ECONOMIC REPORT

Economic and steel market outlook 2022-2023

Fourth quarter report
Data up to, and including, second quarter 2022

October 2022

EUROFER
THE EUROPEAN STEEL ASSOCIATION

Introduction

The positive trend seen in apparent steel consumption throughout 2021 came to an end in the second quarter of 2022, due to the impact of ongoing disruptions linked to the war in Ukraine, poor demand outlook and severe rises in energy prices and production costs. All these downside factors are expected to weigh even more in the second half of 2022 up to the second quarter of 2023 included, as a result of the prolonged effects of the war in Ukraine. In the second quarter of 2022, apparent steel consumption fell (-4.8%, after an increase of +6.1%, in the first quarter), totalling a volume of 38.6 million tonnes.

In 2022, apparent steel consumption is expected to see its third annual recession over the last four years (revised downwards to -3.5% from -1.7%), as a result of quarterly drops forecasted also for the third and fourth quarters of 2022. Apparent steel consumption is set to decrease also in 2023, albeit at a lower rate (-1.9%), as demand from steel-using sectors is expected to remain severely subdued, at least until the second quarter of 2023. These developments are conditional on the evolution of energy prices and the Russia-Ukraine war – which are unforeseeable at the time of writing – and its impact on global supply chains.

EU steel market overview

In the second quarter of 2022, apparent steel consumption dropped (-4.8%, after +6.1% in the first quarter of 2022), totalling a volume of 38.6 million tonnes.

After the pandemic-led recession of 2020, which saw apparent steel consumption plummet (-10.7%) for the second consecutive year after the slump (-5.2%) seen in 2019, in 2021 apparent steel consumption rebounded (+16.3%, slightly revised upwards from +15.7%). The heavy disruptions due to the ongoing supply chain issues and the consequences of the Russian invasion of Ukraine on steel-using industries, and the overall economic outlook, are set to be reflected in apparent steel consumption levels in 2022. Therefore, apparent steel consumption is expected to see its third annual recession over the last four years (-3.5%, steeper than -1.7% previously estimated), most probably as a result of quarterly drops that are foreseen to continue until the second quarter of 2023 included. Apparent steel consumption is set to decrease also in 2023 (-1.9%), as a result of persisting downside factors (primarily the war in Ukraine and high energy prices) that are expected to continue at least until the second half of next year. The overall evolution of the industrial outlook and of steel demand remains subject to high uncertainty, which is likely to continue to undermine demand from steel-using sectors.

Domestic deliveries mirrored weak demand over the second quarter of 2022 and markedly dropped (-7.1%) after a marginal decrease in the preceding quarter (-0.1%). Over the whole of 2021 deliveries sharply rebounded (+11.9%), following 2020's sharp drop (-9.6%) that marked the second consecutive decline in yearly terms after 2019 (-4.2%).

Imports – including semi-finished products – into the EU continued to increase also over the second quarter of 2022, despite weak demand, albeit at a much lower rate compared to the preceding quarter (+1.6% vs +28.5%). Imports of finished products over the second quarter of 2022 also followed the same pattern (+2%, following +34% in the first quarter). This results in a persistent high import penetration in historical terms over the last four quarters, even in a context of significantly weakened demand.

EU steel-using sectors

Despite the heavy disruptions and the weakened demand outlook caused by Russia's invasion of Ukraine, steel-using sectors output recorded the sixth consecutive year-on-year growth over the second quarter of 2022 (+5.7%), gaining further speed compared to the first quarter (+4.9%). This is a continuation of the carry-over effect of the positive trend seen since the third quarter of 2020 when industry began to rebound very strongly after pandemic-led slumps. By contrast, in the second half of 2022 total production activity in steel-using sectors is expected to be considerably impacted by the conflict in Ukraine as well as rising energy prices, that took their toll in terms of production costs and lower output. Total output in steel-using sectors in 2021 rebounded (+8.4%) after the sharp drop recorded in 2020 due to the impact of COVID-19 (-10.2%), and is also projected to achieve growth (+1.9%) in 2022 mainly thanks to very positive developments over the first two quarters. This evolution is a combination of favourable trends in the construction, mechanical engineering and transport sectors, plus automotive which returned to positive territory over the second quarter of 2022 after three consecutive quarterly drops, caused by supply chain disruptions.

The ongoing energy crisis and the overall rapid deterioration of the economic and industrial outlook are set to take their toll on growth over the next quarters, as recession in Steel Weighted Industrial Production (SWIP) is expected between the fourth quarter of 2022 and the second quarter of 2023. The winter months are predicted to be particularly tough for both industry and the economy in general, with a recession in sight.

The rapid deterioration of the global situation due to worsened, persisting downside factors over the summer (war in Ukraine, rising energy prices) have led to a complete revision of output forecast for 2023, when SWIP is expected to fall (-0.9%, albeit with different trends among individual EU economies). An improvement of industrial outlook is foreseen from the second quarter of 2023 onwards, although subject to a wide degree of uncertainty and unpredictability.

Table of contents

The EU steel market: supply

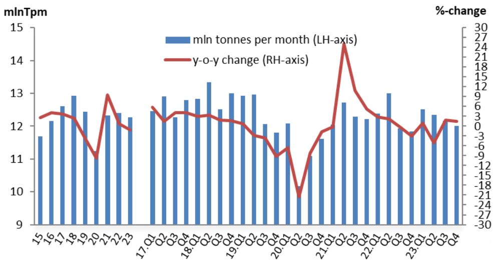
Real steel consumption

Real steel consumption in the second quarter of 2022

In the second quarter of 2022 real steel consumption continued to grow (+2.2%), albeit at a lower rate than in the first quarter of 2022 (+2.8%).

After a strong rebound in 2021 (+9.6%, following -9.7% in 2020 and -3.7% in 2019), growth is expected to continue, although at a modest rate, in 2022 (+0.7%, revised downwards from +1.5% in the previous outlook), before a decrease in 2023 (-1.1%) resulting from the continued negative demand outlook.

EU REAL STEEL CONSUMPTION
Forecast from Q3-2022



The two consecutive recessions of 2019 and 2020 were caused by the considerable slowdown in the activity of steel-using sectors (due to manufacturing and trade downturns) and the COVID crisis, respectively. A counter-cyclical destocking trend from late 2019 continued throughout 2020 and only reversed starting from the first quarter of 2021, mirroring expectations of continued growth in steel demand. It was also visible in the first quarter of 2022, but over the second quarter it came to an end due to the rapidly worsening industrial outlook for the rest of 2022 as a result of the war in Ukraine. This trend is expected to continue at least until the second quarter of 2023 due to the continued impact of Russia's war in Ukraine, high inflation and energy prices, and the deterioration of the global outlook.

In line with SWIP developments (see page 12), real steel consumption is expected to increase (+0.7%) in 2022 and to drop (-1.1%) in 2023.

FORECAST FOR REAL CONSUMPTION - % CHANGE YEAR-ON-YEAR

Period	Year 2021	Q1'22	Q2'22	Q3'22	Q4'22	Year 2022	Q1'23	Q2'23	Q3'23	Q4'23	Year 2023
% change	**9.6**	2.8	2.2	-0.4	-3.1	**0.7**	1.0	-5.1	1.8	1.4	**-1.1**

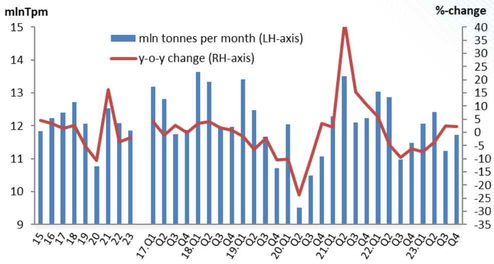
Apparent steel consumption

Apparent steel consumption in the second quarter of 2022

The positive trend seen in apparent steel consumption throughout 2021 came to an end in the second quarter of 2022, being impacted by ongoing war-related disruptions, poor demand outlook and severe rises in energy prices and production costs. All these downside factors are expected to impact even more severely over the second half of 2022 up to the second quarter of 2023 included, as a result of the expected prolonged effects of the war in Ukraine. In the second quarter of 2022, apparent steel consumption markedly fell (-4.8%, after +6.1% in the first quarter), totalling a volume of 38.6 million tonnes. This is still below the pre-pandemic peak reached in the fourth quarter of 2018.

The whole year 2020 was considerably impacted by the COVID-19 pandemic and saw apparent steel consumption in the EU plummet (-10.7%) for the second consecutive year after the slump (-5.2%) seen in 2019. In 2021 apparent steel consumption rebounded (+16.3%, formerly set at +15.7%). The heavy consequences of the conflict in Ukraine on steel-using industries and the deteriorated overall economic outlook are set to take their toll on apparent steel consumption, resulting in a worse-than-estimated recession (-3.5%, previously -1.7%), with quarterly drops foreseen over the third and fourth quarters of 2022. As a result of continued downside factors (war, energy prices, high inflation) and of the worsened economic outlook for 2023, apparent steel consumption is also set to drop in 2023, albeit more moderately (-1.9%). This would be the fourth annual recession out of the last five years.

EU APPARENT STEEL CONSUMPTION
Forecast from Q3-2022



Nonetheless, the overall evolution of steel demand remains conditional on very high uncertainty, which is likely to continue to undermine demand from steel-using sectors.

EU domestic and foreign supply

Domestic deliveries mirrored weak demand over the second quarter of 2022 and recorded a marked drop (-7.1%) after a marginal one in the preceding quarter (-0.1%). Over the whole of 2021 deliveries sharply rebounded (+11.9%), following a pronounced drop in 2020 (-9.6%) that marked the second consecutive decline in yearly terms after 2019 (-4.2%).

Imports – including semi-finished products – into the EU continued to increase also over the second quarter of 2022, despite weak demand, albeit at a much lower rate compared to the preceding quarter (+1.6% vs 28.5%). Imports of finished products increased as well (+2%, after +34% in the first quarter). This results in a persistent high import penetration in historical terms over the last four quarters, even in a context of significantly weakened demand.

EU APPARENT STEEL CONSUMPTION - IN MILLION TONNES PER YEAR

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022 (f)	2023 (f)
Million tonnes	136	142	147	149	153	145	129	150	145	142

FORECAST FOR EU APPARENT STEEL CONSUMPTION - % CHANGE YEAR-ON-YEAR

Period	Year 2021	Q1'22	Q2'22	Q3'22	Q4'22	Year 2022	Q1'23	Q2'23	Q3'23	Q4'23	Year 2023
% change	**16.3**	6.1	-4.8	-9.4	-6.1	**-3.5**	-7.4	-3.5	2.4	2.2	**-1.9**

Imports

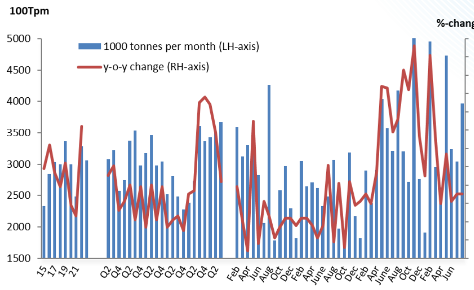
Total steel imports (including semis) into the EU rose moderately (+1.6% year-on-year) over the second quarter of 2022, after a more pronounced increase (+28.5%) in the first quarter.

Imports of finished products over the first eight months of 2022 also increased (+8% compared to the same period of the previous year, with +2% in the second quarter). The same trend was observed for imports of flat products (+6% in the first eight months of 2022, with -1% in the second quarter) as well as for imports of long products (+14% YTD, with +16% in the second quarter).

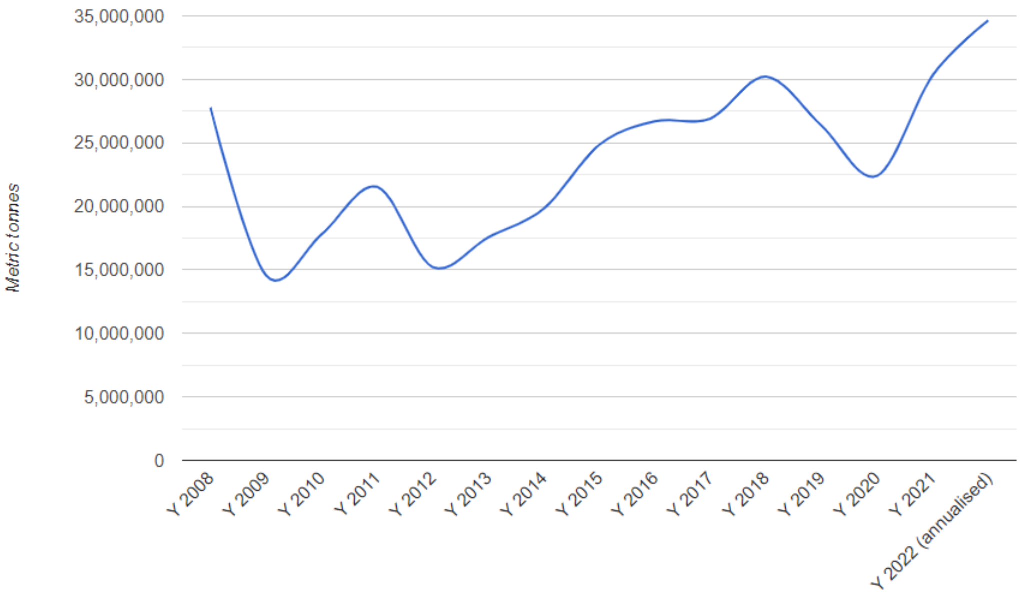
Imports were volatile across 2020, 2021 and the first half of 2022, continuing a trend seen since 2019. After the outbreak of COVID-19, imports surged again for certain products and showed some volatility over the second half of 2020, but the increase became more pronounced during 2021, particularly over the second and third quarters, up to high levels in historical terms.

This development mirrored the continued improvement in steel demand, while volatility continued over the fourth quarter of 2021 and the first half of 2022, with import volumes remaining around high levels in historical terms.

EU TOTAL STEEL IMPORTS, FINISHED PRODUCTS
2008-2022 (YTD)



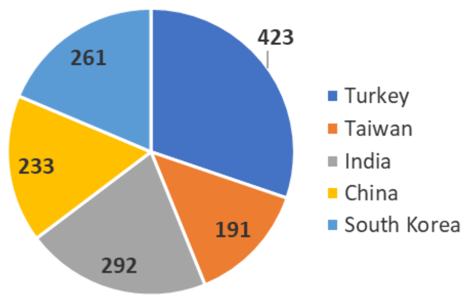
TOTAL IMPORTS FROM THIRD COUNTRIES, FINISHED STEEL PRODUCTS
2008-2022 (YTD)



Imports by country of origin

Over the first eight months of 2022, the main countries of origin for finished steel imports into the EU market were Turkey, India, South Korea, China and Taiwan. As a consequence of EU sanctions and war disruptions respectively, the Russian Federation and Ukraine were no longer among the top five exporting countries to the EU as imports from these two countries dropped considerably (-59% and -79% respectively). The top five exporting countries together represented 51% of total EU finished steel imports. Turkey and India continued to be the largest exporters of finished steel products to the EU (with shares of 15.4% and 10.6% respectively), followed by South Korea (9.5%), China (8.5%) and Taiwan (6.9%).

EU FINISHED STEEL IMPORTS BY COUNTRY
8M-2022, monthly '000 metric tonnes



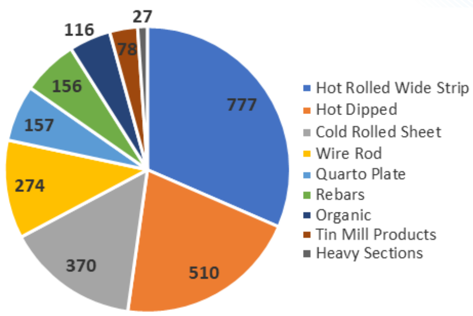
Over the first eight months of 2022, imports of finished products from third countries rose overall (+8%). In particular, imports of finished products from China increased (+109%) and, at lower rates, from South Korea (+42%), Taiwan (+41%) and Turkey (+7%). By contrast, imports from India decreased (-6%).

Imports by product category

Customs data show that both flat and long product imports increased (+6% and +16% respectively) over the first eight months of 2022. The share of long products out of total finished steel product imports was 23%. Over the second quarter of 2022, imports of flat products decreased (-1%), while imports of long products rose (+14%). Overall, imports of finished products rose (+2%).

Within the flat product market segment, over the first eight months of 2022 imports of almost all flat products rose compared to the same period of 2021. Imports of organic coated sheets recorded the highest increase (+43%), followed by imports of cold-rolled sheet (+23%), imports of coated sheet (+11%) and hot dipped (+5%). By contrast, imports of hot-rolled wide strip fell (-6%), while imports of quarto plate dropped more significantly (-10%).

EU FINISHED STEEL IMPORTS BY PRODUCT
8M-2022, monthly '000 metric tonnes



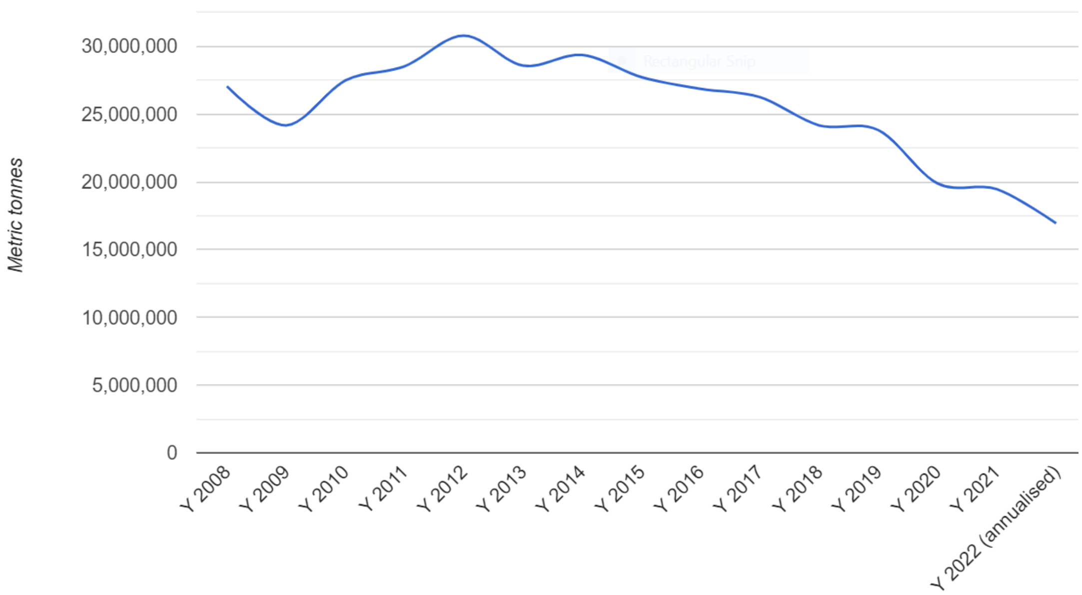
Meanwhile, all long product imports rose in the first eight months of 2022. In detail, imports increased particularly for rebars (+32%). More moderate increases were recorded for merchant bars (+14%), heavy sections (+12%) and wire rod (+10%).

Exports

In the first eight months of 2022 total EU exports of steel products to third countries decreased (-17%), and so did exports of finished steel products (-14%). In particular, exports of flat and long products both dropped (-10% and -22% respectively).

Over the second quarter of 2022, exports of finished products dropped (-21%), including for both flat and long products (-11% and -27% respectively).

EU TOTAL STEEL EXPORTS – FINISHED PRODUCTS
2008-2022 (YTD)



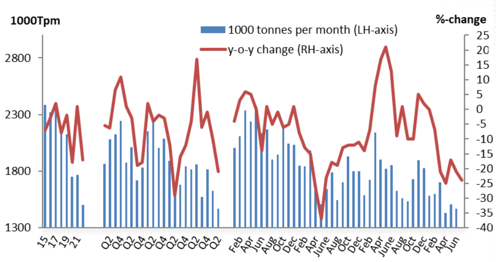
Exports by country

The main destinations for EU steel exports over the first eight months of 2022 were Turkey, the United Kingdom, the United States, Switzerland and China, followed by Norway Egypt, Brazil and India. The first five destinations together accounted for 58% of total EU finished product exports.

Exports to all major destinations decreased over the first eight months of 2022, with the exceptions of Brazil (+47%), the United States (+9%) and Norway (+5%).

The largest decreases in exports were observed with Russia, which is no longer among the EU's seven largest export destinations (-63%), China (-34%) and the United Kingdom (-22%). Exports to Turkey (-9%), India (-8%), Egypt (-4%) and Switzerland (-1%), decreased more moderately.

EU TOTAL STEEL EXPORTS



Exports by product category

Over the first eight months of 2022, exports of both flat and long products dropped (-10% and -22% respectively). The same trend was recorded in the second quarter of 2022 (-11% for exports of flat products and -27% for long products).

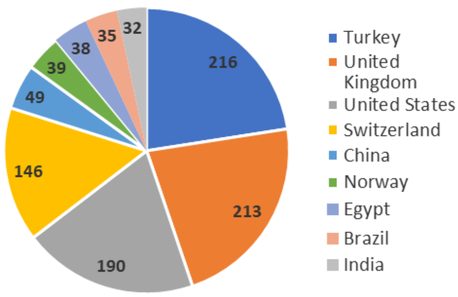
In the first eight months of 2022, flat products accounted for 68% of finished product exports overall.

In the same period, exports of most individual flat products decreased compared to the previous year, in particular organic coated sheets (-26%), hot dipped (-23%) and cold rolled sheets (-12%). By contrast, exports of hot rolled wide strip and quarto plate increased, albeit moderately (+7% and +2% respectively).

Among long products, exports of all products dropped (merchant bars -24%, rebars -23%, wire rod and heavy sections -20% each).

EU FINISHED STEEL EXPORTS BY DESTINATION

8M-2022, monthly '000 metric tonnes



Trade balance

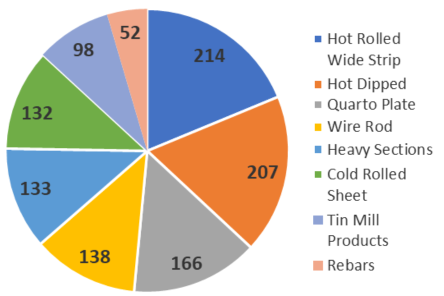
The EU's total steel product trade deficit (finished plus semis) amounted to 2.1 million tonnes per month over the first eight months of 2022. In 2021, total trade deficit amounted to 1.5 million tonnes per month.

For finished products, the trade deficit over the first eight months of 2022 amounted to 1.5 million tonnes per month. Over the entire year 2021, trade deficit amounted to 906 kilotonnes per month.

Over the first eight months of 2022, flat products recorded a deficit of 1.3 million tonnes per month (923 kilotonnes in 2021). Long products also recorded a deficit (217 kilotonnes), whereas a surplus (17 kilotonnes) was recorded in 2021.

EU FINISHED STEEL EXPORTS BY PRODUCT

8M-2022, monthly '000 metric tonnes



The biggest trade deficits - including semis - with individual trade partners over the first eight months of 2022 were with Russia (561 kilotonnes), India (310 kilotonnes), South Korea (259 kilotonnes), Turkey (247 kilotonnes), Ukraine (240 kilotonnes) and Taiwan (192 kilotonnes).

The major destination countries for EU finished steel exports with a trade surplus over the first six months of 2022 were the United States (222 kilotonnes), Switzerland (89 kilotonnes) and the United Kingdom (41 kilotonnes).

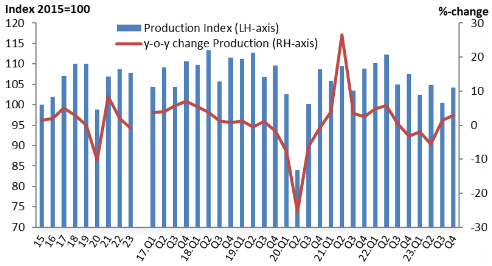
The EU steel market: final use

Outlook for steel-using sectors

Total steel-using sector activity in the second quarter of 2022

EU STEEL USING SECTORS

Production Activity - forecast from Q3-2022



Despite supply chain issues persisting since the third quarter of 2021 and the ongoing war in Ukraine, steel-using sectors marked the sixth consecutive year-on-year growth in the second quarter of 2022 (+5.7%), gaining speed compared to the first quarter (+4.9%). This trend, showing EU industrial sectors' resilience, started in the third quarter of 2020 after the removal of COVID-19 lockdown measures. The rebound proved stronger than expected, and culminated in the second quarter of 2021. By contrast, over the second half of 2021 total production activity in steel-using sectors has been increasingly impacted by supply chain issues (lack of components and materials, bottlenecks and rising transportation costs, etc.) and rising energy prices, that took their toll in terms of production costs, component shortages and lower output.

Total output in steel-using sectors in 2021 rebounded (+8.4%, formerly estimated at +7.3%) after the sharp drop recorded in 2020 due to the impact of COVID-19 (-10.2%). Russia's war in Ukraine initially impacted output only to a limited extent up to the second quarter of this year. However, the outlook for the rest of 2022 considerably worsened over the summer due to energy prices and production costs rising to nearly unsustainable levels. The positive evolution of all sectors' output was a combination of very positive developments in the construction, mechanical engineering and transport sectors on one hand, and a drop in output in domestic appliances on the other. At the same time output in the automotive sector returned to positive territory for the first time since the second quarter of 2021, having suffered from ongoing supply chain issues in the previous quarters.

Total steel-using sectors forecast 2022-2023

Steel-using sectors' output is expected to continue to expand in 2022 at a slightly higher rate than previously estimated (+1.9% vs +1.1%). On one hand, developments in the first half of the year were stronger than initially expected, as output growth proved robust and resilient despite Russia's aggression of Ukraine and its related disruptions. On the other hand, the rapid deterioration of the global industrial and economic outlook further to the unprecedented rises in energy costs over the summer, coupled with worsening war-related disruptions, is expected to yield either very modest growth or even drops in output over the second half of this year. As a result of a most likely continuation of these downside factors into the first two quarters of next year, output is expected to contract in 2023 (-0.9%). This would be the second SWIP recession since 2013, after the one due to the pandemic in 2020, while output was flat in 2019. Based on the current scenario, the economic and industrial outlook is expected to improve only from the second quarter of 2023 onwards.

YEAR-ON-YEAR %-CHANGE IN EU STEEL WEIGHTED INDUSTRIAL PRODUCTION (SWIP) INDEX	% Share in total Consumption	Year 2021	Q1'22	Q2'22	Q3'22	Q4'22	Year 2022	Q1'23	Q2'23	Q3'23	Q4'23	Year 2023
Construction	35	**7.0**	17.1	9.7	0.9	-3.4	**5.6**	-6.0	1.7	2.6	2.4	**-1.0**
Mechanical engineering	14	**15.4**	9.9	8.6	3.5	1.2	**3.3**	-2.9	-3.2	3.2	3.3	**-1.7**
Automotive	18	**3.3**	-10.6	1.4	9.1	-3.6	**-1.7**	0.1	-0.9	4.0	1.8	**1.1**
Domestic appliances	3	**5.4**	-8.8	-3.4	-1.5	-3.6	**-4.5**	-0.5	1.1	4.0	2.9	**1.8**
Other Transport	2	**1.8**	14.1	10.9	1.2	0.5	**6.5**	-0.1	-1.8	0.8	3.4	**0.5**
Tubes	13	**10.9**	4.4	3.1	-0.7	0.7	**1.9**	-1.9	-4.2	2.6	2.8	**-0.4**
Metal goods	14	**12.8**	7.6	7.4	1.3	-2.5	**3.5**	-5.9	-5.8	0.2	3.1	**-2.3**
Miscellaneous	2	**10.1**	7.6	10.7	1.1	-1.1	**4.4**	-1.5	-5.9	2.4	2.3	**-0.8**
TOTAL	100	**8.4**	4.9	5.7	0.4	-3.2	**1.9**	-2.0	-5.5	1.4	2.8	**-0.9**

Construction industry

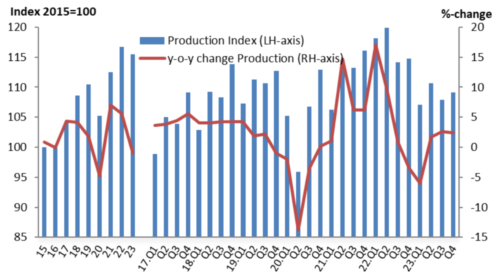
Construction industry activity in the second quarter of 2022

The positive trend in construction output seen throughout 2021 continued also in the second quarter of 2022, albeit at a lower rate than the previous quarter (+9.7%, after +17.1% in the first quarter).

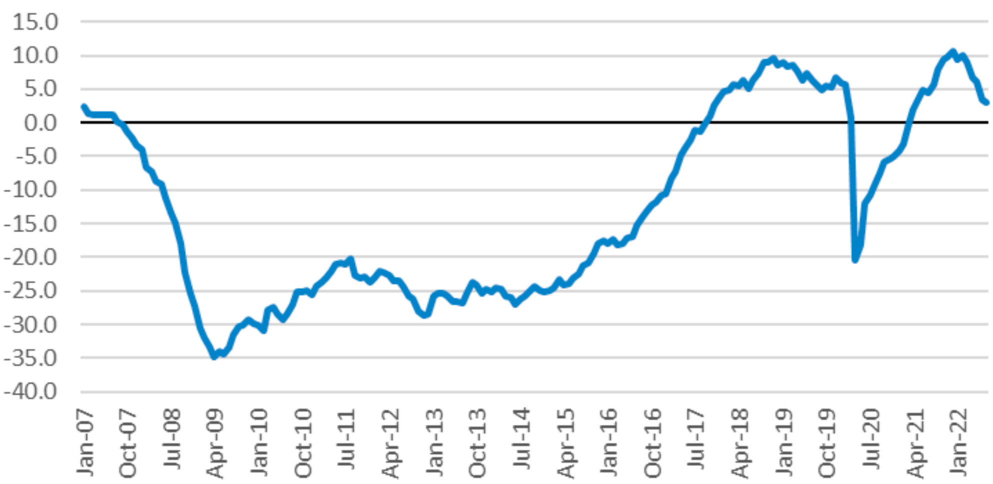
The figures observed since the first quarter of 2021 reflect the continued quarter-on-quarter improvement in the construction activity and the vigorous boost of governmental support schemes at EU and national level. This has especially benefitted the private residential and civil engineering sub-sectors.

In line with real production volumes, in the second quarter of 2022 gross fixed investment in construction increased (+2.6% on a yearly basis). This was the sixth consecutive quarterly increase (+4.7% in the preceding quarter).

EU CONSTRUCTION SECTOR
Production Activity - forecast from Q3-2022



CONSTRUCTION CONFIDENCE INDICATOR
BALANCE OF POSITIVE AND NEGATIVE ANSWERS



Growth was fuelled by residential investment (+2.2%, after +4.7%), despite the expectations of future higher mortgage rates due to the announcements of monetary policy tightening to curb inflation. Growth continued to be boosted also by generous housing and renovation supporting schemes in place in many EU Member States. Positive developments were seen also in 'other construction' investment (+3.2%, after +4.8% in the first quarter), particularly in civil engineering. Its expansion should continue during the second half of 2022, as governments have been using it since the COVID-led recession of 2020 as a cyclical tool (thanks also to NextGenerationEU programmes) to bolster recovery. However, the impact of these publicly-funded construction schemes is expected to ease considerably due to multiple downside factors (supply chain issues, war in Ukraine, etc.), including the shortage and rising prices of construction materials, which are becoming a source of concern.

Construction industry analysis forecast for 2022-2023

Construction output fell in 2020 (-4.8%, revised downwards from +4.4%), due to the COVID-19 pandemic, then rebounded in 2021 (+7%, formerly set at 7.7%). The outlook for 2022 forecasts higher growth than previously estimated (+5.6% vs 5.3%), thanks to bullish developments over the first half of the year. However, this trend is expected to ease substantially over the forthcoming quarters. Due to the impact of rising construction material prices growth in construction and increasing scarcity of construction materials – as well as construction workers' shortage - in many EU countries, coupled with the overall economic slowdown due to the war in Ukraine, growth in construction output is set to lose speed over the forthcoming quarters and to experience drops in the fourth quarter of 2022 and the first quarter of 2023.

Construction confidence in the EU started to improve substantially, almost reaching 2018 levels in the course of 2021, after the lows seen in mid-2020 due to the pandemic. Issues along the supply chain and the overall deterioration of the economic and industrial outlook have been starting to impact the sector since February 2022, while confidence has been declining from then on, as confirmed by the latest available data (September 2022). However, overall construction activity should continue to grow – albeit at rather low rates – mainly thanks to governmental housing supporting schemes and to public construction schemes.

Looking at construction sub-sectors, the expected rise in interest rates – because of policy rate hikes by the ECB and other central banks – is set to impact residential construction demand. Civil engineering is expected to continue to provide the strongest contribution to the construction sector's performance, but to a lower extent. This segment will continue to be supported by EU-wide public policies (NextGenerationEU, etc.), but their effects have become increasingly uncertain and difficult to quantify considering the recent deterioration of the economic outlook. The suspension of the Stability and Growth Pact has been extended until the end of 2023. This will leave room for government spending in infrastructure, but its effects in terms of construction output will be lagged over time.

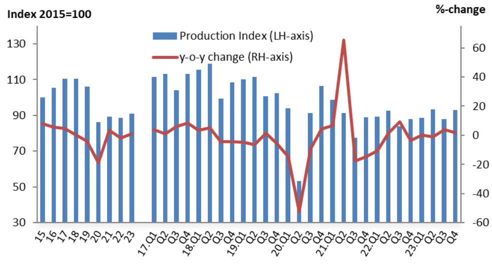
The private non-residential construction subsector (offices, commercial buildings, etc.) has paid the highest toll to the pandemic in 2020 and in 2021 with increasing vacancy rates, and has recovered only partially. The subdued business investment outlook remains unfavourable to investment in non-residential projects in the near future.

Automotive industry

Automotive activity in the second quarter of 2022

In the second quarter of 2022 the automotive sector's output returned to growth, albeit modest, after dropping for three consecutive quarters (+1.4%, after -10.6% in the second quarter). The sector had started rebounding from the third quarter of 2020, thanks to the removal of lockdown measures that had de facto stopped industrial production, culminating in an exceptional increase (+66%) in the second quarter of 2021 (almost entirely due to the comparison with the record lows of one year before). Subsequently, severe supply chain issues took their heavy toll on the

EU AUTOMOTIVE SECTOR
Production Activity - forecast from Q3-2022



sector's output, coupled with the overall uncertain outlook of the sector also on the demand side due to ongoing consumer low confidence. Despite the increase recorded in the second quarter, output in the sector remains well below both the pre-pandemic levels and the pre-2019 recession levels.

In annual terms, the rebound started in the third quarter of 2020 resulted in a modest recovery in 2021 (+3.3%), following the dramatic slump seen in 2020 triggered by COVID-19 (-18.7%) when the automotive sector was hit most severely than any other steel-using sector. The EU automotive sector had already experienced its worst slump during the euro area crisis of 2009-2012 (-26.3%). Output has been on a downward path since the third quarter of 2018: sluggish domestic and export demand, trade-related uncertainties, emissions rules, shifting patterns in ownership and model ranges had been felt all over 2019 before the COVID-19 outbreak. The continued supply chain issues that materialised in the summer of 2021 increasingly resulted in shortage of components and semiconductors, rise in energy prices and in production costs, and slowdown in global trade. Russia's invasion of Ukraine – whose additional disruptive effects on the sector are already visible - has further worsened an already subdued outlook.

EU passenger car and commercial vehicle demand

Ongoing disruptions on the supply side, in particular the shortage of semiconductors as well as hikes in energy prices and soaring shipping costs, went on taking a considerable toll on the automotive industry. This situation also contributed to continued depressed demand and consumer uncertainty.

Supply chain issues and war-related disruptions, coupled with low consumer confidence and squeezed incomes due to high inflation, have kept on weighing on vehicle output. As a result, over the first three quarters of 2022 the EU passenger car market contracted markedly (-9.9% year-on-year). This was reflected in the performance of most countries, with all major national markets experiencing losses over this period. Italy recorded the steepest fall (-16.3%), followed by France (-11.8%), Germany (-7.4%) and Spain (-7.4%).

The latest monthly passenger car registrations data show that in August and September 2022 (+9.6% year-on-year) passenger car registrations reversed their downward trend in the EU. This increase, however, is largely due to the comparison with the very low figures of September 2021, when the semiconductor shortage seriously hindered vehicle production.

Automotive industry forecast 2022-2023

After a severe slump (-18.7%) in 2020 due to the impact of the pandemic, in 2021 automotive output modestly rebounded (+3.3%). The sector is expected to drop again, albeit moderately, in 2022 (-1.7%, reviewed downwards from the previous -0.5%), because of the severe repercussions of the ongoing supply chain disruptions and the war in Ukraine. These downside factors are expected to persist throughout 2022 and at least until the second quarter of 2023. In addition, subdued consumer confidence, due to modest developments in disposable income, have continued to impact car demand from consumers since the second half of 2018.

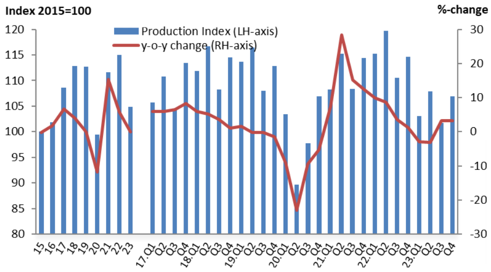
The latter is expected to remain weak until the macroeconomic picture and consumer disposable income substantially improve – which has become now less likely given the worsening economic outlook and more subdued economic growth perspectives. Uncertainties around the implementation of EV and delays in the launch of new models - many hybrid or fully electric, preparing the ground for the complete ban of petrol cars by 2035 – and lack of facilities (recharging points, etc.) have proven unsupportive factors of consumer demand and have also delayed investment decisions by carmakers. Full recovery in global trade and external demand from major markets such as the United States, China and Turkey will remain a key factor for EU car exporters. However, this is not likely to materialise as long as the current war-related uncertainty, global supply chains issues and very high energy and fuel prices persist, penalising both producers and buyers. In the longer term, political commitment (Fit for 55, etc.) at EU level towards the full adoption of EV by 2035 should prove somewhat supportive, despite the fact that general car demand appears to be dependent on fragile consumer confidence throughout 2022 and 2023.

As a result, 2022 is expected to be another difficult year for the sector, with the third recession (-1.7%) in four years. Growth is forecasted to rebound moderately in 2023 (+1.1%), provided that war-related disruptions and uncertainty will ease substantially as a result of an improved economic and industrial outlook.

Mechanical engineering

Mechanical engineering activity in the second quarter of 2022

EU MECHANICAL ENGINEERING
Production Activity - forecast from Q3-2022



Output in the mechanical engineering sector grew (+8.6%) in the second quarter of 2022, recording the sixth consecutive quarterly increase (+9.9% in the first quarter). Driven by the overall post-COVID industrial recovery, the rebound started in the third quarter of 2020 brought back output to absolute high levels, even above those recorded before 2019. Recovery in orders and output gained speed over 2021, but since the second half of the year they have been clearly exposed to downside risks and the even more disruptive impact of Russia's invasion of Ukraine. The latter has not yet been reflected fully in the sector's output, which is expected to slow down but not yet to shrink over the remaining quarters of 2022. However, the persisting downside factors affecting the industrial outlook, in particular the unprecedented rise in energy prices and production costs, are set to take their toll on the sector's output in 2023, or at least in the first two quarters when output is expected to contract.

After a sharp fall (-11.8%) in 2020 due to the pandemic and a slight drop (-0.1%) in 2019, mechanical engineering output rebounded robustly (+15.4%) in 2021 thanks to the recovery of EU industrial sectors in the first half of the year.

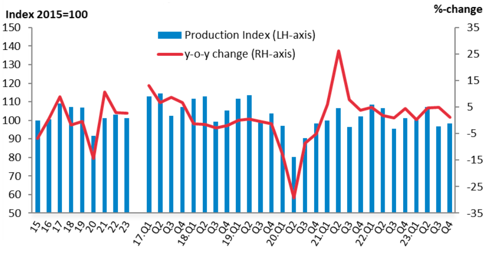
Mechanical engineering forecast 2022-2023

Output in mechanical engineering is expected to grow in 2022 (+5.8%, revised upwards from +3.2% in the previous outlook) and to achieve flat growth in 2023 as a result of war disruptions and high energy costs. Their negative effects on the sector's output should be particularly visible in the first two quarters of the next year.

Steel tube industry

Steel tube industry activity in the second quarter of 2022

EU STEEL TUBE SECTOR
Production Activity - forecast from Q3-2022



Despite war-related disruptions and continued global supply chain issues, data from the second quarter of 2022 confirm the positive trend of the tube sector, recording the sixth consecutive increase in output (+3.1%, after +4.4% in the preceding quarter).

In 2021, the tube sector significantly improved (+10.9%), after the severe drop experienced in 2020 (-14.4%) due to the pandemic.

Steel tube industry forecast 2022-2023

After a rebound in 2021 (+10.9%), output in the tube sector is expected to grow only moderately in 2022 (+1.9%) and to fall, albeit marginally, in 2023 (-0.4%).

During 2020, output in the EU steel tube industry was heavily impacted by the industrial stoppages due to the COVID-19 outbreak. Likewise for other steel-using sectors, the rebound in the first three quarters of 2021 eased in the fourth quarter as a result of severe global supply chain issues. The disruptions linked to Russia's war in Ukraine have further delayed ongoing projects and impacted the availability of materials. In the longer term, demand for large welded tubes from the oil and gas sector should not improve substantially, despite the considerable hikes in energy prices due to the consequences of the conflict.

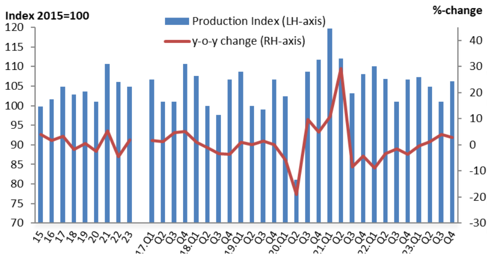
The recent recovery of global oil demand and oil prices is not expected to boost the launch or the implementation of new pipelines in the short term. On the other hand, demand from the construction sector is set to recover a bit more robustly, whereas tube demand from the automotive and engineering sectors is forecast to remain relatively weaker. In addition, import pressure on steel tube markets in the EU will remain high, particularly for the commodity segment.

Electrical domestic appliances industry

Electrical domestic appliances industry activity in the second quarter of 2022

Over the second quarter of 2022 output in the electrical domestic appliances sector dropped for the fourth time in a row (-3.4%, after -8.8% in the second quarter). The post-COVID positive trend that had started in the third quarter of 2020 when the sector experienced a bigger-than-expected recovery in output, came to an end already in the second quarter of 2021. Widespread remote working across the EU boosted demand for home appliances and other related goods. On an annual basis, in 2020 output fell more moderately (-2.5%) compared to other EU steel-using sectors and rebounded (+5.4%) in 2021, thanks to very positive performances recorded over the first half of the year, which was partly offset by quarterly drops in the second half.

ELECTRICAL DOMESTIC APPLIANCE SECTOR
Production Activity - forecast from Q3-2022



Electrical domestic appliances industry forecast 2022-2023

Output in domestic appliances is set to drop in 2022 (-4.5%, revised downwards from -2.7% in the previous outlook) and to recover moderately in 2023 (+1.8%). In particularly, growth in output is expected to remain negative until the first quarter of 2023 as a result of the disruptions linked to the war in Ukraine as well as to global supply chains issues hindering industrial activity and impacting consumer demand.

These downside factors will be partially offset by some supportive factors that should provide positive contribution to growth: remote working will remain widespread practice in the EU over the next years, albeit to a much lower extent than during the pandemic. In the longer term, developments linked to the so-called 'Internet of Things' (i.e., smart applications that enable to connect home appliances, devices, etc.) should also benefit the sector, but their impact is not likely to be visible before 2023.

EU economic outlook 2022-2023

GDP growth

Given the impact of Russia's war in Ukraine, ongoing supply chain issues and rising energy and commodity prices coupled with very high inflationary pressures, EUROFER's GDP forecasts for the EU in 2022 have been further lowered compared to the previous outlook. Thanks to positive developments in the first half of the year, economic recession is ruled out in 2022, but the outlook for 2023 has been significantly revised downwards due to the energy crisis, which is expected to have persisting effects on the EU economy and industry at least up to Q1 2023. As a result, GDP growth estimates are set at +2.9% for 2022 and at +0.4% for 2023 (+1.6% in the previous outlook), with two major EU economies - Germany and Italy - experiencing recession, albeit mildly. In 2020, the economic downturn in the EU caused by the pandemic recorded -6%, marking the first recession since 2013 and the sharpest on record. In 2021, real GDP in the EU recovered (+5.3%), as a result of the robust rebound in the economy and in the industry further to the removal of most COVID-related restrictive measures, and more limited contribution to growth from services.

Thanks to a resilient performance of industrial sectors in the first half of the year, and the vigorous performance of services (returned to full speed after the pandemic), 2022 GDP growth will be positive in the EU and in all its 27 Member States, as well as in all other advanced economies (United States, United Kingdom). Despite the impact of the war in Ukraine and the energy crisis, EU economies are expected to achieve growth also in 2022, albeit with technical recession in the second half of the year.

Building upon the post-COVID positive economic trend, in the second quarter of 2022 real GDP growth in the EU proved to be quite resilient and recorded +0.7% quarter-on-quarter (+0.8% in the first quarter) and +4.2% year-on-year (+5.5% in the first quarter). However, the economic outlook has deteriorated considerably due to the energy prices shock, in particular natural gas prices which reached all-time highs in August. Q3 and Q4 2022 are likely to result both in negative quarter-on-quarter growth, signalling a technical recession due the continuation of the war and its repercussions on energy and commodity prices. This is what has already happened in the United States, which entered economic recession in Q2 2022. Among the biggest EU economies, Germany recorded +0.1% GDP growth (+1.7% year-on-year), as a consequence of worsening problems affecting its industrial sector, automotive in particular. France, Italy and Spain recorded positive GDP growth (+0.5%, +1.1% and +1.5% respectively), but they lost speed compared to the first quarter (except for Italy). However, on a year-on-year basis, these countries performed better than in the first quarter (+4.2%, +4.7% and +6.8%, respectively), also as a result of the comparison to the relatively low GDP volumes seen in Q1 2021.

Leading indicators have been continuously worsening since August 2021, as a result of skyrocketing energy prices, material and component shortages and high shipping costs resulting in major global supply chain disruptions. Growing uncertainty, primarily linked to the conflict in Ukraine, has cast a shadow on the whole year of 2022 and on parts of 2023. This situation has induced major forecasters to review their global GDP outlook. Technical recession is very likely for the EU economy in Q3 and Q4 2022, albeit not yet leading to annual GDP recession in 2022, whilst a rebound of the economic cycle could materialise only from Q2 2023, although subject to very high unpredictability.

The consequences of Russia's invasion of Ukraine will persist over time. Economic sanctions to Russia as well as other war-related disruptions, skyrocketing energy prices and record-high inflation, are also expected to stay. The TTF Natural Gas Price Index went above €300 per MW/h in August 2022, that is 20 times the average value seen in 2021, before slightly easing in recent weeks.

Inflation has become a growing concern. The inflation rate recorded in September (10% in the eurozone, 10.1% in the EU in August) was the highest since 1985 in many EU countries: 10.9% in Germany, 9.5% in Italy, 17.1% in the Netherlands, and above 20% in the Baltic countries. Inflationary pressures initially stemmed from the persisting bottlenecks affecting supply chains and shortage of critical commodities. The conflict in Ukraine and skyrocketing energy prices have further worsened the situation. EUROFER's forecast is that inflation will remain at high levels for the rest of 2022, reaching an average annual rate of 8% (the highest rate since 1984) and then slow down to 4.9% in 2023. The ECB in its latest Monthly Bulletin foresees the inflation rate in the euro area to reach 8.1% in 2022 and then to ease to 5.5% in 2023. Energy inflation, spurred by the unprecedented rise in energy prices over the summer, reached 41% in September (from 12.2% in June 2021).

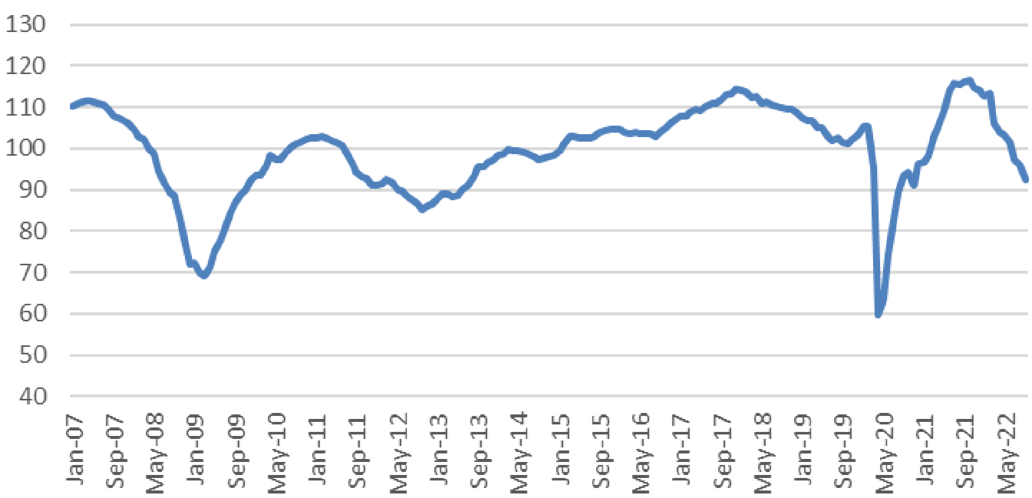
As a consequence, central banks quickly reversed their hyper-accommodative monetary policy stance that had been extremely supportive of economic recovery in previous years. Due to its highest inflation rate since 1981, the U.S. Federal Reserve has raised its policy rate five times since March, although Q2 2022 GDP data already show that the US economy has entered technical recession. Equally, the ECB raised its policy rate by 50 bps in July – for the first time since 2011 – followed by further hike in September (by 75 bps), although real interest rates remain widely negative. In addition, the ECB has terminated its PEPP (the COVID-led exceptional Asset Purchase Programme), which helped keep government bond yields low for highly-indebted countries. On the other hand, the ECB also approved its new Transmission Protection Instrument (TPI) to ensure continuity with the former PEPP and help stabilise government bond secondary markets. Due to the impact of Russia's invasion of Ukraine and the need to continue to provide public support to the economy, the Stability and Growth Pact has been suspended until the end of 2023.

The impact of the energy crisis is expected to be higher for Germany and Italy, whose reliance on Russian gas was particularly high. However, a worst-case scenario with a full rationing of Russian gas supply appears to be less likely. In that case, according to the European Stability Mechanism (ESM) German and Italian economies would be hit the most, with a drop in GDP by around 2.5% in 2023. The two countries, which are the largest manufacturing economies in the EU, should both experience recession in 2023, albeit mild (-0.8% and -0.2% respectively). The German economy will be impacted more severely due to the disruptions experienced by its automotive sector (see page 14). Therefore, assuming that the worst-case scenario will not materialise, in 2023 the economic recession in the EU should be moderate.

In this context, the IMF and the OECD have revised downwards their latest GDP projections. In its October 2022 Outlook, the IMF lowered its world GDP growth to +2.7% in 2023. The euro area will achieve only +0.5% in 2023, with Germany and Italy in recession (-0.3% and -0.2% respectively), while the U.S. economy will grow by +1%.

In its September 2022 Outlook, the OECD foresees a global growth of +3% in 2023, but only +0.3% for the euro area and +0.5% for the U.S.

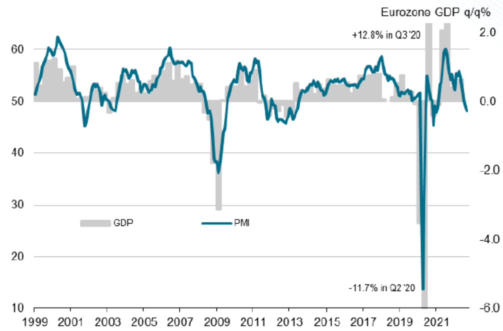
ECONOMIC SENTIMENT INDICATOR (ESI), EU
(long-term average=100)



Confidence indicators

After the restart of the industry and along with the post-pandemic economic recovery, a spectacular improvement in confidence was recorded until the end of the second quarter of 2021. This led to well above pre-pandemic levels peaking at 118 in July, a fourteen-year high, before it started easing in August and September following widespread concerns over supply chain issues and inflation. This downward trend has continued since then, reaching a 10-month low in July 2022 but then plummeting down to 92.6 in August, that is the lowest level seen since October 2013.

S&P GLOBAL EUROZONE COMPOSITE PMI OUTPUT INDEX



Source: S&P Global, Eurostat.

The latest S&P composite PMI for the euro area (September 2022) went below the crucial 50.0 mark in September (48.1) for the third consecutive month, signalling a sustained downturn in business activity across the euro area private sector. This was further down from 48.9 in August, pointing to the fastest decline in output since January 2021. Due to growing concerns surrounding future gas supply, recession risks and persistently high price pressures, in September business confidence fell to its weakest level since the outbreak of COVID-19 in the first half of 2020. High inflation is increasingly impacting output levels as businesses adjust to lower order volumes.

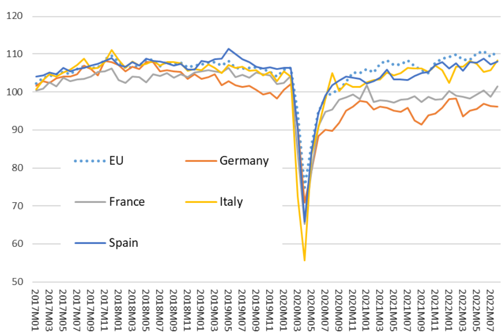
Global supply chain issues weighing on economic and industrial activity since 2020 are showing some signs of easing, as demand conditions are quickly softening due to inflationary pressures squeezing demand from consumers. Fewer lockdowns in China have contributed to soften global supply chain issues, but manufacturing output growth is still widely affected and remains weak in all advanced economies.

In detail, prices for container ships have stabilised and slowed down, reflecting lower trade flows. As a result, the Global Supply Chain Pressure Index, whose levels have remained close to those of the first lockdown period in the second quarter of 2020, eased to 1.51 points in August 2022, down from 1.75 points in the previous month. It went further down in September with 1.05 points, although still around its highest historical terms since 2010.

Mirroring the above developments, after the pronounced drop in industrial production in the EU (-8.1%) in 2020 and the vigorous rebound in 2021 (+7.9%), EUROFER foresees very modest growth in 2022 and 2023 (+1.1% and +1% respectively, revised downwards from +3% and +3.6% in the previous outlook).

On a quarterly basis, EU industrial production bounced back significantly since the trough due to the outbreak of the pandemic, and grew year-on-year for eight consecutive quarters, albeit slowing down since the last quarter of 2021. In the second quarter of 2022, however, industrial production still increased (+1.7% in the EU compared to +1.1% in the preceding quarter). In Germany, industrial production dropped for the third consecutive quarter (-1.3%), due to the growing impact of the war and supply chain disruptions on its automotive sector, whereas it continued to rise in other major euro area economies. France recorded +1.7% (+1.1% in the first quarter), Italy +2% (after +1.3%) and Spain +4% (after +1.6%).

INDUSTRIAL PRODUCTION INDEX,S.A., MONTHLY DATA (2015=100)



The latest available monthly data (up to August 2022) show that industrial output volumes in the EU – albeit with national disparities - have recovered from the exceptional losses due to the pandemic, but they remained below the all-time highs recorded during the strong cycle of 2017. In particular, industrial output has recovered up to pre-pandemic levels in Italy and in Spain but not in France nor in Germany. Industrial output was impacted by global supply chain disruptions already before Russia's war in Ukraine, and it is likely to be increasingly impacted during the third and fourth quarter 2022 as a result of uncertainty linked to the conflict and rising energy costs.

Economic fundamentals

EUROFER MACROECONOMIC DATA, EU ANNUAL % CHANGE, UNLESS OTHERWISE INDICATED	2020	2021	2022	2023
GDP	-6.0	5.3	2.9	0.4
Private consumption	-7.3	3.8	3.8	0.6
Government consumption	0.7	3.9	1.8	0.6
Investment	-6.1	6.8	3.3	1.0
Investment in mach. equip.	-11.7	8.5	1.9	2.4
Investment in construction	-5.1	6.4	3.4	1.6
Exports	-10.2	10.3	5.9	3.0
Imports	-9.3	9.8	6.7	3.2
Unemployment rate (level)	8.1	7.7	7.0	7.3
Inflation	0.5	2.6	8.0	4.9
Industrial production	-8.1	7.5	1.1	1.0

Despite the long-lasting impact of the COVID-19 pandemic on the economy, labour market fundamentals have continued to prove resilient in most EU countries. However, job creation continued to be affected by lower levels of production activity in industry and by persistent uncertainty about short-term business conditions.

The EU unemployment rate, which had remained around late 2019 levels, peaked at 7.8% in September 2020 to gradually ease and reach 6% in August 2022. Labour market proved quite resilient and reacted slowly to the deterioration of the macroeconomic environment. Unemployment levels have continued to conceal considerable differences across member states (12.4% in Spain) and across economic sectors. Consumers have been suffering from substantial decreases in their in disposable income due to inflation rates at their thirty-year highs. This dynamic has slashed consumption growth. Despite government support and increased social expenditure to mitigate the impact of the pandemic (in 2020-2021) and of the energy crisis for households and industries, uncertainty will continue to weigh down on consumer confidence until the end of 2022. In this scenario, the rise in commodity prices coupled with inflation is due to continue to impact household energy costs and limit considerably their purchasing power, while increasing their savings propensity.

Government investment and public expenditure are expected to continue to play a countercyclical role and could provide a strong contribution to the growth of domestic demand, although room for manoeuvre is now reduced due to the end of the ECB asset purchase programme. The NextGeneration EU package will continue to be implemented, but its effects will only be visible from 2023.

Glossary of terms

Sector definitions according to NACE Rev.2

Building & Civil Engineering

41 Construction of buildings
42 Civil engineering
43 Specialised construction activities
25.1 Manufacture of metal structures and part of structures
25.2 Manufacture of tanks. generators. radiators. boilers

Mechanical Engineering

28 Manufacture of machinery and equipment
27.1 Manufacture of electric motors. generators. transformers
25.3 Manufacture of steam generators. except central heating hot water boilers

Automotive

29 Manufacture of motor vehicles and trailers

Domestic Appliances

27.51 Manufacture of electric domestic appliances

Other Transport Equipment

30 Manufacture of other transport equipment
30.1 Building and repair of ships
30.2 Manufacture of railway locomotives and rolling stock
30.91 Manufacture of motorcycles

Steel Tubes

24.2 Manufacture of steel tubes

Metal Goods

25 Manufacture of fabricated metal products excluding 25.1-25.2-25.3

Other sectors

26 Manufacture of computer. electronic and optical products
27 Manufacture of electric motors. generators. transformers and electricity distribution and control apparatus excluding 27.1 and 27.5

EU steel market definitions

SWIP: Abbreviation for Steel Weighted Industrial Production index. It is used as a proxy for real steel consumption. Activity in the steel-using sectors is weighted with the relative share of each sector in total steel consumed by all sectors.

Real steel consumption: Real consumption is the use of all steel products used by steel-using sectors in their production processes, also referred to as the 'final use' of steel products, adjusted for the stock cycle.

Apparent steel consumption: Apparent consumption is also referred to as 'steel demand'. It is total deliveries of all steel products and qualities by EU producers plus imports less 'receipts' into the EU, minus exports to third countries. In other words, apparent consumption is deliveries by EU producers plus imports minus receipts (that is, imports by EU producers themselves of material that is further processed), minus exports to third countries. EUROFER's definition of apparent consumption includes all qualities, including stainless, and all finished products and semi-finished products.

If apparent consumption exceeds real steel consumption, the surplus is stocked in the distribution chain. If apparent consumption is less than real steel consumption, inventories are being withdrawn.

Steel industry receipts: In both the apparent consumption and market supply statistics, the imports component of the calculation is written, in the EUROFER definition, as 'imports less receipts'.

The 'receipts' in this instance mean imports by EU producers themselves of finished or semi-finished steel products that are further processed by the producer and transformed into other products. In the publicly available EUROFER figures, only finished products are shown and thus impacted by the receipts calculation.

This correction is important because it prevents double-counting that would artificially inflate the size of the market. If an EU producer imports a tonne of hot rolled strip that it further processes into a tonne of cold rolled which it then delivers to the EU market - in an uncorrected calculation the import of one tonne would then become one imported tonne plus one EU-processed and delivered tonne. The imported tonne is thus corrected out in the import side of the market supply and apparent consumption figures.

Narrow definition: EUROFER applies the so-called "narrow definition" which excludes steel tubes and first transformation products from the product scope used for calculating steel consumption. Hence, the steel tube sector is a steel-using sector under this definition.

Steel intensity: The ratio of real steel consumption to steel weighted production in the steel-using sectors. This reflects the usually slightly negative impact on consumption of innovation in steel products, inter-material substitution, improvements in process efficiency and design, etc.

About the European Steel Association (EUROFER)

EUROFER AISBL is located in Brussels and was founded in 1976. It represents the entirety of steel production in the European Union. EUROFER members are steel companies and national steel federations throughout the EU. The major steel companies and national steel federations in the United Kingdom and Turkey are associate members.

The European Steel Association is recorded in the EU transparency register: 93038071152-83.

About the European steel industry

The European steel industry is a world leader in innovation and environmental sustainability. It has a turnover of around €125 billion and directly employs around 310,000 highly-skilled people, producing on average 153 million tonnes of steel per year. More than 500 steel production sites across 22 EU Member States provide direct and indirect employment to millions more European citizens. Closely integrated with Europe's manufacturing and construction industries, steel is the backbone for development, growth and employment in Europe.

Steel is the most versatile industrial material in the world. The thousands of different grades and types of steel developed by the industry make the modern world possible. Steel is 100% recyclable and therefore is a fundamental part of the circular economy. As a basic engineering material, steel is also an essential factor in the development and deployment of innovative, CO_2-mitigating technologies, improving resource efficiency and fostering sustainable development in Europe.

EUROFER
THE EUROPEAN STEEL ASSOCIATION

EUROFER AISBL

Avenue de Cortenbergh, 172
B-1000 Brussels
+32 (2) 738 79 20
mail@eurofer.be
www.eurofer.eu

Follow us on twitter @EUROFER_eu