GDP in 2019. That was nearly six percentage points above the Euro area average of 41.2%.

In 2023, the level of current tax burden has declined marginally across Member States, but the ranking remained the same as before the Covid-19 crisis: the level of taxation remained the highest in France, reaching 46% of GDP in 2023, above Belgium (45.1%) and Denmark (43.8%). In 2023, France's level was nearly 5 pp above the Euro area's average of 41% of GDP, Germany (41.1%), the Netherlands (38.5%) and Spain (37.7%), according to the EU Commission.

CHART 46.
Current tax burden in 2023 % of GDP



Source : EU Commission Autumn Forecast (November 2023)

Excessive taxation erodes the competitiveness of domestic firms. With a level of taxes on production and imports exceeding the Euro area average by 3.4 points in 2019 (*see Table 3*), France has been suffering from a permanent deficit of its trade balance and more broadly of its current account balance since 2007 (*see Chart 47*). Within the EU, eight other Member States experienced a negative current account balance on average, between 2014 and 2019. Among them, Cyprus has the highest deficit (-3.9% of GDP), followed by Romania (-2.5%) and Greece (-1.6%).

TABLE 3.
Breakdown of tax revenue by country and by detailed tax categories in 2021, % of GDP

	Taxes on production and imports	Current taxes on income, wealth, etc	Capital taxes	Net social contributions	Total
Germany	10,9	13,5	0,3	17,6	42,3
France	16,6	12,9	0,7	16,8	47
Italy	14,5	15	0,1	13,7	43,3
Spain	12,2	11,9	0,5	14,2	38,8
Netherlands	12,3	13,5	0,3	13,6	39,7
Euro Area (20)	13,2	13,2	0,4	15,2	42

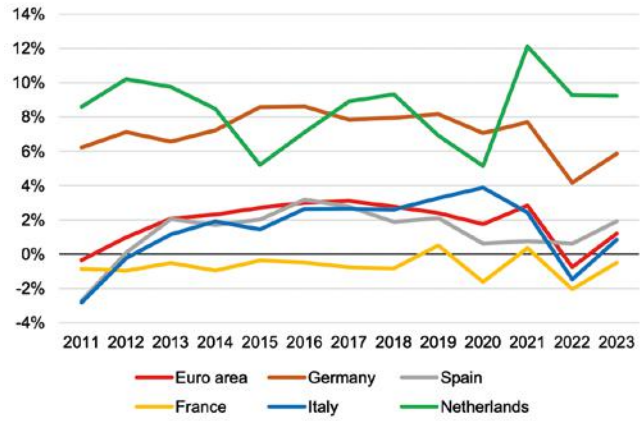
Source: Eurostat

By contrast, countries with a level of taxation below the Euro area average gathered the most competitive firms of the area. With tax revenue on production and imports accounting for 10.9% of GDP in 2021 (*see Table 3*), Germany showed the third highest current account surplus, behind the Netherlands, which is also characterised by a relatively low level of tax burden (12.3% of GDP).

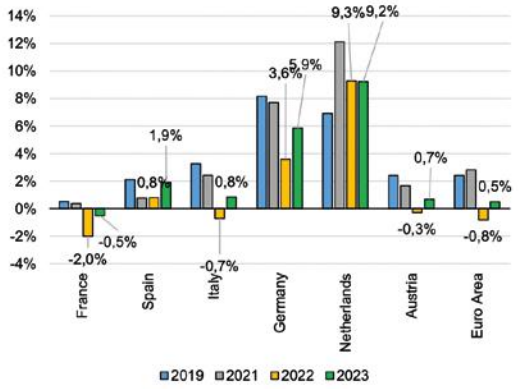
58. The current tax burden of total economy is the sum of Indirect taxes (VAT, imports production), direct taxes (income and wealth, and capital) and social security contributions (actual and imputed), according to the AMECO definition.

CHART 47.
Current Account Balance in the main EU Member States, % of GDP

47a. Over the past decade



47b. Recent trend



Source: Eurostat, AMECO
Data for 2023 are projections taken from the Autumn Forecast of the EU Commission (November 2023) ; projections for the Euro area in 2023 are taken from the IMF World Economic Outlook (October 2023)

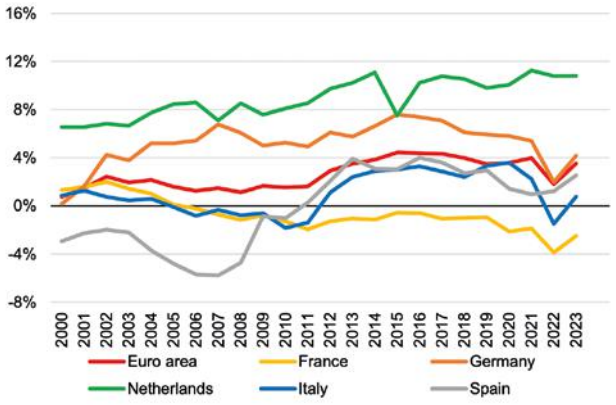
TABLE 4.
Current Account Balance in main EU Member States, % of GDP and EUR bn

	2019		2020		2021		2022		2023	
	EUR bn	% of GDP	EUR bn	% of GDP	EUR bn	% of GDP	EUR bn	% of GDP	EUR bn	% of GDP
France	12,5	0,0	-37,5	-1,6%	9,0	0,4%	-53,8	-2,0%	-14,1	-0,5%
Spain	26,2	2,1%	6,9	0,6%	9,3	0,8%	10,0	0,8%	27,8	1,9%
Italy	58,6	3,3%	64,5	3,9%	44,1	2,4%	-13,8	-0,7%	17,3	0,8%
Germany	283,9	8,2%	240,2	7,1%	278,7	7,7%	140,9	3,6%	240,8	5,9%
Netherlands	56,3	6,9%	41,0	5,1%	105,5	12,1%	88,9	9,3%	95,5	9,2%
Austria	9,5	2,4%	13,1	3,4%	6,7	1,7%	-1,3	-0,3%	3,2	0,7%
Euro Area	289,3	2,4%	201,6	1,8%	353,4	2,8%	-101,1	-0,7%	173,1	0,5%

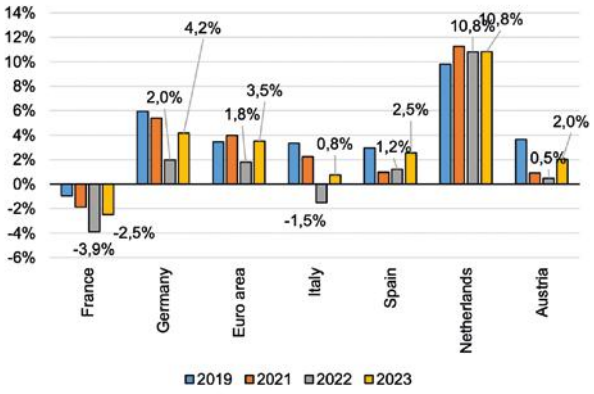
Source: Eurostat, AMECO
Data for 2023 are projections taken from the Autumn Forecast of the EU Commission (November 2023) ; projections for the Euro area in 2023 are taken from the IMF World Economic Outlook (October 2023)

CHART 48.
Net Exports of Goods and Services, % of GDP

48a. Over the past decade



48b. Recent trend



Source : AMECO Autumn Forecast (November 2023)

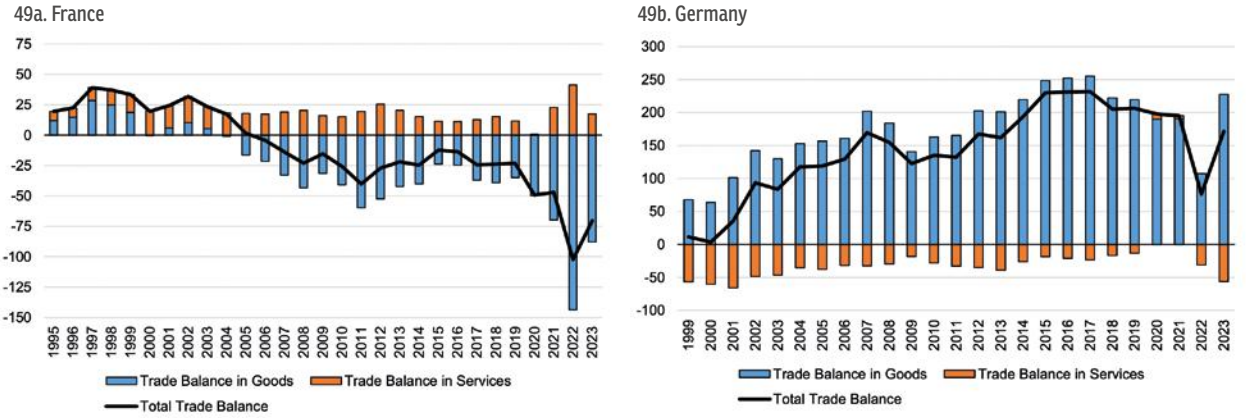
The French trade balance deficit of €47.1 bn in 2021 was mainly due to the negative trade balance of goods, which amounted to €69.8 bn, following a steady decline since 2014. This deficit was partly offset by the surplus in the balance of services (+ €22.7 bn in 2021), rising thanks to the recovery of global tourism after the pandemic.

In the same year, Germany recorded a trade surplus of €190.3 bn, resulting entirely from trade in goods (*see Chart 49*). The German trade balance in goods has always been in surplus over the past two decades, while it has gradually fallen to negative territory in France since 2004. Such a poor performance is the result of deindustrialization and the expansion of the less export-oriented service sector that began in the late 1980s (*see Part 6*).

As described in Part 3, the energy crisis has strongly deteriorated the external balance of EU Member States in 2022. Higher energy imports coupled with lower exports to China pushed the German's trade balance to €76.3 bn, a drop of 40% from 2021. In France, the trade deficit doubled compared to 2021, to € -102.4 bn in 2022.

Table 4 also illustrates the divergent current account positions of France and Germany. While Germany still had a current account surplus of 3.6% of GDP in 2022 (compared to 7.7% in 2021), France had a deficit of 2% in 2022 (compared to a surplus of 0.4% in 2021). With the fall in energy prices since late 2022, current account balance has improved in the two countries, although France is still expected to register a current acccount deficit of 0.5% of GDP in 2023, according to the EU Commission while Germany should experience a surplus of 5.9% of GDP in 2023.

CHART 49.
Trade Balance in France and Germany, € bn



Source : AMECO Autumn Forecast (November 2023)

5.3 Most government expenditures are allocated to social protection, health and public services

On average, Euro area countries allocated 40.5% of their public expenditures to social protection, corresponding to 21.2% of GDP in 2021 (*see Table 5*). As percent of GDP, France presents the second highest share, with 24.8%, behind Finland (24.6%). Health is another most prominent function of public spending in the Euro area (15.8% of total expenditure in 2021), then followed by general public services[59] (11.7%).

TABLE 5.
Major Functions of Public Expenditures of Selected EU Member States, % of GDP (2021)

	General public services	Health	Education	Social protection	Other	Total
Euro Area	6,1	8,3	4,7	21,2	12,0	52,3
Italy	8,1	7,6	4,1	23,4	12,1	55,3
France	5,8	9,2	5,2	24,8	14,0	59,0
Germany	6,2	8,6	4,5	20,9	11,0	51,3
Spain	5,9	7,3	4,6	20,6	12,2	50,6
Netherlands	3,9	8,7	5,1	16,6	12,2	46,6
Austria	5,8	10,1	4,9	21,9	13,2	56,0

Source: Eurostat
Notes: 'Other' includes Defence, Public Order and Safety, Economic Affairs, Environmental protection, Housing and community amenities; Recreation, culture and religion

Considering the components of social protection, public pensions account for the highest proportion. Representing 11.6% of GDP in the EU in 2019, its level is mainly linked to the average effective labour market exit age (*see Chart 50*). In most EU countries, the earlier working-age people retire, the higher the total cost of pensions. Having one of the lowest average labour market exit age in the EU (62.3), France is the country that spends the most on pensions schemes: 14.8% of its GDP in 2019, compared with 11.6% for the EU average. The issue is even more worrying in the context of population ageing, characterized by a growing number of elderly people that will face

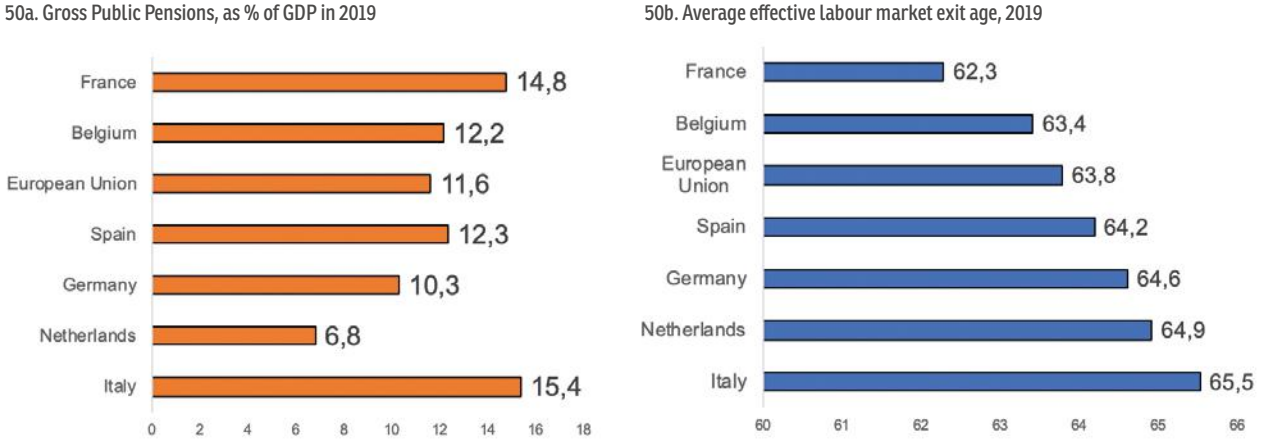
59. According to Eurostat, "general public services" cover the financing of administration, operation or support of executive and legislative organs, foreign economic aid, general services provided by the public sector, as well R&D spending made by public administrations – see Manual on sources and methods for the compilation of COFOG statistics – Eurostat (2019), for further details.

a declining working-age population. By 2025, the share of 65+ in total population is projected to increase by 2 points to 22.3% in France, while the prime-age population ratio (aged 25-64) will fall to 36%, from 37.5% in 2019.

In Italy, the pension system remains one the most onerous for the government in terms of GDP, despite the relatively high average effective retirement age in the EU. There are three key reasons for this situation:

- **The generosity of the system.** The replacement rate – which is the percentage of an individual's annual employment income that is replaced by retirement income – was 20 pp higher than the EU average in 2019 (66.9% in Italy against 46.2% in the EU).
- **The persistent low level of employment rate.** In 2019, 59.1% of people aged 15-64 were employed. This is the second lowest employment rate in the EU, just 2.8 pp above Greece (56.3%), and 9.3 pp below the EU average (68.4%).
- **The ageing population.** The Italian downward demographic trend is one the most salient in the EU. In 2019, 23% of the Italian population was aged 65 or over. This is the highest level in the EU (whose average is 20.4%). This figure contributes to further deteriorating the old-age dependency ratio, which is the number of dependents aged over 65, compared with the total population. The ratio stood 58.5% in 2019 and is projected to reach 70% by 2030.

CHART 50.
Public Pensions Spending and Labour Market exit age in selected EU Member States

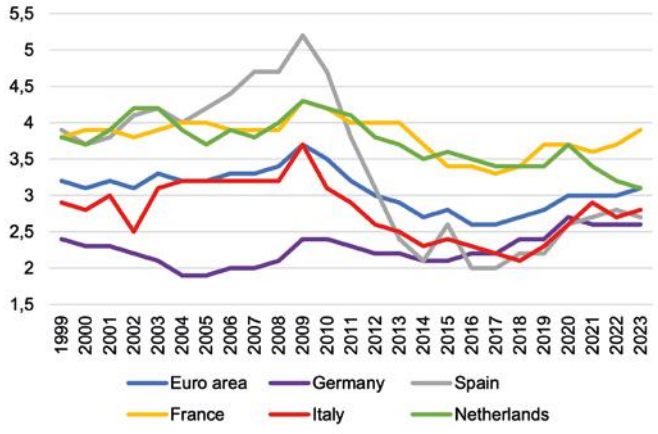


Source: Eurostat

5.4 Such levels of government expenditure have been reached at the expense of productive investment, hence its limited contribution to gross capital formation[60]

The share of public investment has never exceeded 3.5% of GDP in the Euro area since 1996[61]. Moreover, against the backdrop of rising public expenditures, the share of public investment in total public spending fell between 2007 and 2019 (*see Chart 51*).

CHART 51.
Gross Fixed Capital Formation of Public Sector, % of GDP



Source: AMECO Autumn Forecast, November 2023

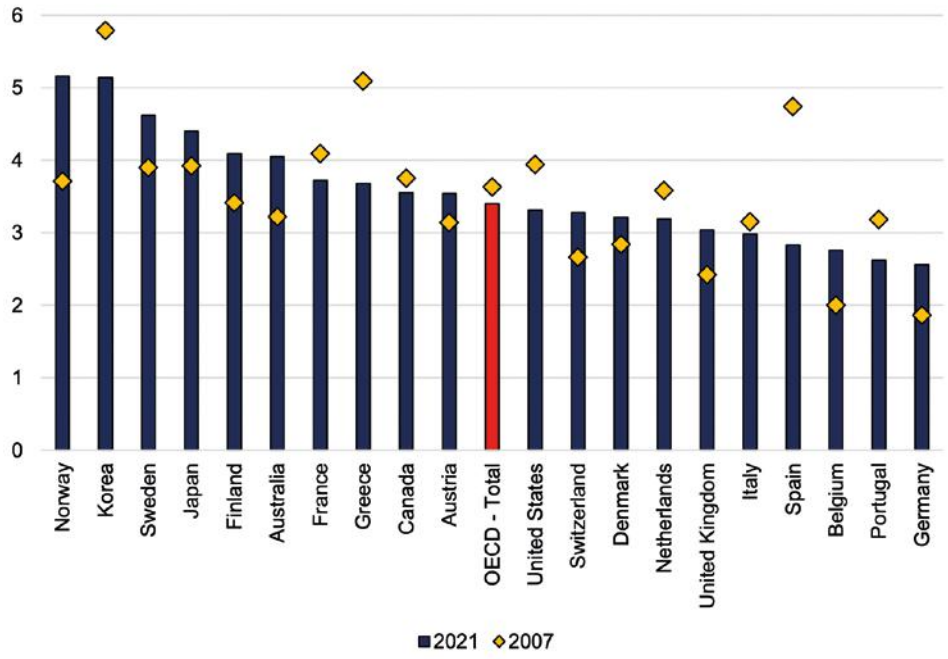
60. For government, gross fixed capital formation includes transport, office buildings, housing, school and hospital infrastructures.

61. 1996 is the first available year recorded by Eurostat.

After reaching 3.3% of GDP in 2007 – its highest level outside the crisis period – the ratio of public investment to GDP in the Euro area gradually declined to 2.6% in 2017 (*see Chart 50*) before slightly increasing to 2.8% in 2019. With an average of 2.7% of GDP between 2014 and 2019, public investment in the Euro area remained below the level of most non-European economies, including the United States (3.2%), Canada (3.7%), Australia (3.6%) and South Korea (4.4%) according to the OECD data.

Such a period of under-investment at the EU level was notably attributable to Germany, where public sector investment never exceeded 2.6% of GDP between 1995 and 2019 (*see Chart 49*). Spanish and Italian governments also contributed to this decline, both investing less than 2.5% of GDP between 2012 and 2018. In the two countries, public investment was still below its pre-2008 level in 2023.

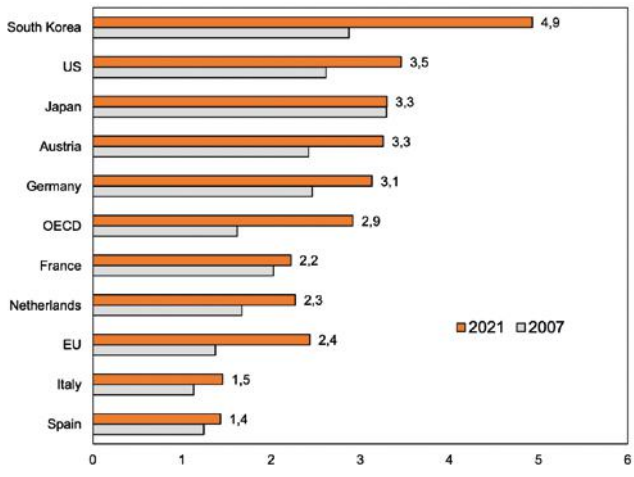
CHART 52.
Government Investment across OECD economies, as % of GDP



Source: OECD

Limited spending on R&D – a measure of immaterial investment – is also a concern. Most of EU Member States allocate less of their spending to this matter than the OECD average (of 2.9% of GDP in 2021). Among the larger EU Member States, only Germany and Austria stand out, with levels close to the US and Japan (*see Chart 53*).

CHART 53.
Gross domestic spending on R&D, % of GDP



Source: OECD
Notes: Gross domestic spending on R&D is defined as the total expenditure (current and capital) on R&D carried out by all resident companies, research institutes, university and government laboratories

Although public expenditures rose in some key EU Member States, the share of public investments in total public expenditures globally shrank between 2007 and 2021 by approximately 1 pp at the EU level, from 7.3% in 2007 to 6.1% in 2021. With an average of 6.1% between 2014 and 2019, the share of public investment in the Euro area is

one of the lowest among other advanced economies, such as the UK (6.5%), the US (8.5%) and Canada (9%) (*see Chart 54*).

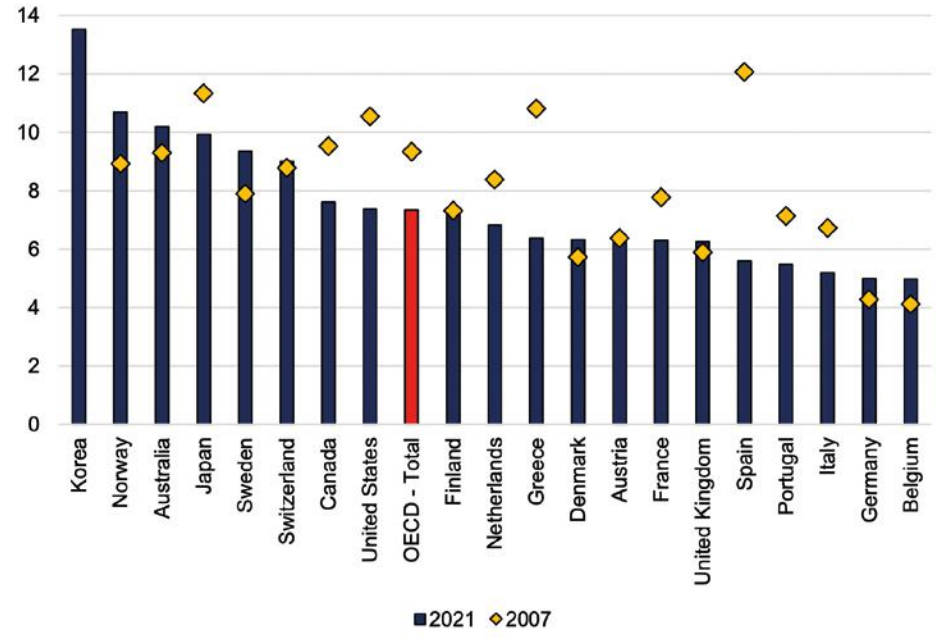
Among the largest EU Member States, only Germany and Belgium have seen an increase in the share of public investment in total government expenditure, although their level of gross fixed capital formation remains among the lowest in Europe (*see Chart 52*).

The most indebted Member States have experienced the largest decline in the share of expenditure earmarked to public investment over the last two decades. While France spent an average of 7.4% of its public expenditure on investment between 2000 and 2007, it fell to an average of 6.1% between 2014 and 2019, a drop by 1.3 pp. It fell by 1.8 pp in Italy, 4.3 pp in Greece and 5.6 pp in Spain.

In other words, these data show that the countries with the highest public debts are those that invest the least to increase their potential growth and thus prepare for the future. As stated by the EU Commission, such decline among high-debt countries suggests that "the accumulation of public debt has not been reflected in a higher capital stock, indicating that deficit spending has not been channeled towards capital expenditure but financed consumption"[62].

In 2021, the share of public investment in total government expenditure has exceeded its pre-pandemic level in most European economies, although it remains lower than in most non-European economies.

CHART 54.
Share of Public Investment in Total Government Expenditure, %



Source: OECD

According to the EU Commission, the EU aggregated public investment-to-GDP ratio is projected to increase from 3% of GDP in 2019 to 3.5% in 2025, as almost all Member States are expected to spend more on public investment than they did before the pandemic. Around half of the increase in public investment between 2019 and 2025 is linked to investments financed by the EU budget, in particular by the Recovery and Resilience Facility (RRF).

Introduced in February 2021, the RRF aims at repairing the immediate economic and social damage of the coronavirus pandemic, by disbursing up to €723.8 bn (in current prices), of which €338 billion will be paid in the form of grants and the rest in the form of loans over the period 2021–2026[63]. A quarter of the fund (26%) is currently estimated to be absorbed by Italy, amounting to €191.5 bn in grants and loans, or 10.8% of Italy's 2021 GDP (*see Chart 54*). Spain is expected to absorb 25% of the requested RRF funding, which represents €163.5 bn in grants and loans, or 13.5% of its GDP. France will receive 6.1% of the RRF funding, corresponding to €40.2 bn or 1.6% of its GDP (*see Part 8 for a detailed analysis of the NGEU plan*).

62. S. Langedijk *et al* "The role of the fiscal framework to foster public investment, including in light of the green and digital transitions" Quaterly report on the Euro area, vol 21 n°4 (2022), February 2023.

63. See "Recovery and Resilience Scoreboard (europa.eu)".

6. Excessive level of government debt does not fuel productivity growth and employment

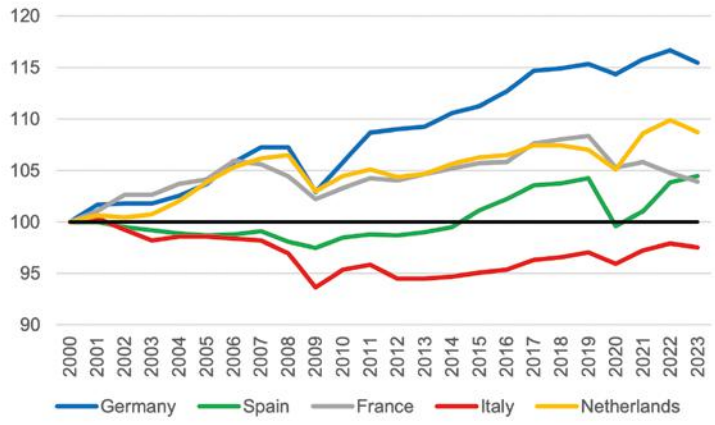
6.1 The Eurozone's most indebted countries have recorded the lowest productivity growth performance over the last two decades

Since 1999, the five EU Member States whose public debt to GDP have risen steadily to reach the highest levels among the Eurozone Member States have recorded the weakest performances in terms of total factor productivity growth[64]. Indeed, productivity growth in France, Spain, Belgium, Portugal and Italy, has been declining or stagnating at low levels. Moreover, these economies have been diverging from the dynamic trend of the Netherlands, Germany and Austria, characterized by relatively lower levels of public debt to GDP ratio and consistently higher productivity growth trends.

As Chart 55 shows, total factor productivity growth in the Euro area has diverged across EU Member States since the start of the EMU. That has resultetd into diverging growth paths. The Covid-19 crisis has worsened this problem, as some of the slowest-growing economies over the last ten years are also those hardest hit by the pandemic crisis.

K. Knot, Governor of the De Nederlandsche Bank (DNB) stated that this issue is concerning[65], "because it threatens the coherence of the Economic and Monetary Union [...]. Resilience is about balance [...]. If you put more pressure on one leg than the other, you are bound to get some serious health problems at some point. That is not what the patient needs [...]. What the patient needs is some care to wean it from its dependence on debt and to bring back balance in economic growth".

CHART 55.
Total Productivity Growth, 2000=100



Source : EU Commission

6.2 The highest unemployment rates in the EU since 2007 were reached in the most indebted EU countries (Spain (12% in October 2023), Italy (7.8%) and France (7.3%))

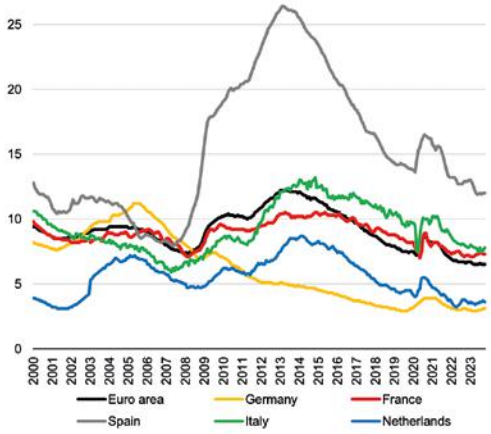
Although French unemployment rate has slowly fallen below its level of 2007 in 2023, massive unemployment reveals a major structural weakness in the labour market.

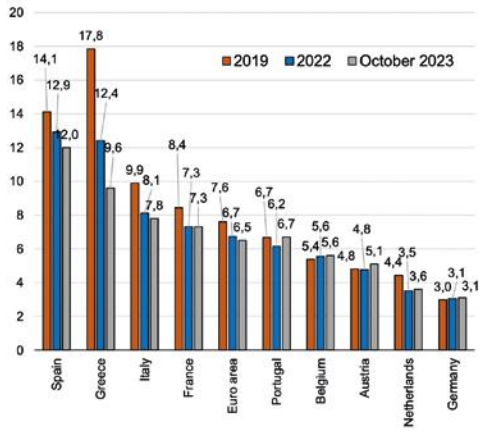
More generally, Spain, Italy and France are among the countries with the highest long-term and youth unemployment rates (*see Chart 57*). In the second quarter of 2023, Spain and Greece people aged 15-29 had the highest rate of unemployment in Europe (20.4% and 22.2% respectively), followed by Italy (17.1%). Despite the record share of spending allocated to education and job training (5.2% of GDP in 2021, compared to 4.7% in the Euro area), France is also the most affected (13.4% for the youth unemployment rate, compared to 11.4% for the Euro area). By contrast, youth unemployment does not exceed 10% in Austria (7.9%), the Netherlands (6.7%) and Germany (4.7%) in the second quarter of 2023.

64. According to the OECD, the indicator reflects the "overall efficiency with which labour and capital inputs are used together in the production process. Changes in Multifactor Productivity Growth reflect the effects of changes in management practices, brand names, organisational change, general knowledge, network effects, spillovers from production factors, adjustment costs, economies of scale, the effects of imperfect competition and measurement errors."

65. K. Knot, "Rebuilding resilience: meeting the challenges beyond Covid-19", Eurofi Forum, 11 September 2021.

CHART 56.
Unemployment rate, as % of labour force





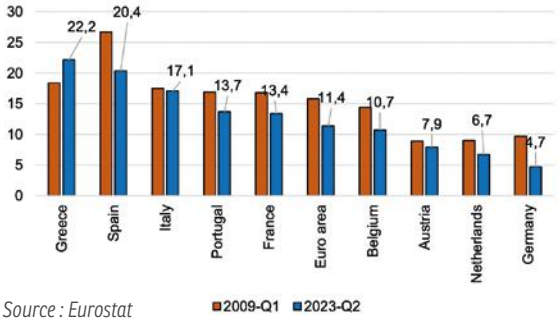
Source: Eurostat
Notes: data on left-chart are taken on a monthly-frequency – last observation from October 2023

Such high levels of public expenditure highlight the ineffectiveness of education and professional training policies, as well as the lack of domestic structural reforms.

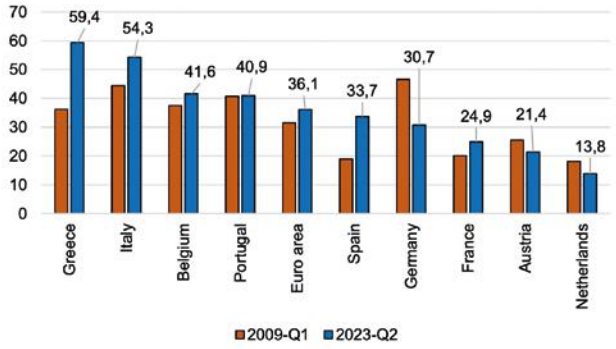
As of Q2-2023, long term unemployment accounted for 54.3% in Italy[66]. France and Spain followed, with respectively 24.9% and 33.7%, although these levels have recently declined below the Euro area level of 36.1% (*see Chart 57.b*).

CHART 57.
Youth and long-term umployment rates across main EU Member States before and after the Covid-19 crisis

57a. Youth Unemployment rate* (as % of total population in the labour force)



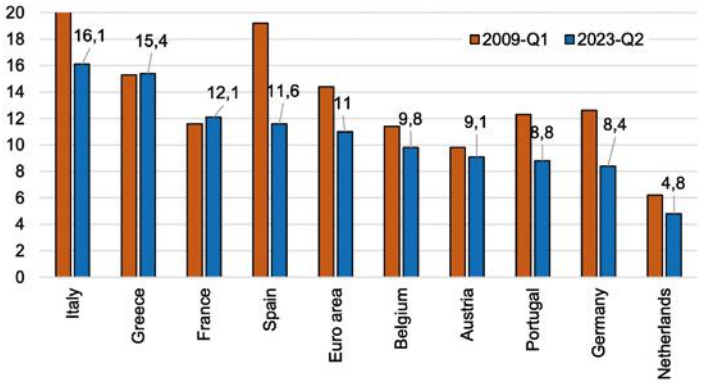
57b. Long-term unemployment**, as %, of total unemployed



Source : Eurostat
**15-29 years-old*
*** People staying unemployed for at least twelve consecutive months (OECD definition)*

The significant share of the youth unemployment rate in some EU countries reveals the existing difficulties in joining the labor market. Such failures favor the proliferation of Youth 'NEET' (youth that are Neither in Employment, Education or Training). In Italy, 16.1% of young people aged between 15 and 29 were in this situation as of Q2-2023, the highest share among European Union countries (*see Chart 58*).

CHART 58.
Young People Neither Employed, in education or Training, as % of 15-29 population



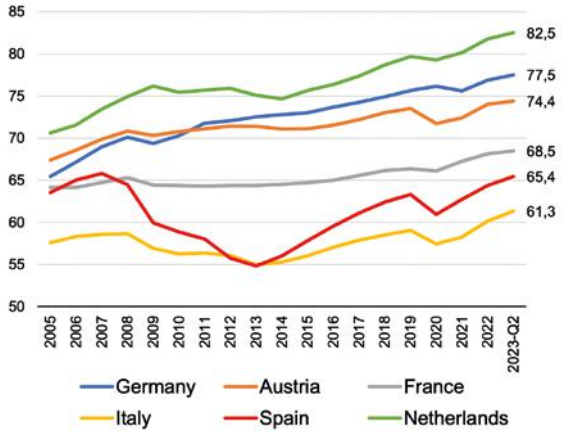
Source: Eurostat

66. People staying unemployed for at least twelve consecutive months (OECD definition).

6.3 The employment rate in France, Spain and Italy is close to 10 percentage points lower than in Germany and the Netherlands

Two groups can be distinguished in the Euro area: countries with a share of people employed exceeding 70% of the working age population, as the Netherlands, Germany and Austria notably, and countries with an employment rate below 65%, such as Italy and Spain (*see Chart 59*).

CHART 59.
Employment rate of the 15-64, as share of total active population



Source: OECD

As of 2023-Q2, 68.5% of the people aged 15-64 were employed in France, compared to 77.5% in Germany.

The employment gap between France and Germany is first due to the fact that the employment rate of the 60–64 is 35% in France, compared with 62% in Germany in 2021. As the effective retirement age is lower in France (*see section 5.3*), workers leave the labor market earlier than in Germany.

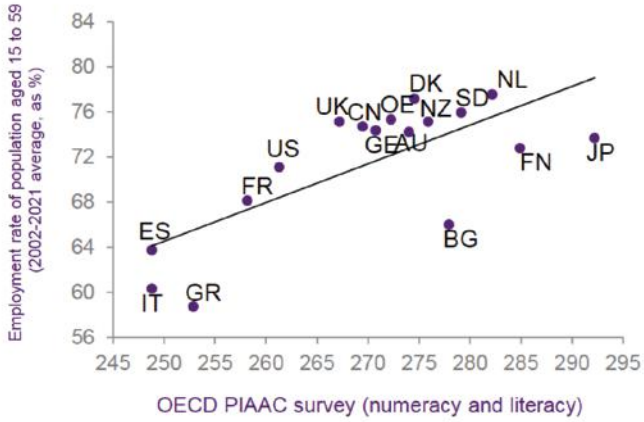
In addition to the nature of the pension system, the reasons behind the remaining gap between France and Germany's employment rates stem from (i) the lack of appropriate skills in the workforce, and (ii) the burden of taxes on companies, which force them to make trade-offs as offshoring their activities at the expense of domestic employment and investment.

According to P. Artus, the skills of the labor force explain 53% of the gap between the employment rate of OECD countries, while the weight of corporate contributions and production taxes explains 35%.

As highlighted by P. Artus[67], the employment rate is the weakest in countries where labor skills are low (*see Chart 60*).

Yet France stands in the bottom quarter of the OECD countries in terms of adult skills and ranks last when it comes to young people's skills in science. France also has, after Sweden, the highest production tax burden in Europe (16.6% of GDP versus 13.2% in the Euro area in 2021, *see Part 5*). This overall weakness in skills and this heavy tax burden largely explain the low employment rate in France.

CHART 60.
Employment rate and OECD PIAAC survey



Source: P. Artus, "The effects of skills, corporate taxes and the employment rate of those aged 60 to 64 on the employment rate of people aged 15 to 59", Natixis Economic Research, February 2023

67. P. Artus, "France: is public spending the answer?", Flash Economics, Natixis (09 May 2022).

The persistence of low employment rate is closely linked to public finances and inequalities. As fewer people are employed and therefore paid and fewer firms produce on the domestic market, public revenues – a source on which the government can rely to finance long-term public investments – are reduced. As tax revenues depend on domestic output, which in turn is linked to the employment rate, increasing the employment rate would therefore increase tax revenues and thus create fiscal leeway.

There is a negative correlation between income inequalities (before redistribution) and the employment rate. The relation is even more pronounced for countries undergoing deindustrialization, where job quality and remuneration have deteriorated. This is because workers' living standards have fallen since productivity per capita, and wages are relatively higher in the manufacturing sector than in the rest of the economy (*see Part 7.1 next section*).

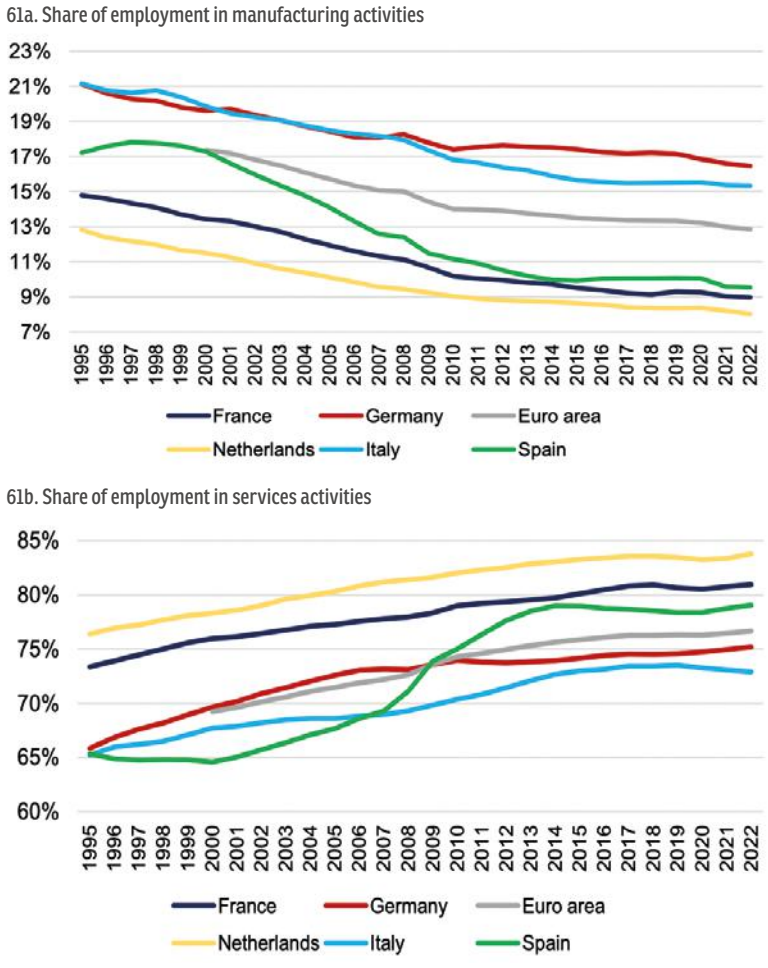
6.4 "Bad jobs" are more prevalent in deindustrializing economies and are concentrated in low-skilled and precarious activities

Although employment rates have increased over the past decade, the quality of employment has deteriorated over the same period in some EU Member States. This deterioration is due in particular to the sectoral shift of these economies in favor of services and at the expense of manufacturing activities.

Since the 1980s, manufacturing employment in France, for example, has declined by more than 35%, while jobs in services increased by more than 60%. This pushed employment in the service sector as high as 81% of total employment in 2022, far above the Euro area level of 76.7% (*see Chart 61*). As a result, the share of manufacturing employment has fallen significantly in France, from 18.5% in 1985 to 9% in 2022, below the Euro area's level of 12.9%.

Among other major EU Member States, a shift towards a service-oriented economy has been particularly pronounced in Spain and the Netherlands, where respectively 79% and 83.8% of the workforce was employed in the service sector in 2022, from 65.4% and 76.4% in 1995.

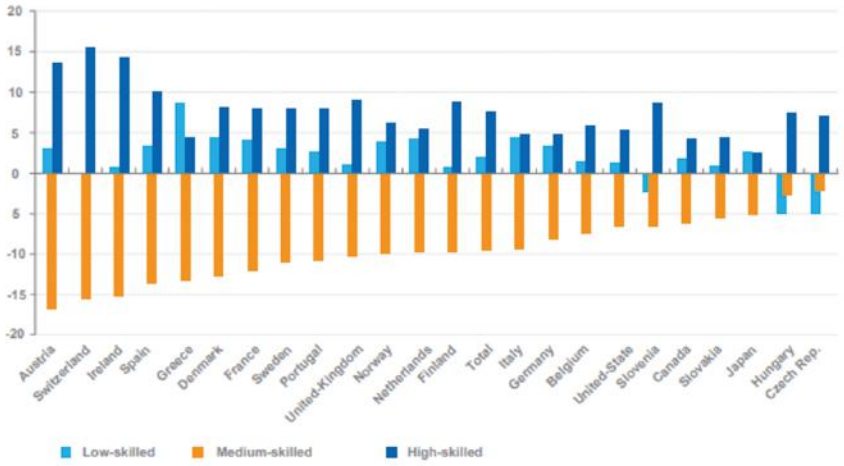
CHART 61.
Employment in manufacturing and services activities, as % of total employment



Source: Eurostat

The bulk of job creation in the service sector is concentrated at the extremes of the skill ladder: high skilled jobs (finance, information and technology, complex business services, etc) and low-skilled or unskilled jobs (hospitality, catering, distribution, transport, leisure, personal services). This labor market polarization has led the share of medium-skilled workers to drop (*see Chart 62*) – formerly prominent in manufacturing sectors. One can also note an increase in the number of low-skilled or "bad jobs" that are poorly remunerated and characterized by a high degree of precariousness and hardship.

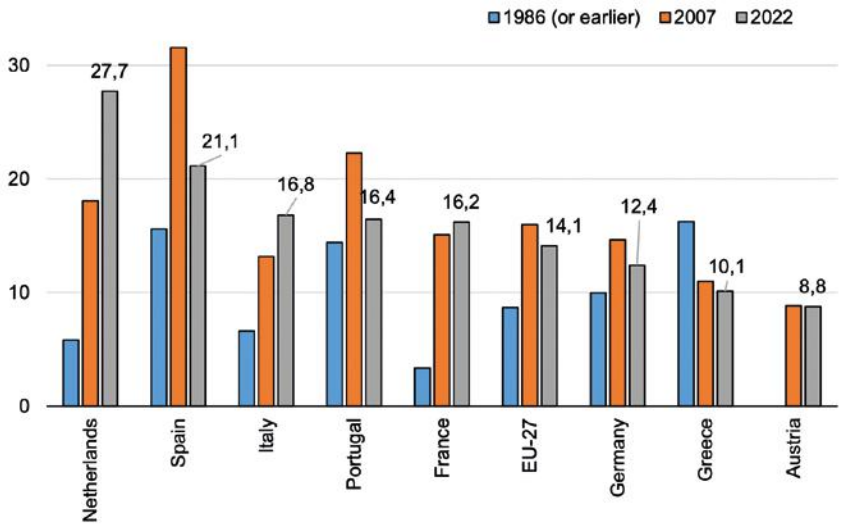
CHART 62.
Change in the share of qualifications in total employment, in percentage points, 1995-2015



Source: OECD (2017), OECD Employment Outlook 2017, based on European, U.S., Canadian, Japanese, and Swiss Employment Surveys
Note: High-skill occupations include jobs classified under the ISCO major groups 1, 2, and 3. That is, legislators, senior officials, and managers (Group 1), professionals (Group 2), and technicians and associate professionals ((Group 3). Medium-skilled occupations include jobs classified under the ISCO major groups 4, 7 and 8. That is, clerks (Group 4), craft and related trades workers (Group 7), plant and machine operators and assemblers (Group 8). The low-skilled occupations include jobs classified under the ISCO major group 5 and 9. That is, service workers and shop and market sales workers (Group 5), elementary occupations (Group 9)

The proportion of temporary employment is highest in countries where employment is mainly concentrated in the service sector, such as Spain or the Netherlands. France, which gradually became a service-based economy over the past three decades, saw the share of temporary employment rising fivefold, from 3.3% of dependent employment in 1983 to 16.2% in 2021 (*see Chart 63*). Although this phenomenon has been widespread across advanced economies through the development of automation notably, it has been even more pronounced in countries experiencing the process of deindustrialization, according to the OECD[68].

CHART 63.
Temporary employment, as % of total dependent employment



Source: OECD
Notes: Temporary employment includes wage and salary workers whose job has a pre-determined termination date, according to the OECD. This indicator is broken down by age group and it is measured as percentage of dependent employees (i.e., wage and salary workers); data labelled "1986 or earlier" date from 1983 for France, Italy, the Netherlands, Greece, the EU-27; It dates from 1984 for Germany, and from 1986 for Spain and Portugal; The first available data for Austria dates from 1995

Accordingly, the combination of low employment rate and low productivity growth leads to a weak output potential for indebted Member States.

68. "Perspectives de l'emploi : l'avenir du travail", OECD (2019) https://www.oecd-ilibrary.org/sites/b7e9e205-fr/1/2/2/index.html?itemId=/content/publication/b7e9e205-fr&_csp_=2a079d50bcd66cec314da33d3c16ff87&itemIGO=oecd&itemContentType=book#figure-d1e4389

7. The European economy suffers from several structural imbalances

In addition to increasing fiscal, productivity and labor market heterogeneities, the Monetary Union has also led to the growing heterogeneity of productive specialization and current account imbalances, which in the absence of fiscal federalism, is a source of vulnerability.

The euro currency has helped strengthen the economies of some EU countries, while weakening others. Indeed, the elimination of currency risks enables these export-oriented economies to exploit their comparative advantages to the full. This translates into divergent sectorial specializations and living standards between Euro area countries.

Since 2015, Target 2 balances have been on the rise. Today, these balances are more a reflection of the differences between Europe's financial markets than the result of market tensions, interbank market fragmentation or capital flight.

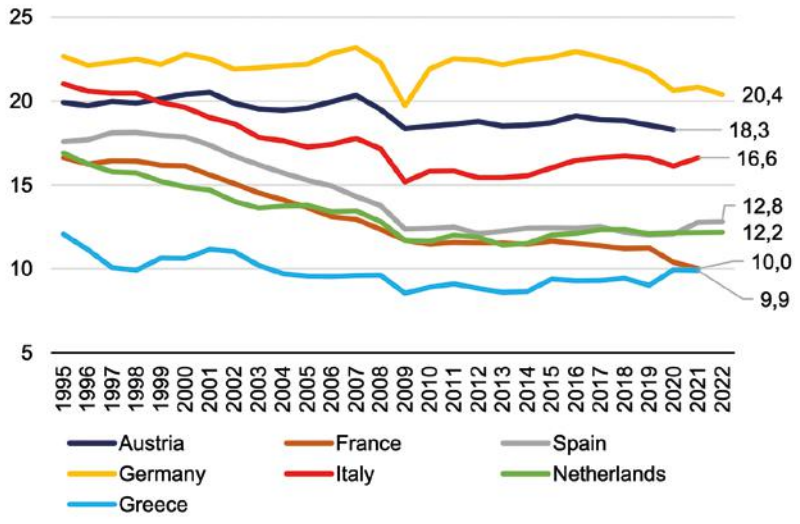
7.1 Growing heterogeneity in productive specialization

As is often the case in a currency area, Eurozone member states have divergent productive specializations, with consequences for relative productivity and potential growth rates. The elimination of exchange rate risks normally encourages productive specialization within the monetary union; it mainly benefits net exporting countries, *i.e.* those that have specialized in tradable products for which they are highly competitive.

Moreover, countries that were already productive before the introduction of the single currency have benefited even more from monetary union. Indeed, the economies of the best-performing countries benefit from the fact that the external value of the euro represents an average for the economic zone as a whole, and appears undervalued in relation to their economic performance, giving them an additional competitive advantage. For example, Germany's exchange rate is estimated to be undervalued by 20%, in terms of its real effective exchange rate against the Eurozone. Its correction would imply, arithmetically, an annual inflation rate of 2% in Germany and 0% in the other countries for a decade – which would be unrealistic and probably misconceived.

In such a context, since the creation of the euro, the northern countries of the Monetary Union (Germany and the Netherlands in particular) have been able to maintain a competitive industrial base, while the southern countries (Greece, France and Spain in particular) undergone progressive deindustrialization. Northern EU countries have gained market share in world trade, while southern countries have lost market share. Charts 63 and 64 highlight the divergence between industry and tourism across EU Member States.

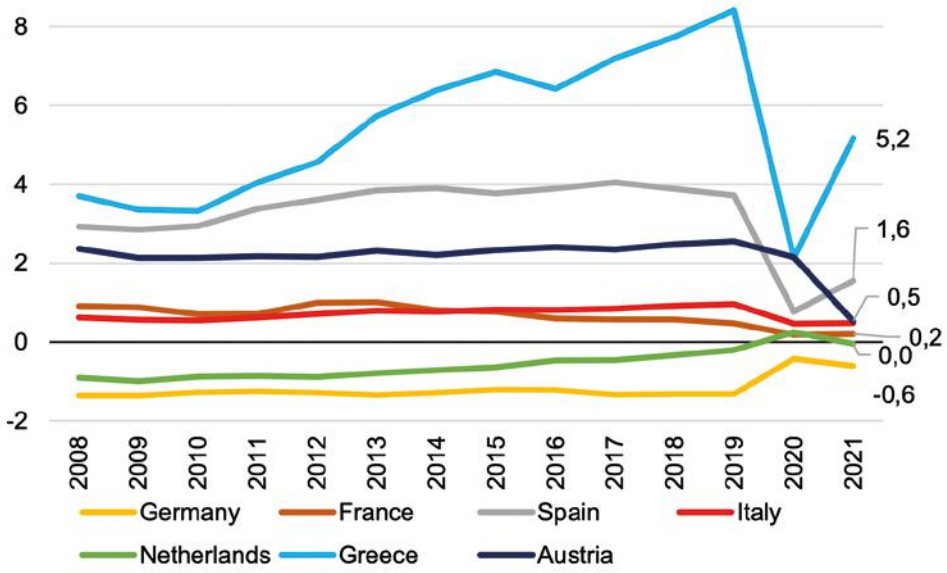
CHART 64.
Share of manufacturing in total value added



Source: OECD
Last observation is from 2021, except for Spain, Germany and the Netherlands which dates from 2022

Chart 64 illustrates in particular the de-industrialization of France over the last two decades, in contrast to Germany, Austria and Italy, for all the reasons mentioned above: the level of tax pressures and the cost of labor are too high due to the excessive weight of public expenditure as a proportion of GDP and the insufficient level of productive investment.

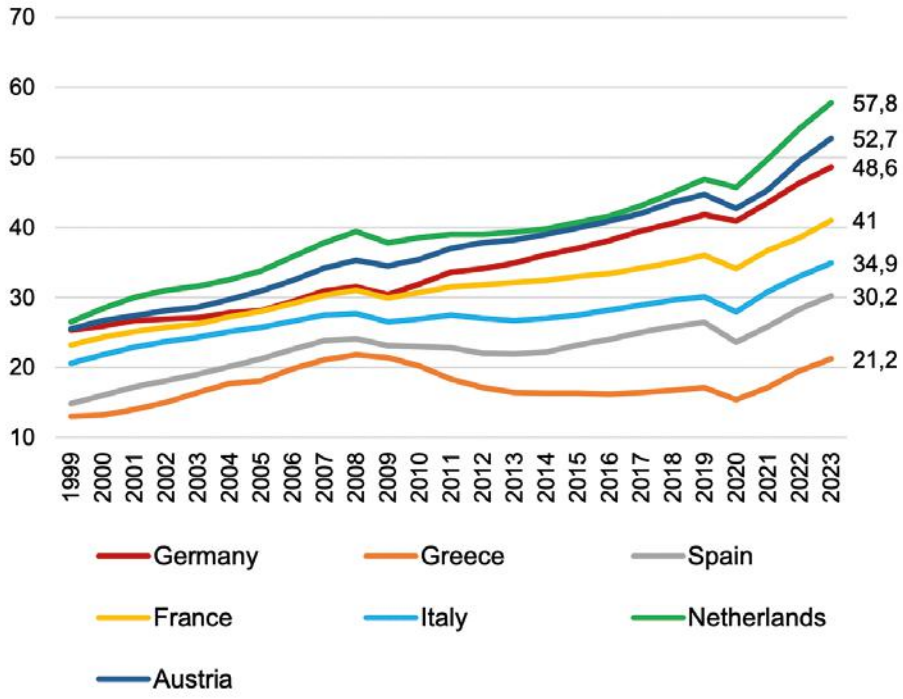
CHART 65.
Balance of payments in travel, % of GDP



Source: Eurostat

This process also leads to a divergence in GDP per capita levels between Eurozone countries. Thus, in 2023, per capita GDP in the Netherlands was almost three times higher in Greece, with €57,800 per capita versus €21,200 for the latter (*see Chart 66*). In 2000 it was only twice as high (€28,380 for the Netherlands and €13,230 for Greece).

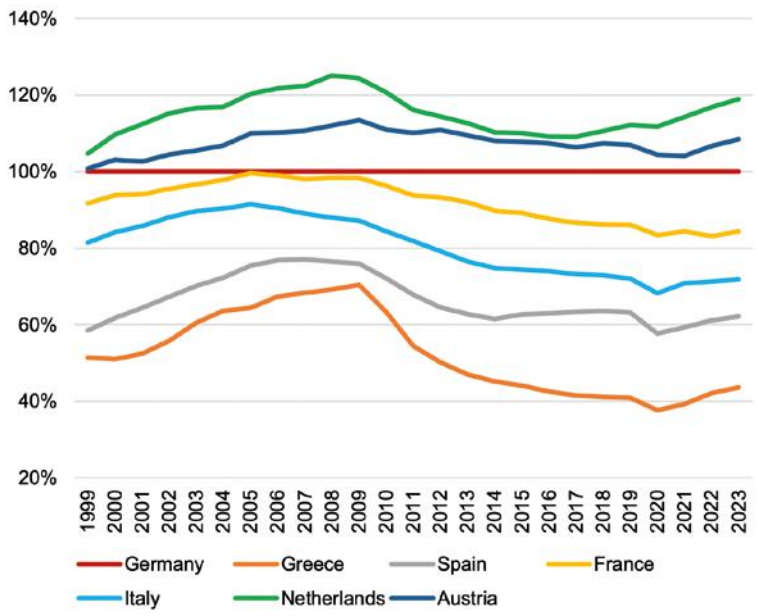
CHART 66.
Per Capita GDP, thousands current euros



Source: AMECO Autom Forecast, November 2023

Another illustration of the growing economic heterogeneity between EU Member States is the gap between a given country's per capita GDP and that of Germany (*see Chart 67*). Over the past two decades, two groups of countries have emerged: those that have systematically exceeded the level of German GDP per capita – such as the Netherlands and Austria – and those that have constantly lagged behind, such as Italy, Spain, Portugal or Greece. Once close to the first group, France's GDP per capita has gradually moved closer to the EU low-income countries since the 2008 Great Financial Crisis.

CHART 67.
Per Capita GDP, as %
of German Per Capita GDP



Source: AMECO Autom Forecast, November 2023

7.2 The existence of countries with large current account surpluses and countries with persistent current account deficits threatens the coherence of the Economic and Monetary Union (EMU)

Table 6 and Chart 68 underline the existence of significant discrepancies between Member States.

Current account surpluses in Germany and the Netherlands averaged respectively 8.1% and 7.7% of GDP over the 2014-2019 period, while France suffered from a permanent deficit of 0.5% on average between 2014 and 2019 (*see Chart 68*).

In 2021, Germany and the Netherlands recorded current account surpluses of, respectively 7.7% of the GDP and 12.1%, compared to +0.4% in France.

In 2022, the external position of EU Member States (*see Part 3*) deteriorated significantly in the context of the energy crisis. High energy prices resulted in a contraction of the current account surplus to 4.2% of GDP in Germany and 9.3% in the Netherlands. In France, the current account deficit reached 2% of GDP.

In 2023, the current account balances have rebunded thanks to lower energy prices, but imbalances have remained unchanged: Germany and the Netherlands should recorded surpluses of respectively 5.9% and 9.2% according the EU Commission. In 2023, France is expected to run a deficit of 0.5% of GDP, according to the European Commission's Autumn forecasts.

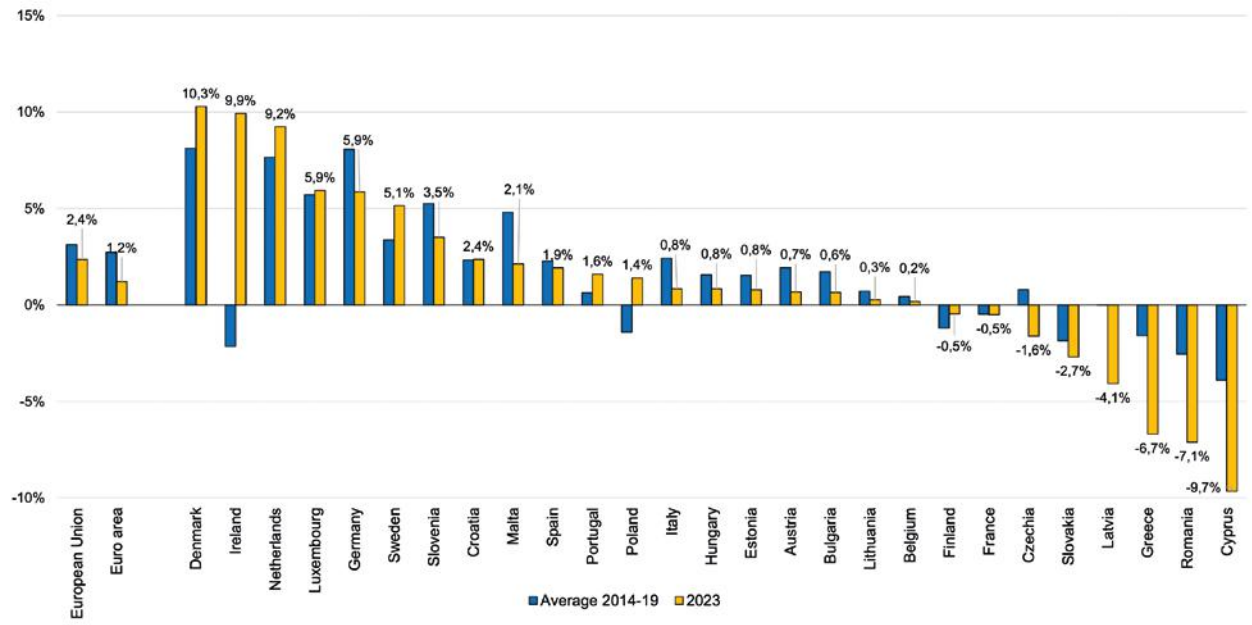
TABLE 6.
Current Account Balance, % of GDP

	2007	Avg 2014-19	2019	2020	2021	2022	2023
France	-0,1%	-0,5%	0,5%	-1,6%	0,4%	-2,0%	-0,5%
Spain	-9,4%	2,3%	2,1%	0,6%	0,8%	0,6%	1,9%
Italy	-1,4%	2,4%	3,3%	3,9%	2,4%	-1,5%	0,8%
Germany	6,9%	8,1%	8,2%	7,1%	7,7%	4,2%	5,9%
Netherlands	6,9%	7,7%	6,9%	5,1%	12,1%	9,3%	9,2%
Austria	3,8%	1,9%	2,4%	3,4%	1,7%	-0,3%	0,7%
Euro Area	0,0%	2,7%	2,4%	1,8%	2,8%	-0,7%	1,2%
European Union	0,0%	3,1%	3,0%	2,7%	3,7%	1,1%	2,4%

Source: Eurostat, AMECO
Data for 2023 are projections taken from the Autumn Forecast of the EU Commission (May 2023); projections for the Euro area in 2023 are taken from the IMF World Economic Outlook (April 2023)

In principle, imbalances in a genuine Union are not in themselves a source of concern. But, as of today, the Eurozone is not a genuine union; national budgets coexist, and so do current account balances between countries. These figures are of a durable and structural nature.

CHART 68.
Current account balance across EU Member States, % of GDP



Source : AMECO Autumn Forecast (November 2023)

If the Eurozone were the equivalent of a nation, such discrepancies in current accounts balances would be acceptable.

Indeed, since there would only be one balance of payments for the entire zone, as in the US for example, rebalancing adjustments would take place automatically through the mobility of capital and labor and automatic fiscal transfers. Sub-regions with high current deficits (and therefore overvalued "currencies") would be winning because they could "import" cheap goods from surplus generating subregions, the latter contributing through this implicit subsidy to the adjustment of the deficit zone.

But in fact, the EMU is composed of separate countries with their own balance of payments and national budget.

Macro-economic imbalances relative to the "highest performing economy" are not a matter to be corrected by the Union. These issues are exclusively dependent on national economic policies.

Since countries cannot adjust their exchange rates to their competitive positions, it is up to the domestic competitive position to adjust to the exchange rate. Devaluations can only be internal – *i.e.* through prices and wages – and lead to a reduction of domestic demands and incomes.

These imbalances raise a number of issues.

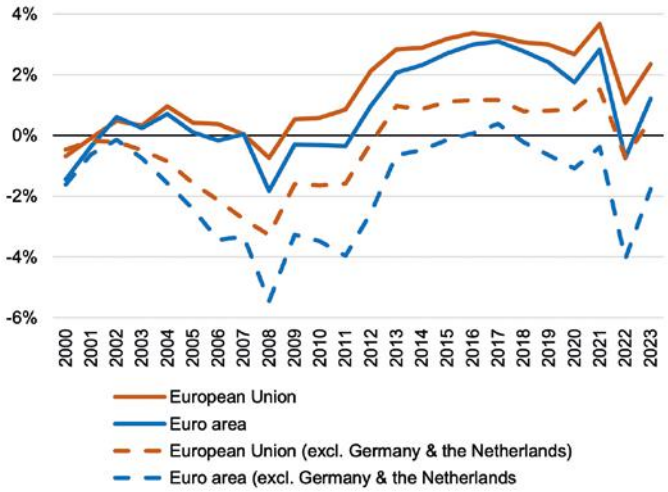
Of course, the objective is not to unify all balances of payments within the EU. Some countries have to catch up from very low standards of living and this has involved some deficits of balance of payment. However, the dynamics should not exacerbate this heterogeneity but rather reduce it.

Since the EU sovereign debt crisis (2011-2012), Member States with excess savings (Germany and the Netherlands in particular) no longer finance investment projects in lower per capita GDP countries (Spain, Italy, Portugal, Greece). This is notably due to the interest rate difference between the US and Europe (risk is better remunerated in the US than in Europe), the limited financial flows between Eurozone countries and the insufficient number of investment projects. These limited cross-border capital flows in the Euro area reflect the persistent doubts of investors in Northern Europe about the solvency of states and companies in other countries, as well as the lack of a genuine Banking Union and integrated financial markets.

The fact that Germany's and the Netherlands' external surpluses are no longer lent to other Member States reduces the capacity of peripheral countries to invest, as well as their potential growth and contribute to increasing the heterogeneous per capita incomes in the Euro area (*see Charts 66 and 67*).

Consequently, the Euro area exhibits a savings surplus of €289.3 bn (or 2.4% of GDP in 2019), but this surplus is reallocated to the rest of the world excluding the Euro area due to the lack of investment projects there.

CHART 69.
Current Account Balance, % of Nominal GDP

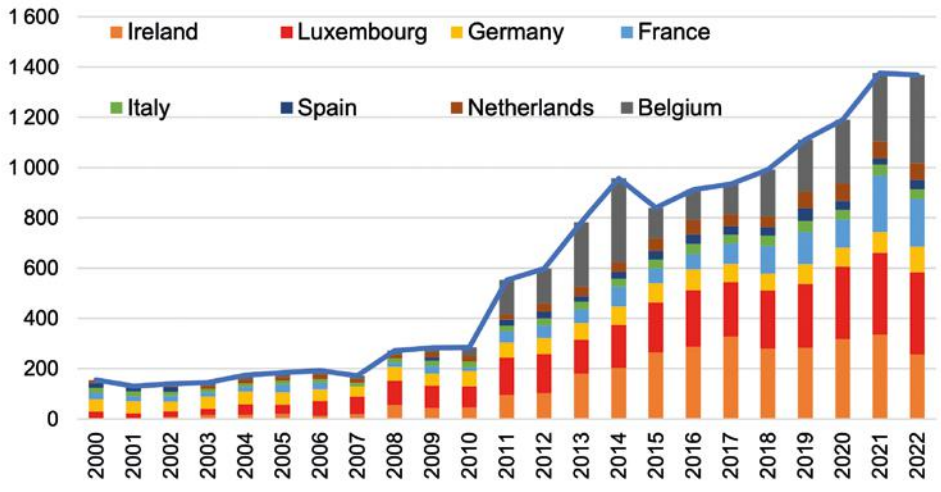


Source: AMECO, IMF

The Eurozone's external surplus has largely been used to buy bonds in the rest of the world, in particular US Treasuries (*see Chart 70*).

Between 2000 and 2022, the volume of US federal debt held by Eurozone residents increased tenfold, from USD 106.3 bn to USD 1 368.5 bn. Within the Euro area, all countries that registered a positive current account balance lend to the United States (*see Chart 59*) and therefore finance the US external and fiscal deficits. These include Germany (USD 100.7 bn in 2022), the Netherlands (USD 67.4 bn), Luxembourg (USD 329.3 bn), Spain (USD 36.9 bn), Belgium (USD 351.2 bn) and Italy (USD 39.2 bn). Although achieving an average current account deficit, France and Ireland also hold a significant amount of US federal debt, lending respectively USD 189 bn and USD 254.8 bn to the US Treasury in 2022.

CHART 70.
Outstanding Treasuries held (USD bn)



Source: US Department of the Treasury

Developing cross-border financial flows within the Euro area is essential. The true objective of a currency area is to make savings flow to finance the most productive investments within it. Indeed, in a monetary union, the elimination of currency risk allows savings from the countries that have a high level of per capita capital (Germany, the Netherlands, France) to finance investments in the countries with lower per capita capital and higher marginal productivity of capital (for example Spain, Italy, Portugal). Income convergence therefore normally stems from the transfer of savings from high per capita income countries to low per capita income countries. But, as mentioned above, such transfers disappeared after the 2008-2010 period.

The phenomenon is there to stay. Indeed, the Eurozone is not a true monetary union. We need to take into account a structural feature, which is the increasing industrial specialization of surplus countries. Success breeds success. Helped by the implicit devaluation stemming from the favorable cost evolution, exports of surplus countries become more profitable.

It would be illusory to believe that the structural advantages of German exports could be transmitted to and copied by southern or eastern European countries which have a different industrial story and cannot become little Ruhr (while the Ruhr can become and is becoming stronger).

7.3 Target 2 imbalances in the Eurozone have increased with the ECB's asset purchase programs (2015-2022)[69]

The Trans-European Automated Real-time Gross Settlement Express Transfer System, also known as TARGET2, allows financial transactions to be settled between commercial banks located in different Euro area countries via a settlement system between National Central Banks (NCBs) and the European Central Bank (ECB). Transactions accumulate in net terms, resulting in a balance which is recorded on the balance sheet of each NCB.[70]

TARGET2 balances are therefore an accounting representation of the cross-border economic and financial relationships that the free movement of capital in the Euro area entails. In addition to trade in goods and services and capital investments, these balances reflect a variety of different types of flows of funds: flows between subsidiaries or branches of the same banking group that participate in TARGET2 via different NCBs, flows resulting from non-standard monetary policy measures, and «technical» flows associated with the location of accounts for the settlement operations of securities.

Why is a positive net TARGET2 balance referred to as a claim and a negative balance as a liability?

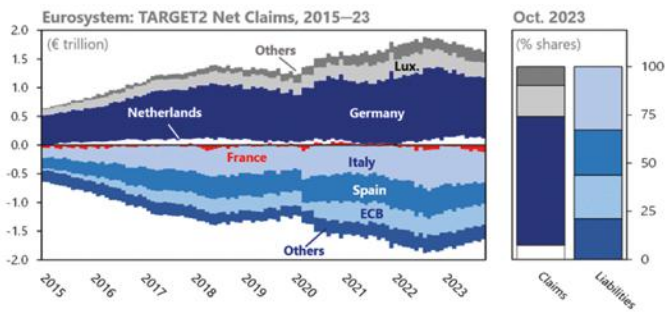
This has to do with accounting and balance sheets. To understand this, two facts must be kept in mind:

- The Euro area has one currency, but because it is made up of multiple countries, there is not one central bank with one balance sheet for the euro. Instead, each central bank in each country has its own balance sheet. TARGET2 has separate central bank components to reflect this.
- When a central bank issues money for the first time, it is recorded on its balance sheet. The money is recorded on the liability side of the balance sheet (as a deposit), while the assets (or claims) corresponding to the money created are recorded on the asset side (for example as a loan).

Back to TARGET2: when money moves between Euro area countries via TARGET2, the central bank of the country receiving the money registers it on its balance sheet as an additional liability. But only the liability moves: the asset stays on the original balance sheet.

For example, if euros that were originally issued in Italy end up in Germany, from an accounting perspective, the German central bank has an additional liability (the money), while the asset stays with the Italian central bank. This means that the balance sheets are no longer balanced: the German central bank needs to add a balancing item to reflect that there are now more euros on its balance sheet than it originally created, while the Italian central bank needs to add a balancing item to reflect that it has fewer euros on its balance sheet than it originally created. This balancing item – which is called the net TARGET2 balance – is a claim (or asset) for the Bundesbank and a liability for the *Banca d'Italia*.

CHART 71.
Eurosystem's Target2 Net Claims, 2015-23



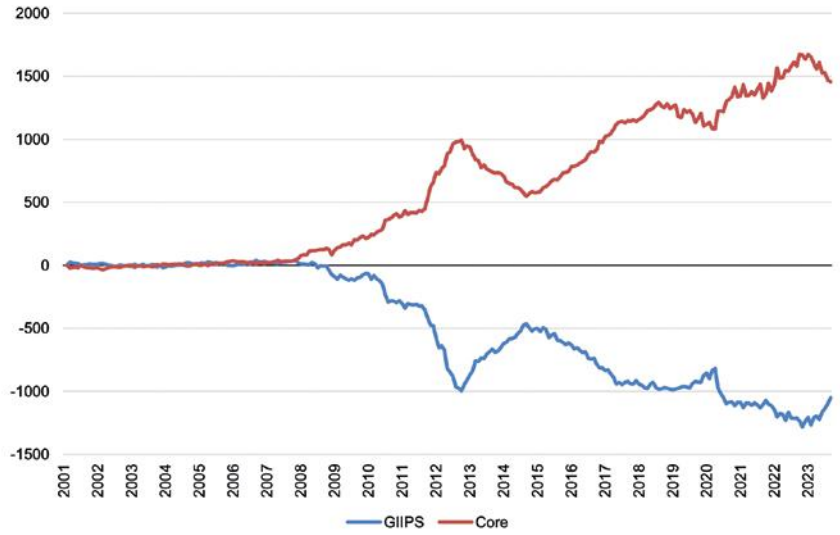
Source: IMF

69. This section takes up the conclusions of the note: C. Deubever & Nicolas Toulemond, TARGET2 imbalances in the Euro area, Tresor Eco, May 2021.

70. TARGET2 ("Trans-European Automated Real-time Gross settlement Express Transfer system 2") is a system that moves money from one bank to another, both within countries and across borders. Central banks and commercial banks use it to process payments in euro and move money safely and easily between them. This is essential for the economy to function. Both central banks and commercial banks have accounts in TARGET2.

Since the euro was created, TARGET2 balances have gone through several distinct phases. Prior to 2008, balances were practically zero: current account imbalances between Euro area countries were settled by means of interbank liquidity transfers. After the 2008 financial crisis and the 2012 sovereign debt crisis, TARGET2 balances rose dramatically due to tensions on the interbank market and a flight of deposits from 'peripheral' countries (Italy, Greece, Spain, Portugal, Ireland) toward "core" countries (Germany, Netherlands, Luxembourg), before gradually going back down. Total TARGET2 national surpluses stood at €900 bn in mid-2012 and then gradually declined to stabilize at around €600 bn by the end of 2014.

CHART 72.
GIIPS's liabilities versus Core's claims, EUR bn

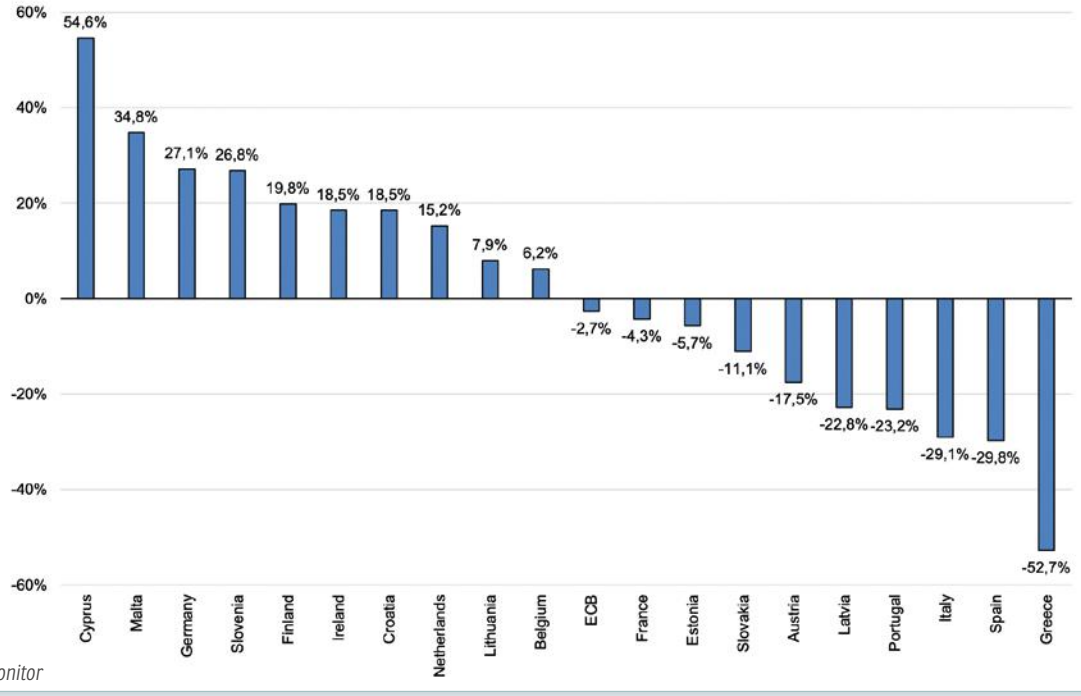


Source: Euro Crisis monitor
GIIPS = Greece, Italy, Ireland, Portugal, Spain;
Core = Germany, Netherlands, Luxembourg
Last observation from September 2023

Since 2015, balances have been picking up again as a result of the ECB's Asset Purchase Programs (APP). Since the mid-2010s, the main countries with most TARGET2-liabilities (in €bn) have been Greece, Ireland, Portugal, Spain and Italy, and the countries with the biggest surpluses have been Germany, the Netherlands, Finland and Luxembourg.

The net TARGET2 liabilities of the Bank of Italy and the Bank of Spain are quite high, standing at respectively €555 bn and €395 bn in May 2023 (which represents roughly 29% GDP for each country). Conversely, the Bundesbank had a net TARGET2 credit of around €1,048 bn in May 2023 (roughly 27% of Germany's GDP).

CHART 73.
TARGET2 imbalances as of September 2023, % of GDP



Source: Euro Crisis monitor

Today, TARGETs balances reflect the legacy of Quantitative Easing (QE) bond portfolios and will fall steadily as the ECB reduces its balance sheet.

In January 2017, in a letter to members of the European Parliament, Mario Draghi wrote[71] that "if a country were to leave the Eurosystem, its national central bank's claims on or liabilities to the ECB would need to be settled in full".

According to B. Drut[72], "At least three problems would arise in the event of the exit from the Euro area of countries with significant net TARGET2 liabilities:

1. For several countries (Spain, Italy, Portugal), the TARGET2 liabilities are very large when taken as% of GDP, which implies that the amounts needed to settle the commitments would be colossal,
2. In the event of the exit of the Euro area from a relatively weaker country from an economic point of view, its new currency would probably be weaker, which would further increase the settlement to be made,
3. Would a country leaving the Eurozone necessarily want to settle all its commitments? We have seen in the case of Brexit that some British politicians were totally opposed to the divorce bill".

In the end, the TARGET2 imbalances – and the potential losses in case of departure from the Eurozone and the non-settlement of the TARGET2 balances – might strengthen the bargaining power of debtor countries in the case of harsh negotiations with core countries.

TARGET2 imbalances should fall as the ECB reduces its Asset Purchase Programs and, more generally, if progress is made on the Banking Union and Capital Markets Union to the extent that cross-border flows will be more north-south than south-north.

71. Letter from Mario Draghi to the members of the European Parliament Marco Valli and Marco Zanni, January 2017.

72. B. Drut, "TARGET2 imbalances, again at the center of attention", CPR, 2018.

8. Is Next Generation EU (NGEU) a game changer? A Comparison with IRA and ways to respond

The Covid-19 crisis significantly hit economies worldwide. On 21 July 2020, the EU Council agreed upon a massive and unprecedented recovery plan – Next Generation EU – to kick-start the European economy and support the ecological and digital transitions, making Europe more resilient and better adapted to future challenges.

This program was designed out of the solidarity between Member States and the will to help the most severely hit by the pandemic conditional on structural reforms to improve their economic situations and resilience capacity.

The disruptions in global supply chains associated with the pandemic have also led countries to reflect on the state of their industrial fabric and capacities. Namely, the renewed interest in industrial policy worldwide is visible through the launch of the Inflation Reduction Act in the US, a massive subsidy program focused on the US market that aims at decarbonizing the American economy thanks to public and private investments in cleantech and clean energy.

NextGeneration EU was agreed in principle by the European Council on 21 July 2020 and officially entered into force on 19 February 2021. The goal is to make the EU greener, more digital, healthier, more equal and stronger. It consists of a massive subsidy plan focused on the EU Member States and financed by common debt and aiming at helping Member States recover economically and socially from the Covid-19 crisis as well as reinforce their efforts regarding the digital and green transitions. Strong requirements in terms of green and digital investments are included in NGEU. The announcement of the NGEU program also aimed at reassuring markets regarding the strength of the EU.

The goal of the first Part of this section is to assess the progress of NGEU almost 4 years after its launch, and to see if it has met the expected benefits, in a context where the EU economy remains less dynamic than its international counterparts (*e.g.* US, China…).

On 16 August 2022, the Inflation Reduction Act was passed by the Biden administration with the aim to address climate change in the US through a massive plan of subsidies and tax breaks. It is the third piece of legislation of a $1.2 tn investment plan that aims at safeguarding the US's competitive edge. Some measures of the IRA, most notably the Local Content Requirements (LCRs), have come under severe criticism for undermining the free trade principles that are at the core of the World Trade Organization (WTO). Yet, one year on, the IRA has proved very efficient and attractive, with a massive movement of industries and capital relocating in the US.

The objective of the second Part of this section is to study the effectiveness of the IRA and how it potentially threatens the European Union.

The third Part of this section shows that government support through the IRA in the US turns out to be more efficient than through NGEU in the EU. Even if NGEU has been designed following virtuous and ingenuous principles, its deployment seems suboptimal, and the benefits are slow to come.

8.1 NGEU is an unprecedented joint response to the COVID-19 crisis, making over €800 bn available to Member States to stimulate economic recovery, by investing mainly in the green and the digital transitions

In the wake of the economic challenges brought about by the Covid-19 crisis, the EU agreed on the Next Generation EU program on 21 July 2020 to provide financial support to its Member States, stimulate economic recovery and transform the EU into a more resilient, sustainable, and competitive region in the post-pandemic era. The program aims to address key challenges such as climate change, digitalization, social inequality, international competition, and economic disparities across EU countries.

NGEU was preceded by three other program adopted in early 2020: (i) the temporary Support to mitigate Unemployment Risks in an Emergency (SURE), which empowered the European Commission to borrow up to €100 bn between 2020 and 2022 to finance loans for Member States to fund expenditures necessary for preserving employment throughout the pandemic; (ii) the European Investment Banks' Guarantee Fund of €25bn addressing liquidity and funding needs of European businesses, predominantly SMEs. The Fund would enable the EIB to mobilise up to €200 billion in resources for viable firms affected by the crisis; and, (iii) the ESM's Pandemic Crisis Support (PCS), an ESM credit line of up to €240 billion (2% of Euro area GDP in 2019) to spend on direct and indirect health-related costs.

The Next Generation EU program has a financial volume of approximately **€750 billion** (at 2018 prices). Its centerpiece – the Recovery and Resilience Facility (RRF)[73] – consists of **€338 bn in grants and €385.8 bn in loans**[74] that are made available to Member States over the period 2021-2026. **The RRF is a performance-based instrument: all the funds must be requested during the lifetime of the program, *i.e.*,** before Q3 of 2026. NGEU is also linked to the 2021-2027 budget of the EU's Multiannual Financial Framework, and together they amount to more than €1,800 bn (12.4% of the EU's GDP of 2021).

As the funds are provided through the issuance of joint EU debt, NGEU underlines the European solidarity and support for the Member States most affected by the crisis. It also aims at targeting new priorities insofar as **at least 37% of RRF funds will be spent on fighting climate change** as part of a major investment plan combining EU and national public funds as well as public and private investments to support the EU on its path to climate neutrality by 2050.

Moreover, **20% of RRF funds** – Next Generation EU largest component (*see below*) – **will be invested in the EU's digital transformation** (cybersecurity, artificial intelligence, supercomputing…).

This part aims at thoroughly presenting the NextGeneration EU program by describing the several instruments it encompasses and the performance based approach according to which funds are granted to Member States. Then, the paper describes the state of play as of January 2024 and the slow progress of NGEU due to:

- insufficient absorption capacity of the Member States, the lack of qualifying profitable projects and skilled workforce in public administration,
- the REPowerEU initiative that led to amend the RRF Regulation to add additional €20 bn for energy projects in the NRRPs,
- Russia's war against Ukraine that is leading to delays in implementation of the National Recovery and Resilience Plans (NRRPs),
- and some amendments linked to inflation and supply chain bottlenecks.

Eventually, the financing of NGEU will be under focus as it is the first time in the EU history that the Commission is allowed to issue such a substantial common debt.

8.1.1 NGEU is one of the tools at the EU's disposal to achieve its objectives of building strategic resilience, and bring the private sector onboard to push environmentally related investments

This paper is deliberately focused on NGEU as to provide a more precise overview, but NGEU is part of a larger movement of European decisions towards climate neutrality and strategic autonomy.

The first relevant decision on the matter was the launch of the European Green Deal (EGD) in December 2019, which mostly aimed at strengthening the EU regulatory framework with the Fit for 55 (FF55) energy and climate package[75]. Yet, EU financing dedicated to the EGD were initially limited and left most of the financial burden to the national level.

In 2020, the EU created the NGEU program which is linked to the Multiannual Financial Framework (MFF) and whose centerpiece is the Recovery and Resilience Facility (RRF)[76]. 37% of RRF spending is earmarked for climate action and 20% for the digital transition, and the overall budget of the EU also dedicates a significant amount – about €750 bn – to tackling climate change (*see Chart 74*).

In 2022, the energy crisis triggered by the war in Ukraine led to the REPowerEU plan which mainly strengthened the EU energy regulatory framework. The goal is to phase out Russian fossil fuels, to encourage energy sobriety and production of clean energy in Europe.

In 2023, the Green Deal Industrial Plan (GDIP) was launched to address tensions in cleantech supply chains and to create a more conducive environment to advance the EU's manufacturing capacity for net-zero technologies and products. Its objective is to put net-zero industry at the heart of future EU competitiveness and energy security. It is articulated around two new pieces of law: the Net Zero Industry Act (NZIA) and the Critical Raw Material Act (CRMA). The NZIA and CRMA introduce targets and regulatory framework and governance.

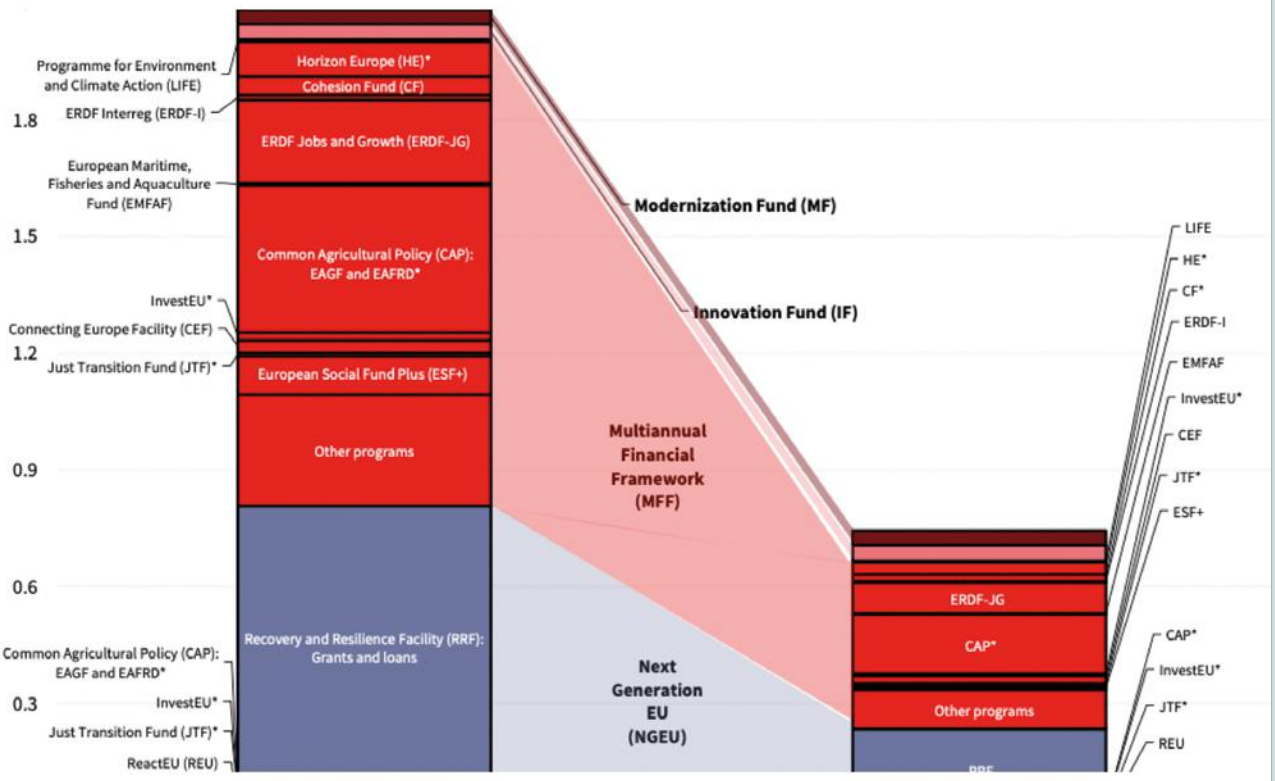
73. See 8.1.2.

74. At current prices, which represented respectively €312.5 bn and €360 bn at 2018 prices.

75. Under the European Climate Law, the EU committed to reduce its net greenhouse gas emissions by at least 55% in 2030 compared to 1990. The FF55 package is a set of 12 proposals to revise and update EU legislation and make all sectors of the EU's economy fit to meet this target. Source: the European Commission.

76. See 8.1.2.

CHART 74.
EU Funding Programs as per the Multiannual Financial Framework (MFF) 2021-2027, the NGEU program and additional funds



Source : EU Commission

A recent rapport from the Jacques Delors Institute[77] deems that "the regulatory push remains shallow". Indeed, it explains that "the NZIA sparked little enthusiasm in the political and industrial ecosystem, due to the lack of concrete instruments to achieve the new target of 40% of European production in clean technologies, a figure that is, moreover, unsubstantiated. Apart from carbon capture, the law contains no quantified targets by sector, even though vulnerabilities and the need to deploy new industrial capacity vary greatly from one technology to another and depend on the stage in the value chain under consideration. Additionally, the list of net-zero technologies excludes some key sectors such as energy efficiency and near-zero materials".

To finance the GDIP, the Strategic Technologies for Europe Platform (STEP) has been created to recycle existing funds; the overall financing of GDIP remains modest. Although still a blueprint, the GDIP contributes to the design of an EU-wide industrial policy aligned to decarbonization goals.

Eventually, in September 2023, the European Chips Act came into force and aims at fostering semiconductor production in the EU, reducing external dependencies, and doubling the EU's global market share to 20% in 2030. The act is based on a three-pillar structure: the "Chips for Europe" initiative which aims at supporting research, development and innovation in the EU chips ecosystem and improve the transition "from lab to fab"; the second pillar focuses on improving supply security with a new framework to attract large-scale investments in production capacities; and the last pillar aims at setting up a co-ordination mechanism between Member States and the Commission to monitor market developments and anticipate crisis.

The act provides derogations to state aid rules for key facilities, reallocates €3.3 bn from existing EU funds complemented by €2.9 bn to relevant projects, and seeks to rationalize investment by Member States. The European Commission intends to mobilize €43 bn in public and private funds through the act, with €11 bn coming from the repurposing of existing funds[78].

All the decisions mentioned above combined with the role of institutions like the EIB in leveraging public and private funds and the recently voted Emission Trading System (ETS) reform are contributing to filling critical gaps in the EGD policy architecture, in terms of funding, regulation and governance.

77. "Energy Union 2.0. to deliver the European Green Deal: stronger governance, common financing and democratic tools", Jacques Delors Institute, November 2023.
78. Data and information are taken from "The return of industrial policies: policy considerations in the current context", OECD, 8 November 2023.

8.1.2 NGEU encompasses several instruments to achieve its objectives: green and digital transitions, structural reforms to recover from the pandemic and economic resilience in all parts of the Union

TABLE 7.
NGEU program, breakdown by instruments

Name of the instrument	Amount of the instrument	Purpose of the instrument
Recovery and Resilience Facility	€723.8 bn (€338 bn in grants + €385.8bn in loans)	Supporting the implementation of structural reforms, investing in green and digital transitions, and enhancing the resilience of national economies
React-EU	€47.5 bn	Supporting investments and reforms, focusing on mitigating social and economic of the Covid crisis, especially through employment
Just Transition Fund	€10 bn	Assisting regions that are heavily dependent on fossil fuels in addressing challenges associated with the green transition
Rural Development	€7.5 bn	Supporting the vibrancy and economic viability of rural areas through funding and actions that support rural development
InvestEU	€5.6 bn	Mobilizing private and public investment by providing guarantees and technical assistance to support sustainable infrastructure projects, R&D, and SMEs
Horizon Europe	€5 bn	Strengthening the impact of R&D in developing, supporting and implementing EU policies while tackling global challenges
RescEU	€1.9 bn	Protecting citizens from disasters and managing emerging risks
REPowerEU	€20 bn	Saving energy, producing clean energy, diversifying energy supply chains

Sources: NGEU tracker, European Council
Notes : REPowerEU chapters must be included in Member States' NRRP but REPowerEU is not per se part of NGEU

REPowerEU was adopted on 4 October 2022 by the European Council to reinforce its strategic autonomy vis-à-vis Russian fossil energy; the revised Recovery and Resilience proposal offers Member States the possibility to add a REPowerEU chapter to their National Recovery and Resilience Plan, thus closely intertwining REPowerEU and NGEU, though REPowerEU is not part of NGEU. REPowerEU is based on three pillars: energy savings, renewable deployment and supply diversification.

As pointed out by the Jacques Delors Institute, "No individual Member State possesses the capacity to independently manage the accelerated phasing-out of Russian gas. This underscores the need for a collective, coordinated effort on a European scale". REPowerEU goes side by side with FF55 as "it first requires the full implementation of the FF55 proposals and higher targets for renewables and energy efficiency and lifting permitting barriers to renewable deployment. It aims at tripling the installed capacity of solar and wind by 2030. If fully and successfully implemented, REPowerEU could lead to a 57-58% emission reduction by 2030, overshooting the EU Climate Law objective of -55%"[79].

Eventually, no EU fresh funding is provided for this program: €225 bn of loans still available from the RRF have been redirected towards the achievement of REPowerEU.

8.1.2.1 With a dedicated envelope of €723.8 bn, the Recovery and Resilience Fund (RRF) is the centerpiece of Next Generation EU, with a focus on the green and digital transitions

The RRF is the centerpiece of the NGEU program and Member States are entitled to a certain amount of grants and loans. For 70% of the total of €338 bn available in grants, the allocation key takes into account the Member States' population, the inverse of its GDP per capita and its average unemployment rate over the period 2015-2019 compared to the EU average.

For the remaining 30%, instead of its unemployment rate, the observed loss in real GDP over 2020 and the observed cumulative loss in real GDP over the period 2020-2021 is considered. Member States can also request a loan worth up to 6.8% of their 2019 Gross National Income (GNI).

8.1.2.2 Italy and Spain are the main recipients of the Recovery and Resilience Fund in volume

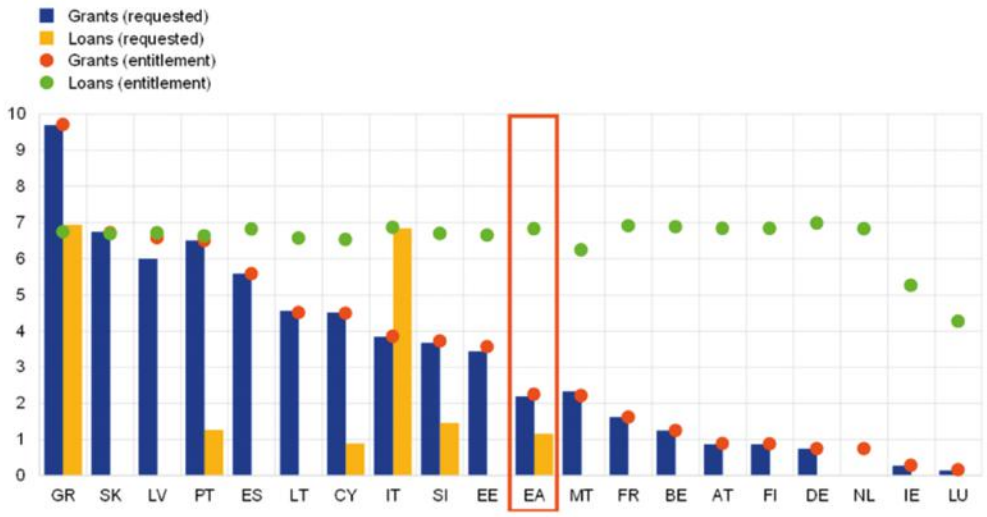
Chart 75 reflects the agreed allocation of RRF funds of 2023[80] as a percentage of each Member State GDP. One third of the fund (30.1%) is currently[81] estimated to be absorbed by Italy (€71.8 bn in grants and €122.6 bn in loans), or 10.9% of Italy's 2021 GDP. Spain has become the second largest recipient of the RRF's fund with 25.6% (€79.8 bn in grants and €83.2 bn in loans), or 13.5% of Spain's 2021 GDP.

79. Op. Cited Jacques Delors Institute.

80. Several Member States have requested amending their initial plan written in 2021.

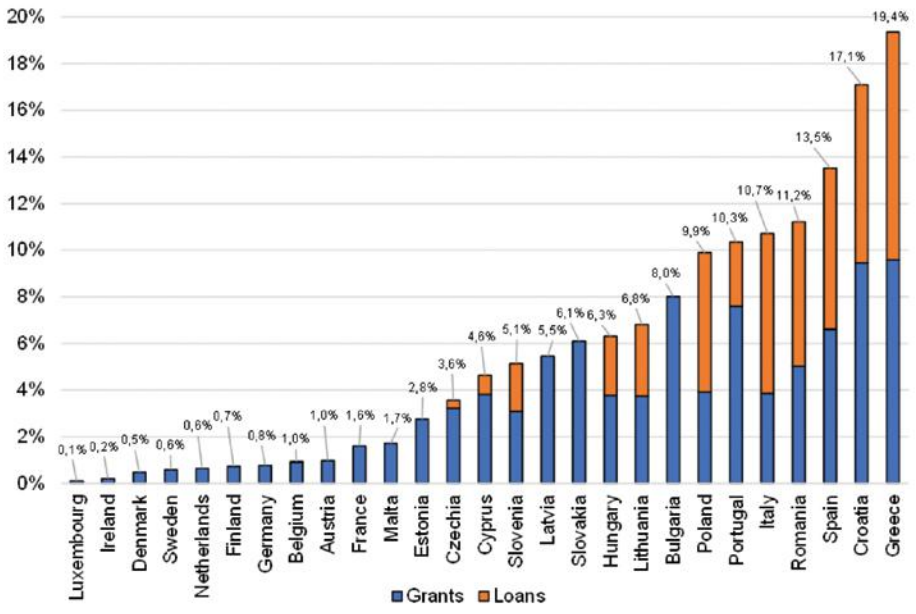
81. Data of 30 September 2023.

CHART 75.
RRF entitlements and funding requested in Euro area countries (2021-26, percentage of GDP)



Source : ECB

CHART 76.
RRF funding (loans and grants) to be received by EU Member States, % of GDP



Source: EU Commission, NGEU tracker

The structure of the RRF was designed at a time when it was thought that interest rates were going to be "low for long". Since the start of 2022, interest rates have risen rapidly for all sovereign issuers including the EU, but it does not seem to have interfered with the Commission's issuance of bunds to fund the RRF and other EU programs. Through this period, EU bond issuance was met with steady investor demand, despite the backdrop of market volatility.

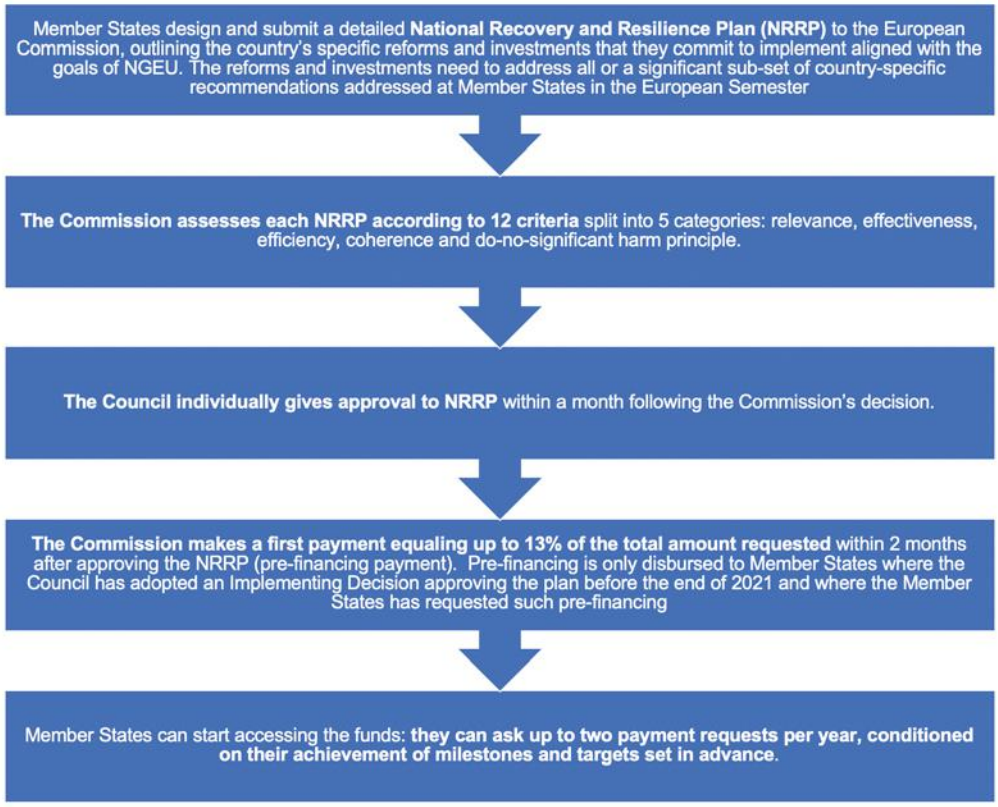
8.1.3 Recovery and Resilience Facility (RFF) funds are awarded to Member States following national plans and are conditional on the delivery of reforms and investments

The Recovery and Resilience Facility is performance based. This means that the Commission only pays out the amounts to each country when they have achieved the agreed milestones and targets towards completing the reforms and investments included in their plan.

As there is little common policy regarding energy, the green transition, budgets and industries, NGEU has adopted a decentralized model that relies on Member States, which have obligations of results but not of means, in contrast with the US centralized approach of the IRA.

Thus, to access the loans and grants offered by the NGEU program, Member States are required to go through the following procedure:

CHART 77.
Procedure for receiving European funds



Source: Fondation Robert Schumann, European Commission

The EU is determined to get results from the NGEU program and has introduced clauses in the RRF Regulation to ensure that Member States are moving in the right direction. First, the disbursement of funds is conditional on achieving satisfactory progress on the roadmap submitted by Member States to the EU Commission. Additionally, as a preventive action, if the Commission discovers deficiencies, it can interrupt or suspend payments to Member States until the problems detected are resolved. The Commission can also take action after payments have been made by introducing financial corrections if it identifies failures at a later stage.

8.1.4 January 2024 state of play: NGEU is almost used at full capacity but faces deployment issues

Halfway through its lifetime, 30.5% of RRF funds have been disbursed. More precisely, 41.9% of the total RRF grants available and 20.5% of the total RRF loans available have been disbursed (*see Table 8*).

TABLE 8.
RRF funds available and disbursed as of mid-January 2024

Source: EU Commission

	Total RRF	RRF Grants	RRF Loans
Available (EUR bn)	723,8	338	385,8
Disbursed (EUR bn	220,5	141,6	78,9
Percentage disbursed	30,5%	41,9%	20,5%

On 9 November 2023, V. Dombrovskis[82] affirmed that "the implementation of the [Recovery and Resilience] Facility is now at full speed. We expect, if everything goes according to plan, the amount of disbursements to exceed €200 billion by the end of the year". Additionally, he warned that "we also need to deal with backlogs. Towards the last years of the RRF's timeline, we should avoid an accumulation of payment requests and funding needs".

82. V. Dombrovskis, "Statement at the European Parliament BUDG-ECON committee 12th Recovery and Resilience Dialogue", October 2023.

TABLE 9.
State of play on implementation of RRF payment requests (as of December 2023)

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SL	SK	FI	SE
27 plans approved by the Commission and adopted by the Council																											
21 pre-financing disbursed (EUR 56.6 billion							*																				
25 Operational Arrangements signed																											
42 payment requests submitted to the Commission		2x	2x					4x	3x	2x	3x	4x										3x	2x	2x	3x		
28 payments disbursed (EUR 174.69 billion)								2x	3x		2x	3x										2x	2x		2x		

Source: EU Commission

8.1.4.1 The 27 national plans have been approved by the Commission and adopted by the EU Council

Table 9 highlights that the 27 Member States' NRRPs have been approved by the Commission and adopted by the EU Council.

As of January 2024, 27 Member States had submitted requests for amending their plans. These modifications are an opportunity to include a REPowerEU chapter in the plan – which has been done by 23 Member States – but also to address administrative capacity issues with additional measures, to increase the absorption capacity of RRF and other EU funds, and to catch up on the disbursement schedule[83].

Several Member States have used the option to take out loans under the RRF; as part of modifying their plans, ten Member States have asked to increase the amount of loan support or requested loan support for the first time for an extra amount of €127.2 bn, bringing the amount of requested RRF loans to €292.6 bn.

As of December 2023, the Commission had endorsed 18 modified Recovery and Resilience Plans[84].

Overall, the Commission has so far received 55 payment requests and disbursed a total amount of €220.5 bn through 32 payments, of which €141.6 bn are grants and €78.9 bn are loans[85].

8.1.4.2 NGEU is a slow and complex process which faces Member States' limited capacity regarding the absorption capacity of European funds

Though it is an innovative initiative that relies on strong rational principles *(e.g. performance based approach)*, NGEU remains so far too little used, compared to the initial planning and ambitions. its deployment is not optimal and NGEU procedures turn out to be slow, complex and very bureaucratic. This can be explained by several reasons.

First, NGEU is a very bureaucratic tool, which stumbles upon the lack of skilled and efficient workforce in public administration – local, regional, national and even European in some cases. This is particularly visible in the difficulties of the Commission and Member States to keep up with the initial indicative disbursement calendar as seen above. Additionally, the complexity in the structure of the program – *e.g.*, encompassing seven different funds and being intertwined with separate plans like REPowerEU – only adds up to the existent difficulties.

A massive challenge lies ahead of the EU insofar as approximately two thirds of the RRF envelope will have to be disbursed during the second half of the facility's lifetime. In that respect, the capability of the Commission can be questioned as such an amount to disburse indicates a future heavy workload in terms of assessing the required preliminary conditions in due time. This is all the more important as, even during the first half of RRF's lifetime, some preliminary assessments were overdue; indeed, no preliminary assessments have been made publicly for the requests submitted by Greece on 17 May, Estonia on 30 June, and Croatia on 24 July[86].

83. Op. Cited V. Dombrovskis.

84. "Recovery and Resilience Dialogue with the European Commission", EGOV, 11 December 2023.

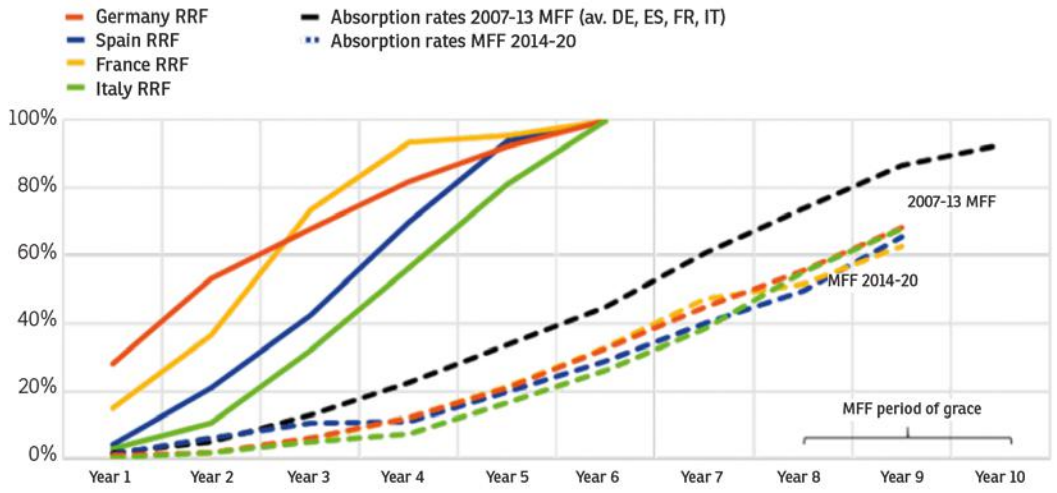
85. Source: Recovery and Resilience Scoreboard.

86. The European Commission must approve the NRRP within the two months following their submission.

Second, past experiences have suggested that Member States have limited absorption capacities, which are likely to hinder the speed of the disbursement of NGEU loans and grants. The challenge will be for Member States to have the capacity to absorb a significant amount of money in a short period of time.

In that respect, Chart 78 shows that, for the 2014-2020 multiannual financial frameworks, the largest Member States absorbed only 60 to 70% of funds that they were allocated after 9 years. Regarding NGEU, the same Member States are expected to absorb the entirety of the funds they were allocated over 5 and a half years.

CHART 78.
Projected cumulative absorption rates of RRF funding compared with realized absorption rates of past EU multiannual financial frameworks (x-axis: year of programme; y-axis: absorption as cumulated percentage of total envelope)



Source : Dorrucci and Freier (2023), based on European Commission data and estimates of the Working Group on Public Finance of the European System of Central Banks. For France cash pay-outs under RRF according to Coeuré report (2021).
Notes: The solid lines refer to the foreseen absorption of RRF funds in Germany (DE), France (FR), Italy (IT) and Spain (ES) over the RRF period (2021-26). The dotted lines refer to the actual absorption by these four countries of past EU resources made available under the EU's multiannual financial framework (MFF). The absorption rate is the amount paid to a Member State as a percentage of the total EU budget made available to that country. Year 1 is the first year of the respective programme, i.e., 2007 for the 2007-13 MFF, 2014 for the 2014-20 MFF, and 2021 for the RRF. Pre-financing under the RRF is included in Year 1. The absorption rate of the 2007-13 MFF (black dotted line) is shown as average of the four countries and includes the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the European Social Fund (ESF), while the 2014-20 MFF includes only the ERDF and the CF. Data under the 2014-20 MFF are provisional for the year 2021 (Year 8 in the chart)

Third, the lack of qualifying and profitable projects[87] to be financed by NGEU funds slows the process and consequently, little progress is visible. One explanation is the weak industrial fabric of the EU and the lack of skilled workforce, especially in strategic sectors[88]. As a result, some countries struggle to fulfill their milestones and targets, and the delays observed in the implementation of the NRRPs lead to question the efficiency of NGEU.

8.1.4.3 Spain seems to be on the right track

Spain seems to have a quite successful story with NGEU so far[89]. As of 18 October 2023, €37 bn were received so far in grants, representing 46.4% of the total initial grant amount for Spain. Loans were only included in the plan in the revision that took place in October 2023. So far, no payment in loans was made. Overall, the total payment received by Spain so far represents 22.7% of its plan, and Spain is ranking third in progress of its NRRP (with 29% of milestones and targets fulfilled), which is an indicator of the positive impact of NGEU in Spain.

The Spanish NRRP was amended in October 2023 and increased its value by roughly 135% (from €69.5 bn to €163 bn: the grants went from €69.5 to €79.8 bn, and loans representing €83.2 bn were added). The Spanish NRRP also exceed the RRF's target of 37% of funds disbursed in the green transition and 20% in digitalization as it will respectively invest 39.9% and 25.9% of the funds it has been allocated.

87. Prof. A. Bartzokas from the LSE Hellenic Observatory and the University of Athens identified several possible implementation gaps in the EU RRF, and among them were "lack of timely implementation [and] limited project upstreaming capacity". Source: Growth Lab, Harvard University.

88. See 3.4.

89. The European Parliament, "Spain's National Recovery and Resilience Plan", October 2023.

Spain's amended plan includes 11 lever policies (LPs) observable on Chart 79. Out of 253 measures planned, 111 are reforms and 142 are investments. Reforms aim at improving business demographics and climate, promote entrepreneurship and increase the size and efficiency of companies.

CHART 79.
Spanish National Program: Breakdown of funding by lever policy

Source: EGOV (think tank of the European Parliament)

The main focus will be LP 5 which targets the modernization and digitalization of the Spanish industry and SMEs and for which 33 investments have been planned and €87.8 bn – or 54% of the Spain's NRRP – have been budgeted. Out of the 10 largest investment projects worth €64.2 bn or 39.4% share of Spain's RRF allocation, five are featured in LP 5 with endowed RRF resources of 49.3 bn, equaling roughly 30% of the available RRF allocation (*see Table 10*).

TABLE 10.
Spanish national program : Measures receiving the largest amount of funding

Source : EGOV (think tank of the European Parliament)

The Spanish NRRP also introduces strategic public-private partnerships (PERTEs) in LP5, which are the equivalent of the Important Projects of Common European Interest (IPCEIs) at EU level[90]. Table 11 shows the different areas in which Spain aims at developing public-private partnerships. As of December 2022, about 29% of the budget for these PERTEs projects had been awarded or opened to calls.

TABLE 11.
Execution status of the Spanish PERTE projects (€ millions, as of 14/12/2023)

PERTE project	Public funds	Awarded and open calls
Microelectronics	12,250	–
Renewable energies, hydrogen and storage	10,475	4,957
Electric and connected vehicle	4,295	2,018
Decarbonisation	3,100	–
Digitalisation of the water cycle	2,790	425
Aerospace	2,126	1,844
Social and care economy	1,808	380
State-of-the-art health	1,650	912
Agrifood industry	1,450	1,063
New language economy	1,101	298
Circular economy	792	192
Marine sector	310	250
Total	42,146	12,339

Source: Caixabank research, Portal of the Recovery, Transformation and Resilience Plan

90. See 3.4.3.

However, an industry representative explained to Eurofi that although the program is on course and the government is making progress on the milestones that were sought, according to data and their experience, SMEs are not receiving all the aid they need to boost their investments, to increase their productivity and gain competitiveness. This is due to the fact that the calls for proposals are complex and usually have a very short deadline, so that small and medium-sized enterprises that do not have a specific department to follow these issues often give up access these calls for proposals. To remedy those flaws, they made some recommendations including:

- Improve coordination between the different levels of government to manage public funds,
- Simplify access to resources by, for instance, generating large calls for proposals with relevant budgets, establishing sufficiently reasonable deadlines, standardizing and simplifying the requirements for accessing measures,
- Reinforcing communication and dissemination,
- Introducing fiscal measures, such as adopting new instruments that have proved efficient in other countries and facilitated the financing of some actions...

8.1.4.4 Italy is now keeping up with its ambitious plan

Italy is the main beneficiary of the RRF funds: the country is entitled to receive €191.5 bn of NGEU funds - €68.9 bn in grants and €122.6 bn in loans. Italy has known a rocky start and seems now to continue to have difficulties keeping up with its objectives and spend the money received accordingly.

The Italian NRRP is structured around six fields of intervention that will be targeted through a mix of reforms and investments. Across its six missions, Italy plans to exceed the RRF's expenditure targets by spending 37.5% of its RRF allocation on the green transition, and 25.1% on the digital transformation. All six missions are also required to address three horizontal priorities: youth, gender equality and territorial cohesion.

Italy's NRRP counts 60 reforms to be carried out in the scope of all 6 missions, with a focus on missions 1 ("Digitalization, innovation, competitiveness, culture and tourism"), 2 ("Green revolution and ecological transition") and 4 ("Education and research") (*see Chart 80*). In parallel, Italy has committed to 132 investment measures aiming at increasing the country's growth potential in the long term.

CHART 80.
Breakdown of funding by mission

Source: EGOV

Italy's initial NRRP was said to be above ambitious and has already been re-written by M. Draghi[91] who admitted in December 2021 that it was impossible to keep up with such a plan. In 2022, only 10 out of 27 goals were achieved, and only €12 bn were spent instead of the €40 bn planned. In March 2023, Brussels decided to temporarily freeze Italy's third instalment as it failed to deliver the expected milestones and targets, especially the accommodation for 7,500 university students. In that regard, the Financial Times[92] wrote that Italy "has struggled to keep pace with the demanding reform and investment timetable agreed with Brussels in 2021, particularly since Meloni's rightwing coalition took power last year".

The difficulties encountered by Italy show that money is not the only issue European Member States are facing. In that regard, H. Waiglein, the Director General of the Federal Ministry of Finance of Austria, stated for the Eurofi Magazine[93] that "money is less of an issue than the co-ordination of all markets to deliver goods and services needed for the green transition".

91. Mario Draghi was Italy's Prime Minister between 13 February 2021 and 22 October 2022 and took part in the development of Italy's NRRP.

92. "Will Italy squander its €200 bn opportunity?", Financial Times, 30 August 2023.

93. H. Waiglein, "Green transition and fiscal sustainability", Views, The Eurofi Magazine, September 2023.

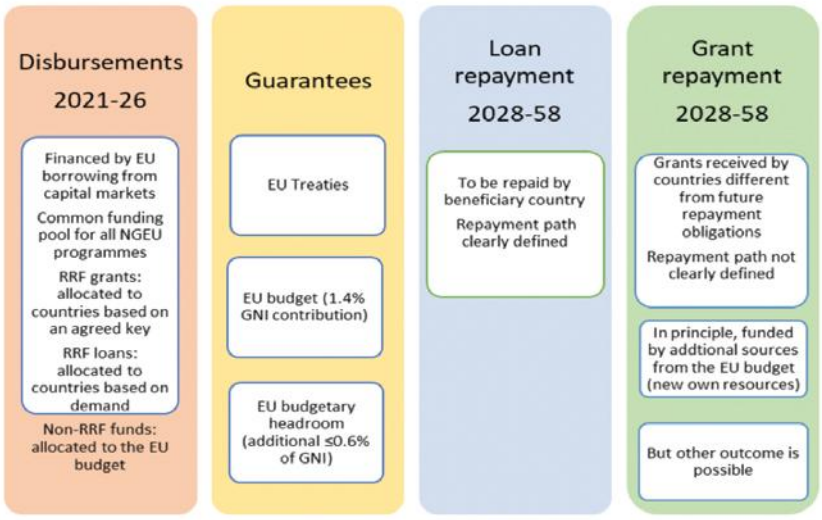
Italy submitted a revised version of its NRRP during the Summer 2023, and the Council adopted it on 19 September 2023. Now that necessary amendments to the plan have been made, Italy seems to be back on track: as of December 2023, the Commission had disbursed €101.8 bn to Italy out of €191.5 bn, and Italy has submitted a fourth payment request.

Nevertheless, to be able to spend funds received faster, Italy could allocate more money to tax credits as "private entities tend to be more nimble than public agencies bogged down in cumbersome bureaucracy", which is the strategy chosen by the US and it seems to have borne fruit so far (*see Section 8.2*).

8.1.5 NGEU is financed by common debt and national resources

Chart 81 highlights the key features of the EU debt issued to finance the NGEU program.

CHART 81.
Key features of EU debt within the NGEU/RRF program



Source: ECB

8.1.5.1 NGEU is by far the largest EU bond-financed program ever

The financing of NGEU relies primarily on common debt. Before the pandemic, the EU was thought to be legally barred from financing its expenditure through joint debt. A recent briefing from the European Parliament[94] highlighted the challenge that designing the RRF represented: "As the EU Treaties do not allow the EU budget to be financed by debt, the RRF had to be run outside the EU budget's framework. (...) The debt taken up for provisioning the RRF is a Commission debt contracted on behalf of the EU, not common debt of the Member States."

"For the RRF, the Commission was exceptionally as a one-off measure authorized to take up a considerable amount of debt. It is to be noted that under the RRF in order to satisfy the requirements of the no-bail out clause (article 125FEU) the Member States do not guarantee another Member States' debt".

To fund the NGEU program, the EU borrows on the capital markets, allowing low-rated countries to benefit from its high credit rating that helps obtain more favorable financial terms[95]. To protect this credit rating, the EU is using the EU budget headroom[96] as a guarantee (see Chart 81, "Guarantees" box). In order to protect the borrowing under NGEU, the EU headroom is 0.6 percentage points higher than the standard one for the period until 2058, as the debt will be gradually reimbursed over the period 2025-2058[97]. Indeed, the average maturity of EU securities is 11 years, and payback deadline are spread out between 2025 and 2058.

It is the first time in the EU history that such a substantial common borrowing and, to a certain extent, risk sharing mechanisms have become characteristics of a EU budgetary plan. To issue the common debt, the Commission resorts to multiple instruments: a combination of medium- and long-term debt issuance across different maturities via EU-Bonds (both regular and green bonds) and short-term via EU-Bills[98].

94. https://www.europarl.europa.eu/RegData/etudes/IDAN/2023/740087/IPOL_IDA(2023)740087_EN.pdf

95. The EU's credit rating (AAA by Fitch and Moody's) is better than the rating of 22 out of the 27 EU Member States.

96. The headroom is the difference between the maximum amount of revenue that the EU can raise for the EU budget and the actual spending from the EU budget.

97. *I.e.*, Member States agreed to a temporary increase in the maximum amount of revenue the EU can call from Member States per year (adding an allocation of 0.6% to the basic own resources ceiling of 1.4% of EU Gross National Income) until all NGEU liabilities have ceased to exist. (source: EU Budget Policy Brief).

98. See "The EU as an issuer: the NextGenerationEU transformation", EU Budget Policy Brief, European Commission, July 2022.

The borrowing strategy to finance NGEU relies on the safety and cost-effectiveness of the way money is raised. In this perspective, EGOV explained that "NGEU is making the EU one of the largest issuers of euro-denominated debt (on average €150 bn a year) and the world's biggest green-bond issuers, in line with the diversified funding strategy"[99]. Indeed, the EU plan to finance up to 30% of NGEU, *i.e.* €250 bn, by issuing green bonds. NGEU green bonds can solely fund eligible green measures.

However, as of July 2023, only €44.2 bn in green bonds have been issued, and about €21.4 bn have actually been allocated and given to states. The pool of planned eligible expenditure for NGEU green bonds, however, stands at €187 bn according to forecasts made by the Commission when assessing the NRRPs[100]. The Commission must also ensure that the use of funds complies with the EU Green Bond framework, and report to investors on the impact achieved.

8.1.5.2 Some uncertainty persists around the resources used to reimburse the common debt

The European Commission has committed to reimbursing the funds borrowed on the markets to finance NGEU in the long run, over the period 2025-2058.

The repayment path of the loan part of NGEU is clearly defined: loans will be repaid by the borrowing Member State. However, the repayment path of the grant part of NGEU has not yet clearly been defined as of January 2024. Two things are certain though: grants received by countries are different from their future repayment obligations, and, as a last resort, all grants will be repaid by the EU budget by 2058 at the latest (*see Chart 81, "Grant repayment" box*).

Several resources are considered to pay back the debt: the Carbon Border Adjustment Mechanism (CBAM[101]), the EU Emissions Trading System (EU ETS), and a digital levy. The EU also contemplates the possibility of new own resources such as a tax on financial transactions, or a new agreement on corporate taxes[102].
In the coming months, Member States must examine the Commission's proposals about the reimbursement of NGEU and will have to make a decision unanimously. The main question is who will incur the repayment costs of the NGEU[103].

Even though NGEU is a solidarity instrument, it has limits: no economically healthy country will accept to incur the risks to repay for weaker countries of the Union. The enhanced economic and fiscal heterogeneities of the Union are largely responsible for this.

8.1.5.3 Is EU common debt a fantasy?

The interest rate on European Union bonds is higher than that of its strongest Member States, and that despite its favorable credit rating.

CHART 82.
Evolution of 10-year benchmark yields for the EU, France, Germany and Spain (in %)

Sources: EGOV, Bruegel, Bloomberg data

99. EGOV, "Borrowing strategy to finance Next Generation EU", November 2022.
100. Data taken from "Degree of implementation of EU green bonds program linked to NGEU", J.-F. Pons, July 2023.
101. CBAM would allow the EU to introduce the same carbon price for domestic and imported products.
102. "L'économie mondiale", CEPII, September 2023.
103. "Plan de relance : 10 points sur les progrès de NextGenerationEU", Le Grand Continent, October 2023.

An article by *The Economist*[104] highlights two important lessons that should be drawn from markets' reaction to EU debt and its interest rates: "one is that investors are indicating it is unlikely that there will be more such joint debt issuance in future (...),the second lesson is that markets think of the EU as something that differs from a top-notch sovereign issuer like Germany or America – the safest bets when it comes to lending money. Such governments have the power to raise taxes when they need to repay creditors. The EU, by contrast, needs to ask nicely for national capitals to send a cheque". Even if the EU budget provides strong guarantee, it does not have the sovereignty over its debt as other sovereign states do.

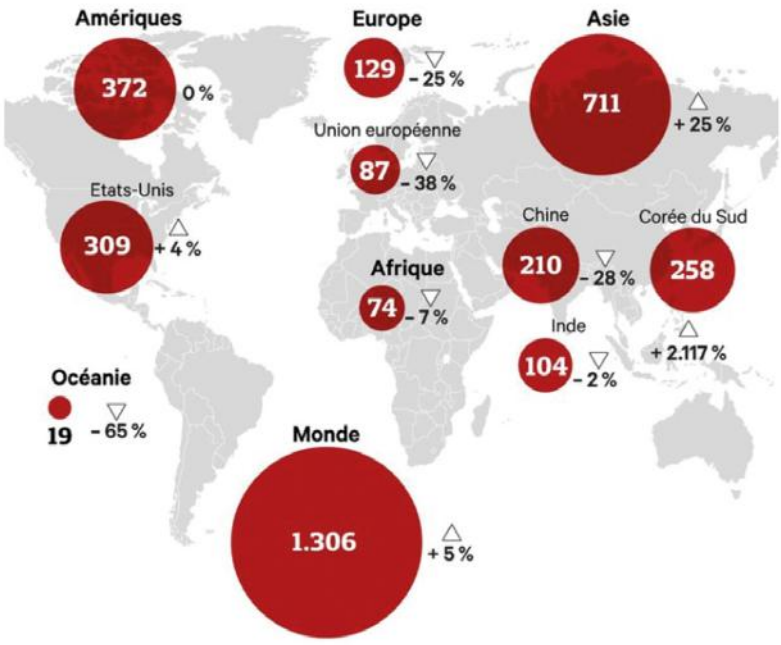
Some indicators can lead to wonder if the common debt issued under NGEU is indeed a first step towards a European safe asset. As explained by the Banque de France[105], "a genuine European safe asset would have several benefits for financial stability and European integration and would facilitate the financing of public policies by reducing borrowing costs". Yet, the current situation is different:

- After two years of issuance, and even though the EU has not faced particular problems to get funds, the EU debt turned out to be less attractive for investors than that of its main Member States[106],
- The fact that NGEU is a unique and temporary initiative implies that EU securities are not going to remain on markets forever, which can have a deterrent effect for investors looking for liquid and easily tradable assets,
- Though liquidity has improved with the introduction of the unified funding approach in January 2023, the current market of EU common debt remains narrow and not deep enough, and so, insufficiently liquid.

A recent study by Trendeo, Fives, McKinsey & Company and the institute for reindustrialization shows the distribution of investment by regions and highlights that despite its significant efforts, the EU struggles to convince investors to invest on its territory (*see Chart 83*). According to this study, investments in the US have grown 4% over the period running from July 2022 to June 2023 compared with the period June 2021-June 2022, amounting to $309 bn. This is undoubtedly mainly due to the Inflation Reduction Act (IRA).

Additionally, even if China recorded 28% less in investments over the same period, investments in Asia have grown by 25%, especially thanks to a $227 bn investment by Samsung in South Korea. By contrast, investments recorded by Europe between July 2022 and June 2023 stood at -25%; this figure even reached -38% in the European Union (compared with the period June 2021-June 2022), which questions the performance of the RRF and the effectiveness of Member States' public spendings.

CHART 83.
Distribution of investment by region
In $bn, between July 2022 and June 2023 compared with the period June 2021-June 2022:
△▽ evolution, in %



Sources: Trendeo, extracted from Les Échos

104. "What markets are trying to tell Europe – and why it should listen", The Economist, October 2023.

105. "A European safe asset: new perspectives", Banque de France Bulletin, April 2021.

106. Op. Cited Le Grand Continent.

Therefore, one can wonder to what extent NGEU is efficient, and what role the IRA plays in such a growth gap between both sides of the Atlantic. Indeed, differences on the efficiency and speed of implementation seem to exist between the IRA and NGEU, potentially threatening to further widen the gap between both regions.

In that regard, the Jacques Delors Institute argues that "at a time when the energy transition is gaining pace, the EU and the United States are actually facing similar challenges: increasing Chinese and international competition, vulnerable strategic value chains, labor shortages, lengthy permitting processes, public sensitivity to activities with a high environmental impact, and demands for a fair and equitable transition. The difference lies within the type of policy answer provided as a result of these challenges"[107].

8.2 Can the IRA widen the gap between the US and the EU?

On 16 August 2022, the Biden administration promulgated the Inflation Reduction Act (IRA), **a $369 bn subsidy package that aims at making the US the global leader in clean tech, notably by cutting CO2 emission by 40% by 2030.** Though it was announced nearly two years after the launch of NGEU, the IRA raises many questions and concerns on the European side.

This part aims at thoroughly describing the IRA and the goal of the Biden administration to make the US the leader in cleantech energy and to reduce its CO2 emissions by 40% by 2030. It also assesses the success of the IRA one year after it was voted, showing that companies from all around the world are attracted to the US, even if structural headwinds mitigate this deeply optimistic assessment.

8.2.1 The IRA is a protectionist-inspired subsidy package that aims at making the US the global leader in clean tech and CO2 emission cuts

8.2.1.1 The IRA gathers a variety of measures worth approximately $400 bn to reach its goals

The IRA is a massive subsidy package that was signed into law by President Biden on 16 August 2023 and that clearly states the US ambition to:

- Become the global leader in the environmental transition by cutting its CO2 emission by 40% by 2032,
- Attract investments on the US territory to reinforce its industrial fabric,
- Enhance innovation in the US to stay at the edge of the digital transition,
- Reinforce its strategic autonomy by weakening China's position at the global level and avoid supply chains disruptions,
- Lowering prescription drug prices.

To do so, **the IRA commits $400 bn in tax credits, loans and subsidies over the next 10 years.** But estimations remain unprecise, and subsidies could tally to up to $1.2 tn over 10 years, depending on the take up as most measures are not capped. These funds focus on several aspects of the industrial policies: investing in domestic manufacturing capacity, encouraging procurement of critical supplies domestically or from free-trade partners, enhancing R&D and commercialization of leading-edge technologies such as carbon capture and storage and clean hydrogen, allocating money to environmental justice and demonstrating equity impacts.

A central element of the IRA – and the most criticized overseas – is the protectionist measures on which it relies. Indeed, to benefit from IRA funds, Local Content Requirements (LCRs) must be met, which establishes a disloyal competition between the US and its competitors.

One of many examples of LCRs is the fact that half of the subsidy for EVs depends on a minimum percentage of critical minerals being extracted and processed in the US or a country with which the US has a free trade agreement, and the other half on a threshold percentage of battery components being manufactured or assembled in North America. Additionally, the final assembly must take place in North America to qualify to the IRA tax credit.

In that regard, the EGOV[108] affirms that LCRs are the biggest issue with the IRA: "LCRs come in gross violation of the international trade architecture that is enshrined in the WTO statutes, of which the most-favored-nation principle is blatantly disregarded".

107. Op. Cited Jacques Delors Institute.

108. "EU's response to the US inflation Reduction Act (IRA)", briefing by EGOV, September 2023.

TABLE 12.
Allocation of the IRA "Climate and Energy" package, $bn

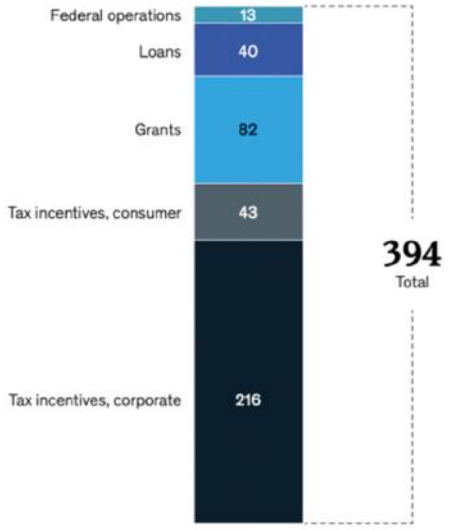
Climate and energy	391
Tax credit for production and investment in clean electricity	161
Air pollution, harmful products, transportation and infrastructure	40
Individual incentives for clean energy	37
Tax credit for clean energy production	37
Tax credit for fuel and clean vehicles	36
Conservation, rural development, forests	35
Subsidies and grants from the Energy Ministry for the increasing efficiency and transmission of electrification	27
Other spending for climate and energy	18

Source: Extracted from the paper : Inflation Reduction Act – Comment l'Union Européenne peut-elle répondre ?", Policy brief n°40, CEPII, February 2023

Table 12 shows the sectors in which IRA tax incentives, grants and loans guarantees will be disbursed. A major part of it ($161 bn) will be directed on clean electricity in the form of tax credit while $40 bn will be spent on air pollution, transportation and infrastructure. Other expenditure items include individual incentives for clean energy ($37 bn), tax credit for clean energy production and for fuel and clean vehicles (respectively $37 bn and $36 bn).

It is unarguable that the IRA's primary goal is to provide incentives for private investments, which is a key difference compared to the European approach focusing on public investment: out of the $393.7 bn allocated to energy and climate funding, $216 bn will be received by corporations in the form of tax credits[109] (*see Chart 12*). Moreover, $43 bn in IRA tax credits aim to make EVs, rooftop solar panels and other clean technologies more affordable, and thus to reduce CO2 emissions. For instance, qualifying new EVs will be eligible for a tax credit of up to $7,500.

CHART 84.
Energy and climate change funding in the Inflation Reduction Act, $ bn



Source: McKinsey&Company
This exhibit reflects analysis of the appropriation figures contained in the Inflation Reduction Act, as well as those reported by the Congressionnal Budget Office and Joint Committee on Taxation. This analysis may differ from the other analysis due to differences in methodology.

8.2.1.2 The IRA is the third piece of law passed since late 2021 that seeks to improve US economic competitiveness, innovation and industrial productivity

The IRA is part of a wider US plan to assert its leadership position on the economic stage and launch a new era of American industrial policy. Indeed, the IRA joins two other pieces of law that seek to improve economic competitiveness, industrial productivity and innovation in the US.

Firstly, the Bipartisan Infrastructure Law (BIL) voted in November 2021 is a piece of law aiming at rebuilding America's roads, bridges and rails, expanding access to clean drinking water, ensuring that every American has access to high-speed internet, tackling the climate crisis, advancing environmental justice and investing in social justice. Over 10 years, the act should allocate an estimated $1.2 tn in total funding, of which $550 bn will be spent on surface-transportation network ($284 bn) and society's core infrastructure ($266 bn) over the first five years.

109. "The Inflation Reduction Act: Here's what's in it", McKinsey & Company, October 2022.

Secondly, the CHIPS and Science Act passed in August 2022 aims at boosting US innovation and competitiveness, as well as enhance US national security regarding semiconductor manufacturing. Out of the $280 bn dedicated to this act, $200 bn will be for scientific R&D and commercialization. Additionally, about $53 bn will go to semiconductor manufacturers, R&D and workforce development and $24 bn worth of tax credits will enhance chip production. The remaining $3 bn will be spent on programs aimed at developing leading-edge technology and wireless supply chains. Overall, the goal is to keep the US the leader of the industries of tomorrow, including nanotechnology, clean energy and Artificial Intelligence (AI).

TABLE 13.
The three main pieces of legislation passed by the Biden administration, (in $bn and %)

	Over 10 years	On average per year	% of 2022 GDP
Inflation Reduction Act	391	39.1	0.2
Chips and Science Act	278	27.8	0.1
Bipartisan Infrastructure Law	1200	120	0.6
Total	**1869**	**186,9**	**0,9**

Source: CEPII[110]
Note: only the "climate and energy" part of the IRA was taken into account in this table, because public spending increase for healthcare is estimated to 0.05% of US 2022 GDP per year

The BIL, the CHIPS and Science Act, and the IRA have partially overlapping priorities and together introduce $2 tn in new federal spending over the next ten years.

Parallelly, President Biden has inaugurated on 29 November 2023 a Council on Supply Chain Resilience[111]. While measures have been taken to bring manufacturing to the US and strengthen supply chains since supply chain bottlenecks peaked during the pandemic, this Council should further work to keep supply chain secure, diversified, and resilient into the future. Both geopolitical and economic benefits are at stake: having secure supply chains vis-à-vis China is key in some fields such as medicine and semi-conductor, and avoiding supply chain disruptions such as those suffered during pandemic fostered will minimize inflationary trends.

8.2.1.3 Firms from all over the world are entitled to receive IRA funds under certain conditions

The IRA favors its territory and people. To fully benefit from full IRA tax credits, industrial manufacturers must meet prevailing wage and apprenticeship requirements; the goal is to build stronger talent pipelines and better-skilled workforce.

Moreover, many IRA-incentives are conditioned to scaling domestic-production or domestic-procurement requirements. Subsidies allocated through the IRA – which represents 0.17% of the US GDP over 10 years – incentivizes foreign companies to relocate their production sites on the American soil, as the allocation of funds is conditioned to certain Local Content Requirements (LCRs).

In that regard, the EVs are an epitome: as mentioned above, to fully benefit from the EV consumer credit of $7,500, the battery must have been at least assembled in North America, and a scaling percentage of critical minerals in the battery must have been recycled in North America or been extracted in a country that has a free-trade agreement with the US.

Similarly, regarding the electricity production, the $15 tax credit per MWh is granted to companies that have a carbon-free process, but these $15 are conditioned to a LCR: companies must use steel, iron or other products that have been extracted in the US[112].

The conditionality on the sourcing site of materials and/or on the assembling site have been claimed to go against World Trade Organization (WTO) principles, and to be a disguised protectionist decision. An article from the FT[113] phrases the contrast in perspective between the US and the rest of the world, especially Europe: "what the US sees as a strategy to reverse deindustrialization in deprived areas, allies have interpreted as a thinly veiled exercise in protectionism because it encourages companies to shift plants and customers to buy American". IRA subsidies are thus distorting trade, but in the particularly tense current economic and geopolitical context, other countries cannot afford to pick a fight with the US and prefer to follow its path regarding industrialization.

110. Op. Cited CEPII Policy Brief n°40.

111. "La Maison-Blanche se transforme en tour de contrôle des chaînes d'approvisionnement", Les Échos, 28 November 2023.

112. Op. Cited CEPII Policy Brief n°40.

113. "A global subsidy war? Keeping up with the Americans", Financial Times, 13 July 2023.

8.2.1.4 The IRA is financed through new corporate taxes and revenues raised by new reforms

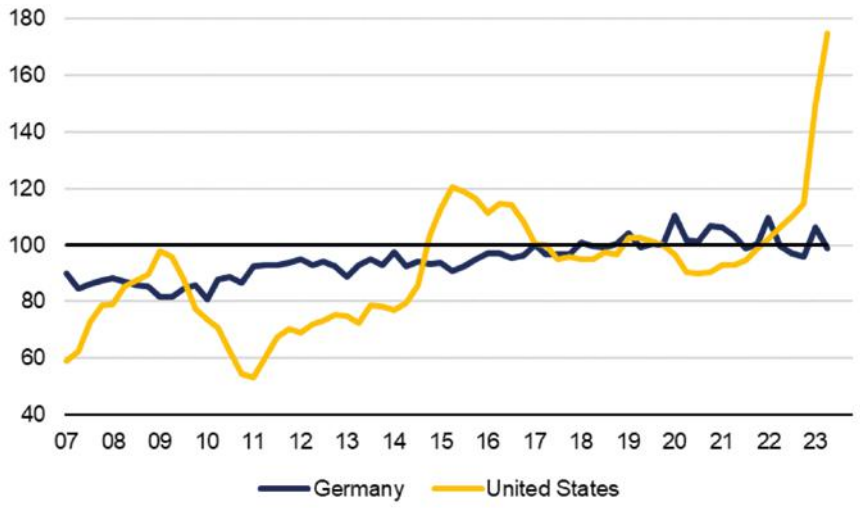
According to figured produced by the Congressional Budget Office (CBO) and the Joint Committee on Taxation, the estimated investments made amount to $369 bn in energy security and the fight against climate change, and $64 bn in the extension of the Affordable Care Act. The funds will be delivered through a mix of tax incentives, grants and loan guarantees. The same sources estimate the revenue raised by these investments to amount to $288 bn through the Prescription Drug Pricing Reform, $124 bn through IRS Tax enforcement, $14 bn through efforts to close the Carried Interest Tax loophole and $313 bn through the establishment of a 15% corporate alternative minimum tax rate for companies with higher than $1 bn of annual financial statement income[114].

The CBO also estimates that the law will reduce fiscal deficits by $237 bn over the next decade[115].

8.2.2 In one year, the IRA already proved very attractive for both US and foreign companies

As written by G. Moëc[116], "the Inflation Reduction Act (IRA) is one of the ingredients of the current resilience of the US economy – showing up for instance in the already visible rebound in manufacturing investments projects – in stark contrast with the increasingly dismal readings on the European economy".

CHART 85.
Private real investment in non-residential structures, index 2019 = 100



Source: DeStatis, US Bureau of Economic Analysis
Note: last observation from 2023-Q2; data are seasonally adjusted and expressed in real term

Chart 85 shows the boom in private investment in non-residential structures on the US territory, while Germany – the industrial heart of the European Union – observes a declining trend: between late 2019 and mid 2023, the volume of private investment in progress has increased by 75% in the US while it remained almost unchanged in Germany.

This gap does not seem to affect only Germany insofar as the IMF World Economic Outlook forecast no economic growth in Italy and a decrease from 2.5% in 2023 to 1.7% in 2024 in Spain.

Given the conditions to benefit from the IRA mentioned above, the latter seems to be undeniably successful at attracting investors from all around the world.

8.2.2.1 American firms are massively investing in the US

Out of the 10 biggest investment projects announced in the first year of the IRA, 6 have been made from American companies (*see Table 13*)[117].

The largest investment worth $30 bn is made by American firm Intel to expand a campus in Chandler, Arizona. Among other investments are a $20 bn investment implemented by IBM to expand the technology ecosystem in New York, and a $20 bn investment by Micron to build the US's largest semiconductor plan in Clay, New York.

114. The IRA imposes a 15% corporate alternative minimum tax on certain corporations ("CAMT"), since Congress focused on the phenomenon of very large publicly traded corporations with significant earnings paying little or no tax, hence the decision to have the CAMT calculated based on book income rather than taxable income.

115. However, as the IRA is uncapped, this figure could be much lower (*See 2.3*).

116. G. Moëc, "In defense of Europe's net zero strategy", AXA Macrocast, 20 November 2023.

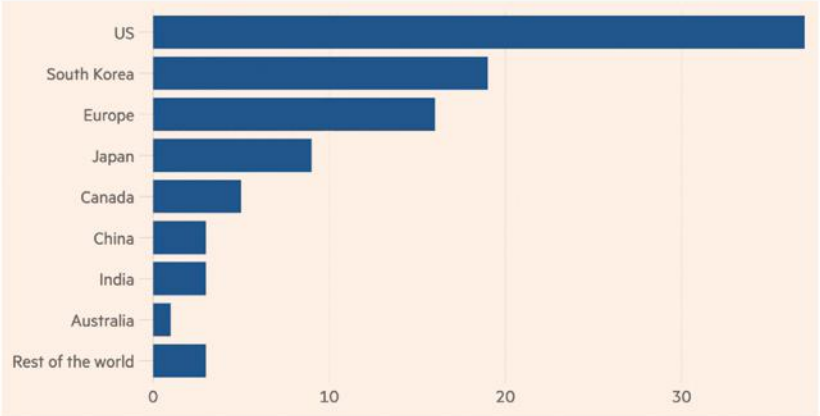
117. "Inside the $220 bn American cleantech project boom", Financial Times, 16 August 2023.

TABLE 14.
The past year's 10 biggest projects, by announced capital expenditure

Company	Investment ($bn)	Location	Company HQ
Intel	30	Chandler, AZ	US
Taiwan Semiconductor Manufacturing Company	28	Phoenix, AZ	Taiwan
IBM	20	Hudson Valley, NY	US
Micron	20	Clay, NY	US
Micron	15	Boise, ID	US
Texas Instruments	11	Lehi, UT	US
LG Energy Solution		Queen Creek, AZ	South Korea
Wolfspeed		Chatham County, NC	US
Hyundai and SK On		Bartow County, GA	South Korea
Honda and LG Energy Solution		Fayette County, OH	Japan and South Korea

Source: The Financial Times

CHART 86.
Number of cleantech projects by investor country since August 2022



Source: The Financial Times

Micron also announced an additional $15 bn investment in Boise, Indiana. Other smaller investments are flourishing, as that of US manufacturer First Solar worth $1.1 bn to open its fifth factory in Iberia Parish, Louisiana.

But as shown by Chart 86, "foreign investors want a stake in US cleantech supply chain" [118].

8.2.2.2 A number of foreign companies are shifting their investment plans to the US to benefit from the IRA

"The flurry of projects comes as US allies roll out their own policies to compete with IRA subsidies that they say have created an uneven playing field" experts of the FT wrote. Indeed, while countries are trying to enhance their industrial policies, they also refuse to be distanced by the US and to miss on significant opportunities to secure a stake in the US supply chain.

- **Asian companies are leading the capital influx to the US.**

South Korea makes the running with 20 projects announced in one year, with 3 of them being among the 10 biggest projects (*see Chart 9*). Other important investments have been made by Singapore-based Maxeon Solar Technologies which announced a $1bn solar cell and panel facility in Alburquerque, New Mexico, by Taiwan Semiconductor Manufacturing Company with a $28 bn investment in Phoenix, Arizona, or by Japanese company Toyota which decided an $8 bn investment in its battery manufacturing plant in North Carolina, where the state offered at least $900 mn in incentives.

- **Europe is the second largest foreign investors since the passage of the IRA and the Chips Act.**

On the European side, 19 investments over $100 mn in the US have been registered within the first year of the IRA. This is particularly detrimental to the EU strongest country – Germany – which has the most developed industrial

118. "The impact of the Inflation Reduction Act, one year on", Financial Times, 17 August 2023.

fabric of the Union. For instance, Meyer Burger, a Swiss solar manufacturer, announced last month that it was putting its German expansion plan on hold to open a $400 mn factory in Colorado to receive tax credits from the IRA. Besides, Dutch-headquartered automotive constructor Stellantis announced in February 2023 a $155 bn investments to build new plants in Indiana.

An article from the Financial Times[119] also warns on the overall industrial situation of Germany: "even before the IRA came into force, there were signs that investment was flowing out of Germany. Other European firms are willing to invest on the other side of the Atlantic; it is namely the case of the Italian electricity producer Enel which plans to spend $1 bn in Oklahoma, or the Swedish battery manufacturer Northvolt which is attracted by a nearly $8 bn tax credits for its investments on the US territory[120].

According to a study by the Cologne-based German Economic Institute, the gap between outbound investments by German companies and business investment into the country in 2022 was the largest on record: **more than €135 bn of foreign direct investment flowed out of Germany and only €10.5 bn came in".**

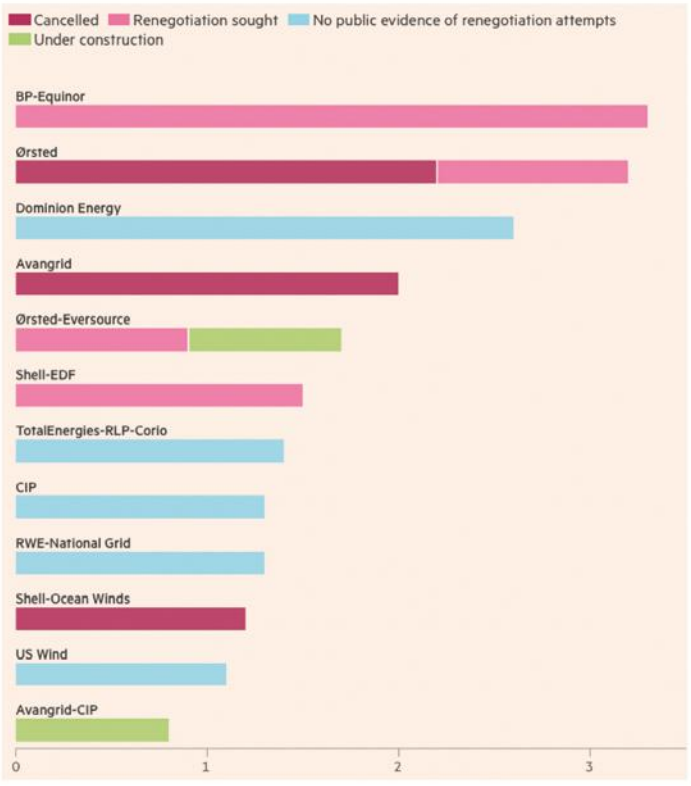
8.2.3 Structural headwinds mitigate the success of the IRA

The deeply optimistic assessment of the IRA is counterbalanced by the fact that not all the investment projects announced end up materializing in the US. Indeed, major investments have been cancelled in the recent weeks, and this could potentially hinder the swift decarbonization of the US economy intended by the IRA.

An article from the Financial Times[121] listed several cancellations of projects in the green energy sector. Namely, the global leader in offshore wind energy Ørsted abandoned two projects aiming at delivering 2.2 gigawatts of power to New Jersey early November, Navigator CO2 cancelled its $3 bn project regarding carbon capture and storage in October, and Ford announced pushing back its $12 bn in Electric Vehicles investments.

Several reasons are accountable for these cancellations. Among them are "high interest rates, supply chain constraints and impediments to permitting new infrastructure. Certain projects have also stalled due to a lack of guidance on tax rules and strict domestic content provisions in the new law" [122].

CHART 87.
Contracted capacity, gigawatts



Source: The Financial Times

119. "A global subsidy war? Keeping up with the Americans", Financial Times, 13 July 2023.

120. "Industries vertes: face à l'Europe, l'Amérique de Biden prend l'avantage", Le Figaro, 7 July 2023.

121. "Green energy investment headwinds threaten Joe Biden's climate targets", Financial Times, 4 November 2023.

122. "Green energy investment headwinds threaten Joe Biden's climate targets", Financial Times, 4 November 2023.

Additionally, the clean energy sector remains expensive, and uncertainty about the future is making companies question their investments as evidenced by Chart 87: at least 2 projects have been fully cancelled, and more than 2/3 of Ørsted's massive project has been cancelled as well. Besides, 4 other projects representing about 6.5 gigawatts are expected to be renegotiated.

On the one hand, US offshore wind sector is currently at risk as "more than half of all US offshore wind contracts have been terminated this year or are at risk of being ended", which threatens the Biden administration's ambition to deploy 30 GW of offshore wind power by 2030. On the other hand, "large-scale wind and solar projects built on land have been hit by financing costs related to interest rates and a cumbersome process to connect far-flung generation to electric grid". Indeed, it took only three years in 2015 from the interconnection request to commercial operations for such projects, against five years in 2022, indicating that "the backlog is worsening as more projects are attracted due to the incentives in the IRA".

Regarding the strained profitability of projects, there are two main explanations. On the one hand, costs have exploded due to the rise in costs of steel, copper and other scarce metals that are necessary to build wind turbine. On the other hand, governments refuse to increase the price of electricity in order to protect the consumers. Other logistic issues such as the lack of port capacity to berth a boat transporting wind turbines have been brought to explain the termination of some contracts.

The offshore wind sector is not only floundering in the US. Indeed, a recent podcast by F. Lenglet[123] explained that there was a bubble asset on windmill project and that it has burst, leading a significant number of projects to be interrupted or cancelled and crippling the commitment of countries of Northern Europe to multiply by 10 their offshore wind production within the coming years.

Other headwinds are visible in the EV sector[124]. First, the transition to EV has become highly political and polarized: EVs represented between 14% and 25% of car sales in Democrat states such as California, Washington and Oregon while it represented less than 2% in Republican state like Oklahoma, Western Virginia and Mississippi. The conditions imposed by the IRA to be eligible to the $7,500 tax credit have also led carmakers to rethink their strategy. Indeed, the price of qualifying new EVs is capped at $55,000 and this drives prices down, implying profitability issues for manufacturers who are consequently forced to cancel or delay their investment projects.

Moreover, the protectionist-inspired conditions to get IRA funds could end up being a hurdle for companies to meet demand for critical minerals such as nickel by exclusively relying on domestic sources and free-trade partners.

Eventually, the IRA could also become the victim of its own success in the coming years. Firstly, with little constraints on tax credits, an increasing amount of companies are benefiting from them, which could significantly raise the bill of the IRA over 10 years, and could push federal debt higher. In that regard, the IMF forecast the US public deficit to remain above 5.5% of its GDP for the next ten years – with the IMF announcing a public deficit between 7.5% and 8.2% of GDP in 2023, and debt could go as high as 138% of GDP in 2028[125].

Furthermore, the US could face a lack of skilled workers and raw material constraints[126]. In that regard, the FT wrote that "more than 1mn US jobs for computer scientists and engineers risk going unfilled by the end of the decade (…) and the US faces a shortfall of 500,000 construction workers this year alone as it tries to meet demand fueled by the new factory announcements".

8.3 The EU seems to be distanced by the US in the race to clean energy, competitiveness, and industry

Even if NGEU, was launched two years prior to the voting of the IRA, and that the EU has afterwards launched other initiatives such as REPowerEU and the GDIP, the EU seems to fall behind the US in the race to clean energy, competitiveness and industry. This part shows that both external and inherent features of the EU can explain that the latter is lagging behind the US: the current global context is more favorable to the US than to the EU, and the American instruments seem also more efficient than in the EU. The second half of this part focuses on recommendations for the EU to improve its competitiveness and its overall economic health to fully reap the benefits of NGEU.

123. F. Lenglet, "Mauvais vent sur les éoliennes: la bulle spéculative explose !", RTL, 23 November 2023.

124. "L'Amérique se divise aussi sur la voiture électrique", Le Figaro, 17 November 2023.

125. "Pourquoi les États-Unis s'endettent à tour de bras", Les Échos, 28 November 2023.

126. "Inside the $220 bn American cleantech project boom", Financial Times, 16 August 2023.

8.3.1 Global context is more favorable to the US than to the EU

The EU has been through a sequence of crises over the past few years that have further exacerbated existing detrimental trends in various areas of the economy[127]. Listed below are the different elements of the global context which are undeniably hampering the reindustrialization of Europe and undermining the effects of the massive investments under NGEU.

- **The EU has suffered from importing energy at very high prices.**

"European industry has long struggled with energy prices substantially higher than in the US and parts of Asia. Over the 10 years to 2020, European gas price were on average two to three times higher than the US, according to the International Energy Agency".

Besides, the major difference between the United States and the Euro area is that the former produces its energy, whereas the latter imports it. Therefore, contrary to EU countries, the US has not experienced any external shocks and benefits from an external surplus for energy; this is a very different situation from that of Europe, which saw its energy price explode.

Therefore, one of the motivations of REPowerEU – and to a lesser degree of NGEU – is to reduce Europe's dependency on fossil energy and thus re-establish a more favorable trade balance while reinforcing its open strategic autonomy.

- **The EU has few raw material resources.**

Commodities on Europe's territory are scarce. Oil, natural gas and metals are at the basis of industrial production; the insufficient level of supply of such resources to respond to the demand forces the EU to import them. This has a double effect: 1) it leads to poor trade balances, and 2) it makes the EU dependent on the rest of the world for its consumption of raw materials, which hampers the objective of open strategic autonomy.

This is all the more problematic as the EGD, the FF55 and REPowerEU involve "an unprecedented increase in cleantech components and raw materials needs. The demand for batteries for electric storage and electric mobility could increase fourfold by 2030 and more than sevenfold by 2035. This implies a growth in demand for strategic materials such as lithium, graphite, cobalt, nickel or manganese"[128].

- **Europe's ageing population is not attractive for companies.**

Demographics in the Eurozone are less dynamic than in the US[129], leading to a future decline in labor force that will reduce potential production, tax revenues, etc.
Additionally, Europe's ageing population does not make it very attractive to establish new industrial production capacity, especially as it gives rise to structural recruitment difficulties.

- **The workforce is cheaper, better-skilled, more productive in the US than in the EU.**

Labor productivity increased by only 14% in the Eurozone between 1998 and Q3 2022 compared to 62% in the US. Reasons explaining this gap includes better education, higher spending on R&D and a larger volume of hours worked in the US. Additionally, though European workforce seem less performing that the American one, unit labor costs are rising much faster in the EU than in the US, further increasing the costs for companies in the EU.

- **High public debt and fiscal deficits in the EU hampers competitiveness and effectiveness of companies.**

Unlike the United States, the Eurozone countries do not issue the world's currency.The overall economic and fiscal health of certain EU Member States are further hurdles to their reindustrialization and attractiveness. Indeed, as long as no structural reforms are steered, high public debt as well as important fiscal deficits are limiting the possibility of the most highly indebted countries to help reindustrialization through public funding[130]. In that respect, the RRF is trying to link the approval of recovery and resilience plans to the country-specific recommendations whereby Member States needed to include structural reforms in their plans to address long standing issues, among which fiscal sustainability.

- **Germany, the manufacturing pillar of Europe, is being forced to review its growth model and has been in recession in 2023.**

Germany needs to review its industrial model which was built on low-cost energy imported from Russia and dependent on its exports particularly from China. The ability to increase fiscal deficits to support companies, the

127. See Eurofi Macroeconomic Scoreboard.

128. Op. Cited Jacques Delors Institute.

129. America's working age population – those between 25 and 64 – rose from 127 million in 1990 to 175 million in 2022, an increase of 38%. By contrast, in Western Europe, the working-age population rose by 9% during that period, from 94 million to 102 million. Source: Eurofi Macroeconomic scoreboard, September 2023.

130. See 3.3.

strong industrial culture, and the high skills of the population point to a temporary weakness in growth. But population ageing, stagnant productivity, the cost of the energy transition and competitiveness problems could lead to lasting weak growth.

All in all, European firms face costs explosion in terms of energy, skilled labor, tax law and environmental regulations, while simultaneously, the US and China fight to attract industrial activities and employment.

It has to be emphasized that the industrial decline of the EU started decades ago; as written in a recent article of the Financial Times[131], "one moment of truth for the EU was in the early 2000s, when the internet technology boom created dozens of major US conglomerates, but hardly any in Europe. In the decades since, EU companies have failed to come even close to the likes of Apple, Alphabet or Amazon, or challenge the scale of Chinese rivals such as Alibaba. Now EU policymakers are very concerned that the next technology revolution – in artificial intelligence and quantum computing – will similarly pass Europe by and further widen the gulf with the world's two economic superpowers".

8.3.2 The US employs instruments that are more efficient than the EU, and qualitative differences in the approaches are also observed

The IRA is very attractive for firms worldwide, and its success relies on various elements. First, the focus is on the market, firms and private investment. The US benefits from a genuine single market that enables companies to achieve economies of scale. The focus of NGEU is on EU Member States and public investment rather than the single market. Moreover, the IRA resort to massive tax credits, which cannot be implemented in the EU because tax policies remain national.

Besides, the US has a genuine industrial policy: the IRA includes Local Content Requirements (LCRs) that automatically favor the US over international competitors and attracts companies which want to benefit from IRA subventions. In that regard, the US has already favored its national economy for almost a century with the *Buy American Act* of 1933 which requires the US government and third parties to prefer US-made products in its purchases, with legal requirements changing according to sector, price and competition.

This is in profound contrast with the European approach regarding industrial policy: for decades, the EU has favored competition policy and free trade over having a genuine industrial policy with a community preference. This absence of EU industrial policy is reflected in the current struggles in the progress of NGEU.

Additionally, one of the main differences between the IRA and NGEU is that the former massively grants subsidies and tax credits to private companies and citizens, while the latter follows a bureaucratic intermediated procedure where the Commission distributes grants and loans to national public authorities which then award it to private sector agents.

This burdens the efficiency and the speed of the fund allocation and disbursement, even if it is true that the disbursement by the Commission is made upon evidence that milestones and targets – *e.g.* signature of contracts/ grant awards – have been fulfilled and thus that Member States have supported private companies and citizens. While everything is centralized in Europe, IRA funds swiftly and efficiently flow through more than a dozen federal agencies, with 5 main agencies handling 96% of the funding.

Furthermore, available IRA funds are spent almost immediately while halfway through its lifetime, only one third of NGEU funds have been spend. Indeed, the Member States – which have never before benefited from so much money – seem to be struggling to absorb all the funds made available to them.

8.3.3 Highly indebted Member States need to review the composition of public spending and favor quality over quantity in order to have new margin to increase productive public investment

Eurofi's Macroeconomic Scoreboard shows that EU countries with the highest level of government expenditure as percentage of GDP are those with the least competitive firms and that excessive level of public debt does not fuel productivity growth and employment. In such a context, it has become urgent to achieve a credible and ambitious EU agreement on the review of the Stability and Growth Pact in order to achieve sufficient fiscal discipline in all parts of the EU.

In that regard, D. Cahen and J. de Larosière made some recommendations[132].

131. "EU's plan to regain its competitive edge", Financial Times, 5 November 2023.

132. J. de Larosière & D Cahen, "Reforming the Stability and Growth Pact", Eurofi Regulatory Update, April 2023.

8.3.3.1 Public investments should not be excluded from a country's deficit and debt calculations

There are huge public spending needs, given new investments for the green and digital transitions, education, and healthcare. But a special treatment for growth-enhancing expenditure would not be helpful. It comes from the illusion that public financial means are not scarce. In reality, it is a matter of refocusing the priorities. Unproductive spending needs to be replaced by productive public spending.

It would be a grave mistake to push the extreme fiscal limits in the present situation. Investment-friendly rules – such as the golden rule to protect public investment implying a separate capital account – can lead to excessive borrowing and weaken the link between fiscal targets and debt dynamics, fostering potential risks to debt sustainability. In addition, as stated by an ESM paper[133], "creative accounting and the reclassification of unproductive expenditures as investments to circumvent rules could challenge monitoring and enforcement, alienate the targets from the numbers and reduce transparency".

Strong fiscal positions are needed to face the challenges of infrastructure investments and ecological policies. The last thing needed would be to deteriorate current imbalances budgets.

The future depends on:

- a consolidation of present weak fiscal positions,
- a shift toward quality of expenditure and investment.

With the amount of liquidity created in the past years, no more redistributive expenses are required. The latter must be reined in and adequate space for public investment must be allowed.

8.3.3.2 The quality of public spending and composition of public finances must prevail over quantity

Fiscal policy should ensure a composition of public finances that is both growth-friendly and sustainable. It has to be recognized that the shift towards more productive investment will require substantial political effort because presently public investment only accounts for some 4% of GDP while current expenditure represent almost all public expenditure.

In this perspective, putting in place early warning mechanisms to prevent unsustainable public finance trajectories would be required. Indeed, a country whose share of public expenditure reaches record levels in relation to the European average should be subject to special discipline.

The fact that money has been thrown at problems for years has worked against supply-side policy. In order to raise growth potential, it is necessary to deal not only with stimulating demand and reducing unemployment but also boosting productive investment and productivity gains, which have been the orphans of this story.

In an extreme case, stimulating demand does not translate into increased production, but leads to a widening of our trade deficit if countries do not have efficient production systems. In this respect, the quality of public spending has become an absolute imperative: as much as we need to fight against unproductive spending, we can encourage the financing of infrastructure spending (including research) that can be financed by debt.

8.3.4 The EU needs to design and implement a genuine industrial policy

8.3.4.1 The EU needs appropriate competition rules to boost its industry

The recent paper of the European RoundTable[134] (ERT) reminds us that the EU's competition policy is an essential pillar of a comprehensive industrial strategy for the Union. The Commission should assertively deliver a competition policy that reinforces the role of open markets and incentivizes European firms to compete effectively, both across the internal market and on the global stage. Such a policy should also foster the emergence of European industrial and financial champions able to compete on the international stage: merger decisions should seek the benefits for the entire single market, not only the markets of individual Member States and should be assessed regarding global competition and trends.

An effective industrial policy could also rely on state aid for earlystage innovations for the digital and green transitions as well as for key strategic sectors when market forces alone are insufficient. The EU must offer faster and more efficient procedures to entice European companies to invest at home rather than being lured away by attractive and unbureaucratic incentives in the US and elsewhere.

133. "EU fiscal rules: reform considerations", ESM Discussion Paper 17, October 2021.

134. "Securing Europe's place in a new world order", ERT Vision Paper. 2024-2029, 26 October 2023.

8.3.4.2 State aid rules must be carefully relaxed insofar as they could jeopardize the Single Market because Member States have diverging fiscal capacities

In the EU, tax policy remains the preserve of Member States so it has relaxed rules on state aid to deter companies from redirecting investment to the US[135]. Indeed, the Temporary Crisis and Transition Framework (TCTF) of March 2023 can be seen as a European response to the financing gap between the EU and the IRA.

In the wake of the Covid-19 and Russia's invasion of Ukraine, Brussels decided economic emergency measures and abandoned the single rule book: rules on the permissibility of state aid and national subsidies were lifted and EU oversight of its members' deficits and debts were suspended. But the FT reminds us that **"the EU's state aid rules were drawn up to protect poorer states with less fiscal firepower from the richer states that would otherwise be able to pump cash into their national champions and give them an unfair advantage.** That, say some officials from mainly southern and eastern countries, is exactly what has happened.

Governments in countries such as Germany and France, in the name of economic stability for the entire bloc, have given their own companies the financial clout to outcompete their EU rivals, trampling on the safeguards of the single market in the meantime"[136]. Indeed, France and Germany accounted for half of the €733 bn in state support that Europe approved between March 2022 and August 2023. **The state aid explosion showed by Chart 88 has thus given Member States, particularly richer ones, the incentive to keep the rules as they are, but this situation also brings about fundamental disequilibria insofar as fiscally sound Member States can afford to provide financial assistance to their economies, while fiscally weak countries cannot, which worsens the existing heterogeneities within the Union.** Therefore, without adequate safeguards and limits, a relaxation too loose risks fragmenting the Single Market.

CHART 88.
Total state aid by EU27 countries (€bn)

Source: The Financial Times

EGOV (the think tank of the European Parliament) deems that in the continuity of the pandemic and the War in Ukraine, "the EU, to counter the IRA's negative effects on EU industry, decided upon additional support to industry to be made available through the relaxation of EU state aid rules. This is based on an extension of the more generous application of state aid rules in response to the Russian invasion of Ukraine, for which the Temporary Crisis Framework was created in March 2022. On 9 March 2023, its latest modification transformed it into the Temporary Crisis and Transition Framework (TCTF), which *de facto* also made it a response to the IRA. The framework uses the flexibility foreseen under state aid rules to support the economy. In 2022, the Commission declared specific categories of state aid compatible with the Treaty if they fulfil certain conditions"[137].

However, the Agefi warns that, as there is no European fiscal capacity, a generalized relaxation of the state aid rule risks jeopardizing the single market because Member States have diverging fiscal capacities[138]. In the same spirit, Belgian Prime Minister A. de Croo told the Financial Times[139] that "the EU's policy of relaxing state aid rules is the exact opposite of what is needed to regain competitiveness in response to high energy costs and generous US tax breaks" and that "the EU should instead deepen its single market and put in place bloc-wide incentives for industry".

135. "Industrialists call for deeper political union in the EU on energy", Financial Times, 14 November 2023.

136. Op. Cited FT.

137. "EU's response to the US inflation Reduction Act (IRA)", briefing by the think tank of the European Parliament, September 2023.

138. "Les aides d'État restent sous contrôle étroit en Europe", Agefi, 30 August 2023.

139. "More state aid will not help Europe compete, warns Belgian PM", Financial Times, 5 December 2023.

8.3.4.3 IPCEIs should be continued and enhanced

Important Projects of Common European Interest (IPCEIs) are useful instruments that enable Member States and the EU to support certain industries without going against international competition rules. It relies on a bottom-up approach insofar as private companies are involved in the projects since their beginning, and Member States remain the drivers of the projects all along.

IPCEIs were created in 2014 and allow firms to receive state aid under the EU state aid rules in complement to private funding in order to promote innovation in strategic industrial sectors.
They have known an increasing success since 2018: at least one IPCEIs has been approved each year by the Commission since 2018, with significant amounts engaged: the approved state aid along with the expected private investments into research and development of the 7 IPCEIs so far add up to almost €80 bn. Moreover, the increase in the number of participating Member States and companies observable in Chart 89 shows a positive trend. IPCEIs are also supported as part of the NRRPs.

CHART 89.
Approved IPCEIs

	First IPCEI on Microelectronics (2018)	First IPCEI on Batteries (2019)	IPCEI Fehmarn Belt fixed rail-road link (2020)	Second IPCEI on Batteries – EuBatIn (2021)	First hydrogen IPCEI – Hy2Tech (2022)	Second hydrogen IPCEI – Hy2Use (2022)	Second IPCEI on Microelectronics and Communication Technologies (2023)	Total
Participating companies	29	17	1	42	35	29	56	209 180*
Participating projects	43	22	1	46	41	35	68	256
State aid approved (EUR billion)	1,9	3,2	9,4	2,9	5,4	5,2	8,1	36,1
Expected private investments (EUR billion)	6,5	5	NA**	9	8,8	7	13,7	50
Participating Member States								21 with UK included as a Member State, plus Norway participated in at least one IPCEI

*Excluding the companies that participated in more than one IPCEI **A study confirmed this projects creates a positive socio-economic return for the entire EU

Source: European Commission

Six approved IPCEIs falls into three categories: microelectronics value chain, batteries value chain and hydrogen value chain. A seventh IPCEI has been approved to enhance the territorial integration of the EU.

Microelectronics value chain

So far, two IPCEIs in the microelectronics value chain have been launched. These IPCEIs comprise 100 projects in 14 Member States including up to €10 bn state aid which is expected to unlock more than €20.2 bn of additional private investment.

32 companies from 5 Member States take part in the first IPCEIs on Microelectronics that was approved on 18 December 2018. The project's overall objective is to enable research and develop innovative technologies and components that can be integrated in a large set of downstream applications such as energy efficient chips, power semiconductors, compound materials, advanced optical equipment and smart sensors.

The second IPCEIs in the field of microelectronics was approved on 8 June 2023, focuses on communication technologies, and involves 68 projects from 56 companies coming from 14 Member States. The project's overall objective is to enable digital and green transformation by creating innovative microelectronics and communication solutions and developing energy-efficient and resource-saving electronics systems and manufacturing methods.

Batteries value chain

So far, two IPCEIs in the ecosystem of batteries have been launched. These IPCEIs include 59 companies in 12 Member States including up to €6.1 bn state aid which is supposed to trigger more than €13.8 bn of additional private investment.

17 companies from 7 Member States have come together for the first IPCEI in the field of batteries approved by the Commission on 9 December 2019. The project focuses on research and development activities to deliver beyond

state-of-the-art innovation across the batteries value chain, from mining and processing the raw materials, production of advanced chemical materials, the design of battery cells and modules and their integration into smart systems, to the recycling and repurposing of used batteries.

The second IPCEI on batteries is called European Battery Innovation (EuBatIn) and was approved on 26 January 2021. 42 companies from 12 Member States are participating in this project. The IPCEI EuBatIn will cover the entire battery value chain from extraction of raw materials to recycling and disposing the batteries with a strong focus on sustainability.

Hydrogen value chain

So far, two IPCEIs in the hydrogen value chain have been launched. The two IPCEIs include 59 companies in 16 Member States and Norway including up to 10.6 bn state aid which is expected to unlock more than €15.8 bn of additional private investment.

The first hydrogen IPCEI Hy2Tech was approved on 15 July 2022 and gathers 35 companies from 15 Member States. The project's objective is to contribute to the development of important technological breakthroughs in the hydrogen technology value chain.

The second hydrogen IPCEI Hy2Use was approved on 21 September 2022 and gathers 29 companies coming from 13 Member States.

Fehmarn Belt fixed rail-road link

A seventh IPCEI has been approved on 20 March 2020: the Fehmarn Belt fixed rail-road link, which is key in the cross-border integration of central and northern Europe. The Fehmarn Belt coast-to-coast infrastructure which will link Denmark and Germany and

IPCEIs are key strategic instruments with regards to the implementation of the EU Industrial Strategy. An IPCEI brings together knowledge, expertise, financial resources and economic actors throughout the union, as to overcome important market or systemic failures and societal challenges which could not otherwise be addressed.

Since IPCEIs are supported from national budgets, Member States are in the driving seat to form an IPCEI, identify the scope of the projects and select participating companies and projects. A centrally EU IPCEI fund does not exist, but IPCEIs require the approval of the European Commission under state aid law.

IPCEIs are a way forward towards a European industrial policy and enhance the competitiveness of the Union at a time where it most needs it. As P. Gentiloni told *Le Monde*[140], the EU "will not win the race to competitiveness only with regulations". IPCEIs are a promising way forward and could be extended to other strategic sectors such as health, solar panels and even a European cloud. But uncertainty remains around the financing of such initiatives: is more common debt the key? Only the reimbursement of NGEU will tell if a European fiscal union can emerge, or if it is doomed to remain a pipe dream.

8.3.4.4 The EU needs to accelerate the single market while re-establishing a community preference

With the Single Act of 1986, the EU has abandoned the community preference, and this limitless openness of trade has undoubtedly contributed to the weakening of industries in certain EU countries. However, experts such as French Nobel Prize of Economics M. Allais warned in the early 2000s about the threats of an unregulated economic globalization and the detrimental effects it would have on the various regions of the world, with a focus on European Union. He advocated in his work **the need to build a European community based on a democratic political structure as well as on a community preference and an appropriate protection of the community single market.** He also suggested that the European Treaties, especially the Article 10 of the Treaty of Rome, were revised as to introduce a reasonable level of protectionist that would always put the best interest of the European community first. His proposal was the following: "In order to safeguard the harmonious development of world trade, a reasonable community protection must be ensured regarding imports from countries whose exchange rate wage levels are incompatible with the abolition of all customs protection".

Furthermore, the potential of the single market has not yet been fully tapped. Indeed, the IMF estimates that further integration of the single market would enable the EU to gain up to 7 pp of GDP. In that respect, the ERT[141] made some recommendations to remove single market barriers: "the European Commission must spearhead an 'encompassing program' to shape a common market across all policy areas, including energy, digital, capital, environment and defense. It should proactively compel EU Member States to promptly remove unlawful or

140. "L'Europe a un problème de compétitivité", *Le Monde*, 17 November 2023.

141. Op. Cited ERT Vision Paper 2024-2029.

unreasonable barriers and burdens *via* mechanisms like the European Semester, guaranteeing the free circulation of goods, services, people, capital and data. There should also be a concerted effort to harmonize and simplify the implementation of EU Regulations, Directives and Delegated Acts, as fragmentation makes it difficult for businesses to compete fairly across the single market". A collaborative and genuine single market would be beneficial for the overall union and to secure Europe's place in the new world order.

The growing inequalities both at regional and global levels as well as the fierce competition that put pressure on workers and the environment are increasingly observable. Re-establishing a community preference in Europe would also reinforce the development of a European industrial policy, the multiplication of IPCEIs and the emergence of European industrial companies. It also seems to be an adequate response to the LCRs at the heart of the American IRA.

To conclude, several salient points must be emphasized.

To date, **the main issue in the EU is not essentially one of financing, but of carrying out investments that could consequently give rise to a need for financing.**

With €370 bn of excess savings in 2023, Europe has significant financial resources to engage in the green and digital transitions but lacks adequate investment projects in spite of the different EU plans that have been launched over the past years. In other words, the additional financing needs assumed according to the Commission's calculations for additional investments in the climate transition (+€350 m/year) and digitalization (+€150 bn/year), have not materialized, as investments have remained stagnant.

With regard to the ecological transition, all public and private reports confirm that the EU is still a long way from the levels of investment required to meet commitments (FF55). Roughly speaking, to successfully achieve the transition, the investment efforts should be multiplied by 2 to 3. For this to work, a positive investment-financing feedback loop would have to be triggered. This is what the US has achieved with the IRA. What is puzzling is that they have attracted including European companies on their territory – all the more since energy prices are cheaper on their side of the Atlantic!

The multiplication of European investment plans over the past years underlines the EU's standardization effort. In addition, the RRF is a well-designed innovative performance-based instrument which combines reforms and investments, emphasizing the effort of the Commission to get results. Nonetheless, external factors tend to limit the speed and the impact of the program. The solidarity and ambition demonstrated in NGEU are undermined by the Recovery and Resilience Plan being fragmented along national lines. Indeed, 27 national plans have been submitted to the Commission with no enhanced cross-border dimension, even though Member States have similar needs regarding the digital and green transitions.

Furthermore, the RRF offers one more advantage to Member States: expenditure financed by RRF grants does not add to national debt and deficits, and thus provides an important support to high-quality investments and reforms without subtracting from the available fiscal space.

When qualitatively comparing NGEU and the American IRA, one thing is striking: the American funds are easily and quickly accessible and work as an incentive to achieve the fixed objectives, whereas national and European bureaucracies make the progress of spending NGEU funds cumbersome and relies heavily on prohibitive rules. In that respect, some experts also pointed out to the fact that the EU does not have the fiscal means of the US, and therefore needs to rely much more on the approach of ETS combined with a well-designed subsidy/industrial support.

The speed of deployment of the IRA and the whopping number of companies that have announced investments on the American soil indicates the success and the simplicity of the IRA one year on. By contrast, the deployment of NGEU is slower as it is impeded by the lack of skilled workforce and the burden of bureaucracy.

Furthermore, NGEU does not reap the full benefits of the European single market. This is less attractive for investors than the vast and unified American single market which offers significant opportunities and economies of scale. As a result, 30.5% has been spent halfway through the lifetime of the project. Additionally, some European companies have been attracted by the IRA and have thus shifted investment to the US, including Total Energies, MBW and Northvolt.

In light of this situation, what should be done?

1. Rewarding risk taking and long-term investment.

Long-term investments incur a risk – especially linked to technological and regulatory updates, as well as uncertainty – and demands the immobilization of resources in the long run. The development of technologies necessary to the green transition thus requires investments in R&D, as explained by a recent study from McKinsey & Company[142]: "40 to 50 percent of the emissions reductions needed by 2050 are expected to come from technologies that are currently in the early market stage (for example, lithium-ion energy storage, onshore wind power, and passenger battery EVs)". But those investments involve a risk. Therefore, risk-taking must be rewarded, otherwise private savings will remain liquid and will not be directed towards long-term productive investments in the EU. This has not been the case over the past 15 years as real interest rates have remained close to – and even under – zero.

2. Giving certainty to transition pathway in the EU.

EU Member States should give all economic agents clear and complete national transition scenarios (sectoral priorities, timetables, risk edging mechanisms) and guidelines so that citizens, companies and public authorities make coordinated progress.

3. Getting public finances back in order.

The sooner we get public finances back in order, the sooner states will regain the leeway they need to invest. Furthermore, over-indebted Member States must also revise the composition of public spending to accentuate the efforts in the fields at the heart of the transitions – *i.e.* R&D and carry out supply-side-oriented reforms to reinforce their production system and rekindle their industrial power.

4. Elaborating a genuine European industrial policy to face common challenges.

To avoid lagging behind the US and China, the EU needs to adopt a genuine industrial policy. To do so, the EU needs appropriate competition policy to boost its industry, foster the emergence of European industrial and financial champions and to accelerate the single market while re-establishing a community preference. The IMF estimates that further integration of the single market would enable the EU to gain up to 7pp of GDP.

5. Developing European projects financed by European companies.

What the EU needs now is to finance common European projects led by European companies. As highlighted by P. Gentiloni[143], NGEU has been designed like a solidarity tool that enabled to give more funds to countries that suffered more from the pandemic. But today, Europe should finance common European projects, hence the necessity to implement a genuine industrial policy, especially in strategic sectors such as digital, energy, cleantech space…

The multiplication of IPCEIs and collaborative projects between Member States is undeniably a way forward, given that they align their objectives, they identify qualifying and profitable projects and that they find adequate funding. This would facilitate and foster the emergence of competitive European companies as they would benefit from economies of scale in the single market.

6. Balancing national and common interests in the EU.

There is an urgent need to find the right balance between national and common interests in the EU economic, financial and industrial areas.

Recent events seem to show that industrial and economic nationalism is rising in Member States, which further thwarts the efforts towards more integration in the industrial field. For instance, Italy blocked in November 2023 the $1.8 bn acquisition by French jet engine maker Safran of the flight control business of Collins Aerospace called Microtecnica. Italy alleged that the deal "poses an exceptional threat to the essential interests of national defense and security"[144] because Microtecnica produces and delivers spare parts to the Eurofighter and Tornado jet fighter programs which are needed to comply with the operational requirements of Nato. "This is a very bad signal sent by Italy and Germany for the future of European defense collaboration" lamented Safran CEO O. Andriès.

142. "An affordable, reliable, competitive path to net zero", McKinsey & Company, 30 November 2023.

143. Op. Cited *Le Monde*.

144. "Italy blocks Safran deal over national security concerns", *Financial Times*, 21 November 2023.

This growing economic nationalism – fostered by rising nationalists parties in some EU Member States – hinders the progress of the EU towards open strategic autonomy and towards more integration in key sectors such as industry, finance and defense. Even if it is understandable that each Member State wants to keep their sovereignty, they cannot have it both ways. There is an urgent need to find the right balance between national and common interests.

Conclusion: For a more dynamic economy in the Eurozone

A monetary union does not by itself create economic convergence. This Scoreboard underlines that the Eurozone is a currency area comprising heterogeneous countries with a low level of federalism (their productivity levels, productive specialisation, level of fiscal deficits and indebtedness, and level of labour force skills being very different).

As we have observed, many Member States have relaxed their macroeconomic discipline over the last twenty years and those who played the card of fiscal vigilance turned out to be the winners. The Covid-19 crisis has exacerbated these existing heterogeneities across EU Member States. In this context, it is important that the implementation of Next Generation EU is a success.

Despite its significant efforts, the EU struggles to convince investors to invest on its territory. According to the Trendeo, Fives, McKinsey & Company and the institute for reindustrialization study, investments in the US have grown by 4% over the period from July 2022 to June 2023, amounting to $309 bn. This is undoubtedly mainly due to the Inflation Reduction Act (IRA). By contrast, investments recorded in Europe between July 2022 and June 2023 stood at -25%; this figure even reached -38% in the European Union (compared with the period June 2021-June 2022), which questions the performance of NGEU, other EU plans and the effectiveness of Member States' public spendings.

It is an illusion to try to solve the structural problems of our economies by prolonged increases in public or private debt or by using money creation. Yet this is what has been too often tried by pursuing lax fiscal and monetary policies that inevitably pose systemic risks to financial stability and therefore to future growth. It is not because budget deficits are monetised that they disappear. In addition, the quality of a state's signature is an essential element of confidence that shall be preserved at all costs for the country's future.

But as long as it is not sufficiently understood, especially in highly indebted countries, that over extended debt is a source of under-competitiveness, the economic situation in these countries will continue to deteriorate and it will be all the more difficult to make progress in the construction of an economic and financial Europe. Indeed, the intensity of fiscal and economic divergences between EU countries makes it more difficult to define in Europe a common interest, encourages a policy of "every man for himself", creates a climate of mistrust between Member States which hinders any progress in terms of public and private risk sharing and weakens the Eurozone.

It is economic growth that eventually solves indebtedness issues. The only way of promoting robust and sustainable growth in the EU is to implement ambitious structural supply side oriented reforms in all Member States.

If Europe and the Eurozone are to correct their growth disadvantage in relation to the United States and China and not be relegated to the rank of second-rate powers, a considerable investment effort in research and development, in industrial equipment, in decarbonisation, in digital technology, in improving equity financing, the education system and the skills of the population, in promoting selective immigration of "people" who can occupy sufficiently skilled jobs, will therefore be necessary. Furthermore, scale matters more than ever and the completion of the single market must be a permanent objective and must be based progressively on an EU industrial policy.

We must understand that our future – noninflationary – depends on the elasticity of supply, and thus on sufficient investment and a well-trained force. Anything that encourages savings to into liquid investments at the expense of long-term tangible investments must be fought.
As explained by Jacques de Larosière in his latest book[145], "one day we will have to understand that the narrowing of the output gap between potential and observed growth cannot be reduced to the mere fight against the restoration of production chains, but requires the activation of all the sources that ultimately constitute our eco system: productive investment – penalized for 20 years by lasting very low interest rates – , the development of training, the recovery of the share of wages in income, the revitalization of competition... To revive productive investment, refrain from administratively setting ("or guiding" the market) long term interest rates and accept to let the market remunerate savings in the medium and long term according to supply and demand without which there can be neither productive investment nor productivity gains".

145. J. de Larosière, "Putting an end to the reign of financial illusion", Odile Jacob, September 2022.

Monetary policy can erase spread differentials but cannot address structural issues and notably the lack of confidence and the persistence of structural discrepancies, which explains the limited capital flows from North to South. Europe benefits from a large pool of savings which could contribute to finance long term investments and especially those related to the green and digital transition, provided that such savings are not taxed but remunerated. However, these savings leave the EU and finance the rest of the world (in particular the United States).

This is notably due to the interest rate differential between the US and Europe (risk taking is more rewarded in the US than in Europe) and the insufficient number of investment projects. These limited cross-border capital flows in the Euro area highlights the lack of a genuine Banking Union and integrated financial markets as well as persistent doubts of some investors in Northern Europe about the solvency of states and companies in other countries.

If the divergence of interest rates between the two sides of the Atlantic continues to increase in favour of the United States, the problem of transfer savings to higher interest rate areas could have very negative consequences for Europe.

Consequently, the Eurozone has to embark on the right course: fighting persistent inflation, more fiscal responsibility and more supply reforms geared to increase productivity, as well as steps to complete the Banking Union and implement the Capital Market Union. But this move can only be envisaged if sufficient discipline starts reversing the trend of ever-growing economic heterogeneities across Member States.

Ultimately, the paradox of the Euro is that a single currency and national economic policies coexist without a strong cement of coordination. Ultra-accommodating and asymmetric monetary policy have been used to overcome the contradictions of this paradox, but the price of this permanent rescue is costly. It is essential to ensure convergence of fiscal and structural policies. An intelligent revision of the Stability and Growth Pact should help to resolve these contradictions and thus make the euro sustainable.

To be viable, the Eurozone needs:

- **To combat persistent inflation.**

The most pressing monetary policy task is to restore low and stable inflation and to sustainably rebuild monetary buffers. High interest rates will also reduce central banks remittances to the governments. The reappearance of spreads should not dominate the decision- making process.

The history of high inflation episodes tells us that if central banks loosen too quickly, before the problem is really addressed, then we get another inflation wave, and then another wave of interest rates hikes, which would be a worse scenario.

- **National budgets under control in all parts of the Union.**

No responsible state can be expected financing durably current public deficits generated by other Eurozone members of the Union that do not follow the rules of the Union. The future – and notably the solution to market fragmentation – depends on a consolidation of present weak fiscal positions (primary surpluses) and a shift towards quality of expenditure and investment. We do not need more redistributive expenses. We must rein them in and allow adequate space for public investment.

We have to recognize that the shift towards more investment will require substantial political effort ; presently public investment only accounts for some 4% of GDP while current – non-productive expenditure – represent almost all public expenditure. As much as we need to fight against unproductive spending, we can encourage the financing of infrastructure spending (including research). The revision of the Stability and Growth Pact is of paramount importance in this respect. Unfortunately, the agreement of the Ecofin Council achieved in December 2023 states that Countries that are subject to an excessive deficit procedure (total public deficit over 3% of GDP) are exempt from the rule requiring them to reduce their public debt by an average of 1% a year until their deficit falls back below 3%, which is not the best way to encourage the worst performers to reduce their debt to GDP ratio!

- **Domestic structural measures aimed at enhancing business dynamism and increasing growth potential should be encouraged and monitored.**

We have seen that the economic and financial model based on monetary abundance, the under-remuneration (taxation) of savings, the financialization in response to structural insufficiencies, the systematic short- termism, and the increase in the – essentially speculative – valuations of financial assets, does not meet the needs of our society. These needs require long-term investments, a response to climate and digital challenges, an adequate

return on savings and salaries. Without such a reorientation of our policies, it seems difficult to achieve the "common good" and to correct the major current imbalances.

Rasing potential growth requires to increase the productivity of the system, which necessitates more competition and long-term investment.

Last but not least, it is necessary to refrain from fixing administratively ("or directing" the market) long-term interest rates and to accept to let the market remunerate medium – and long-term savings – according to supply and demand – without which there can be no productive investment or productivity gains.

- **An active banking and integrated capital market in Europe.**

In sum, members of the Monetary Union must act together to make it work, and not behave as passive individual bystanders hoping that things will turn out fine. Ultimately, the fate of euro will depend on the political will to achieve genuine cooperation within the Euro area.

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