GERMANY
2022-2023 SCENARIO

SOBRIETY,
A SMALL PRICE TO PAY

October 2022

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WORKING EVERY DAY IN YOUR INTEREST AND FOR SOCIETY

GROUP ECONOMIC RESEARCH

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SUMMARY

SOBRIETY, A SMALL PRICE TO PAY

The German economy grew 0.1% q/q in Q2, narrowly avoiding recession. Private-sector consumption, government spending and resilient productive investment made a positive contribution, while net exports were a drag. But inflationary pressures intensified over the summer months: energy prices rose and inflation spread to goods and, to a lesser extent, to services. Although frictions persist caused by bottlenecks in the supply chains of intermediate goods from Asia, things seem to be gradually improving. Gas flows from Russia practically dried up completely at the end of September. The leaks that appeared in the Nord Stream 1 and 2 pipelines have scuppered hopes that the taps will be burned back on before the end of the year. However, Germany has used steady gas deliveries from its European partners to replenish reserves to 96% of capacity. It introduced a range of measures to get through the winter, including an energy savings plan to cut consumption by 15%. In addition to accelerating the construction of regasification terminals with a time line to the end of the year, Germany has increased reliance on coal-fired plants and extended the life of two of its remaining nuclear power plants.

We have significantly lowered our growth forecast for the second half to reflect sharply higher and more persistent inflation than expected. Inflation will dent consumer spending, put a damper on investment and hold back productive activity. In view of these factors, we have tempered our growth forecast to +1.6% for 2022. We expect GDP to decline 0.4% in 2023 as persistent negative inflation effects take their toll, especially on industry. Energy-intensive industries are either scaling back production or shutting down lines as profitability is hit by the surge in gas and electricity prices.

In our view, consumer spending will be the first component of the economy to pay the cost of double-digit inflation at the year-end. The war in Ukraine is sapping household confidence and retail sales have dropped considerably in recent months. While it is true that savings built up during the pandemic will ease the situation for the more affluent, rising prices are impacting the majority of consumers. Expected wage rises will help, but not enough to keep pace with soaring inflation. And then there are the interest rates hikes to bring inflation back down, which also affect what people can afford to buy.

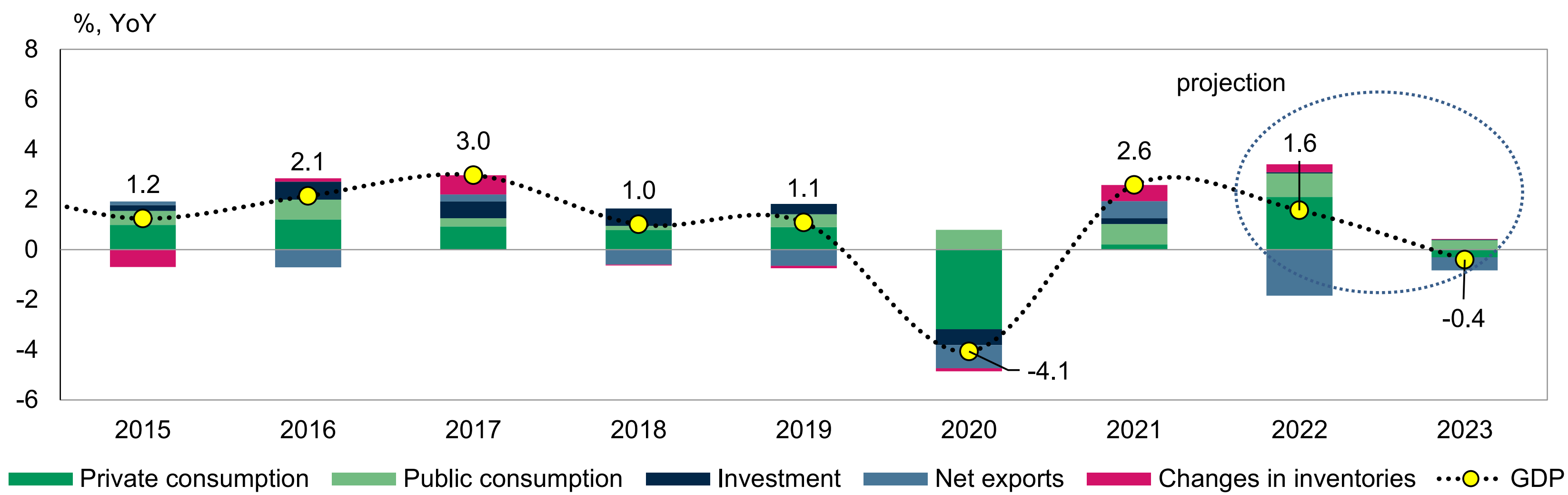
Productive investment, mainly in the energy transition and sustainability, is expected to increase at only a very modest pace. Investment in construction had been a growth driver but has started to slow, as material shortages, higher costs and higher interest rates cool new projects. Net exports will continue to be a drag on German growth: exports have fallen and imports risen in an inflationary environment. Moreover, rocketing energy costs – with gas no longer available as a transition fuel – are threatening the country's long-term competitiveness, especially since the country has committed to weaning itself off fossil fuels by 2035.

German fiscal policy should remain expansionary this year and next. Berlin has introduced three relief packages to help households and businesses cope with the ravages of inflation. Worth a total of €95 billion, they amount to subsidies for pensioners, students and those on low incomes, together with some lower taxes. On top of these developments, the German government has agreed a gas and electricity price cap for a two-year period to shield consumers from surging energy prices. At a cost of €200 billion, or 5.1% of GDP, the scheme gives consumers a basic allowance of discounted power. To be managed outside the normal budget process, the money for the cap will come from the economic stabilisation fund. It will add to government debt but not the deficit. According to the most recent official estimates, debt is expected to rise to 76% of GDP from 71% before the relief package was announced.

SUMMARY

SOBRIETY, A SMALL PRICE TO PAY

Contributions to annual growth



	Yearly average (YoY, %)				Quaterly growth (QoQ, %)											
Germany	**2020**	**2021**	**2022**	**2023**	**2021**				**2022**				**2023**			
					Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
GDP	**-4.1**	**2.6**	**1.6**	**-0.4**	**-1.5**	**1.9**	**0.8**	**0.0**	**0.8**	**0.1**	**-0.2**	**-0.4**	**-0.2**	**-0.1**	**0.2**	**0.3**
private consumption	-5.9	0.4	4.1	-0.6	-4.9	3.4	5.7	-1.0	0.8	0.8	-0.2	-0.6	-0.3	-0.2	0.3	0.3
investment	-3.0	1.0	0.2	0.1	-1.5	1.5	-2.3	0.0	2.1	-1.3	0.1	0.0	0.1	0.1	0.3	0.3
change in inventories *	-0.1	0.6	0.3	0.0	1.7	-0.9	-0.3	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
net exports *	-0.9	0.7	-1.8	-0.5	-0.1	-0.2	-0.6	-0.5	-0.6	-0.6	-0.2	-0.1	-0.1	-0.1	-0.1	0.0
unemployment rate	3.7	3.6	3.2	3.5	3.9	3.7	3.5	3.3	3.0	2.9	3.3	3.5	3.5	3.5	3.5	3.5
Inflation	0.4	3.2	8.7	8.7	1.7	2.2	3.5	5.4	6.1	8.3	9.2	11.1	10.3	9.8	8.9	6.0
Government net lending	-4.3	-3.7	-3.8	-3.2												

** Contributions to GDP growth*

Sources : Crédit Agricole SA, estimates

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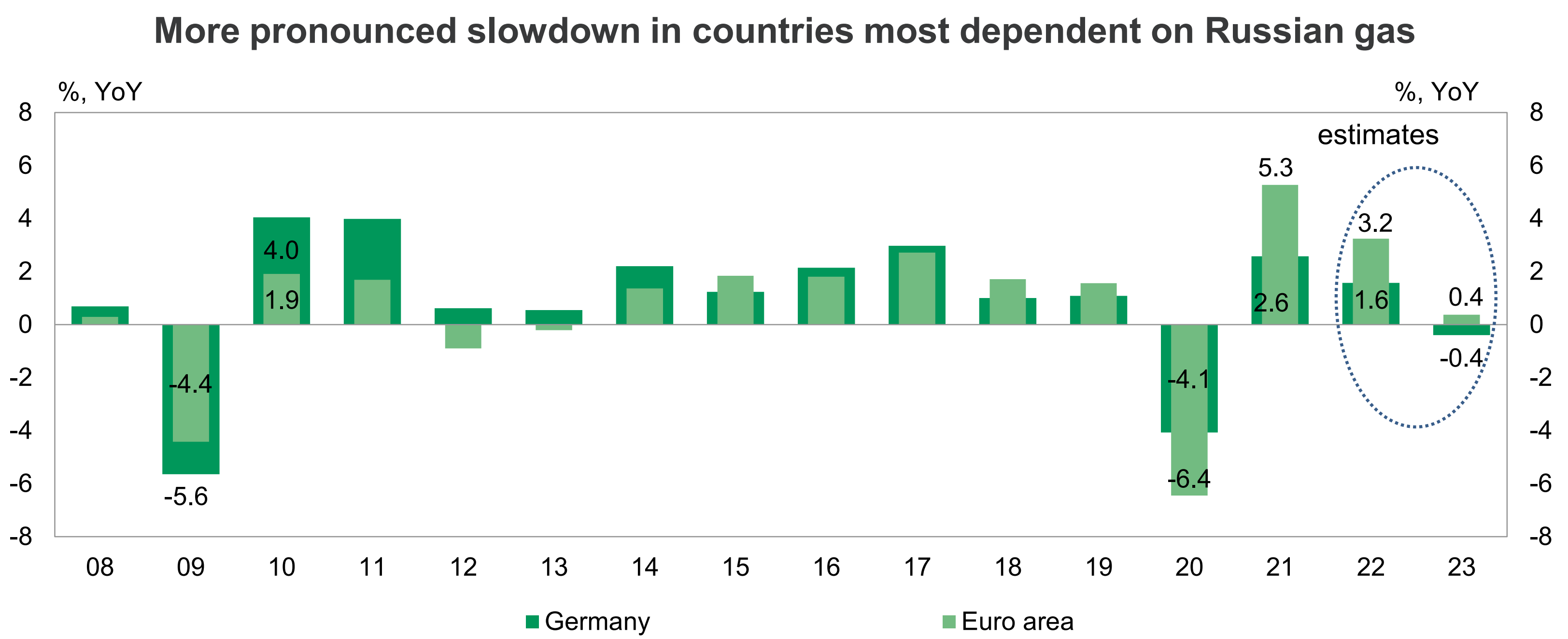
RECENT ECONOMIC TRENDS

SOARING ENERGY PRICES DAMPEN GROWTH



Sources: Eurostat, Crédit Agricole SA/ECO

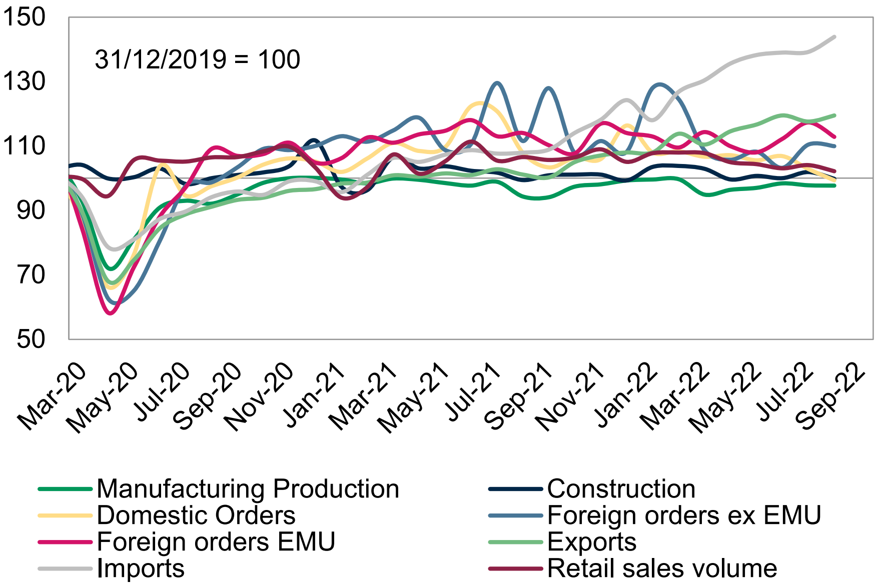
The Germany economy was resilient in Q2 propped up by household and government spending. But investment in construction and net exports were a drag on growth. Although GDP has just about returned to pre-pandemic levels, consumer spending and productive investment especially have still not returned to where they were – a sign that the economy has only partially recovered. Consumers and businesses are feeling the impact of the inflationary pressures whipped up by the war in Ukraine. Households are grappling with the dramatic erosion of their spending power as prices continue to rise. Companies – especially the most energy-hungry industries – face difficult choices as they rationalise production to cope with the sharp rise in production costs.

Gas supplies are still a critical issue, but the government has stepped up measures to get through the winter without taking the drastic step of rationing: it is replenishing gas reserves, building floating regasification terminals and taking modest steps to encourage moderation and reduce energy consumption. Nonetheless, gas dependence, the structure of German industry and inflation that is running hotter than in some of its partner countries will all leave deep marks on the economy. Our forecast is for annual growth to expand 1.6% this year and GDP to dip 0.4% in 2023, as inflation casts a pronounced recessionary shadow on both investment and demand from consumers.

RECENT ECONOMIC TRENDS

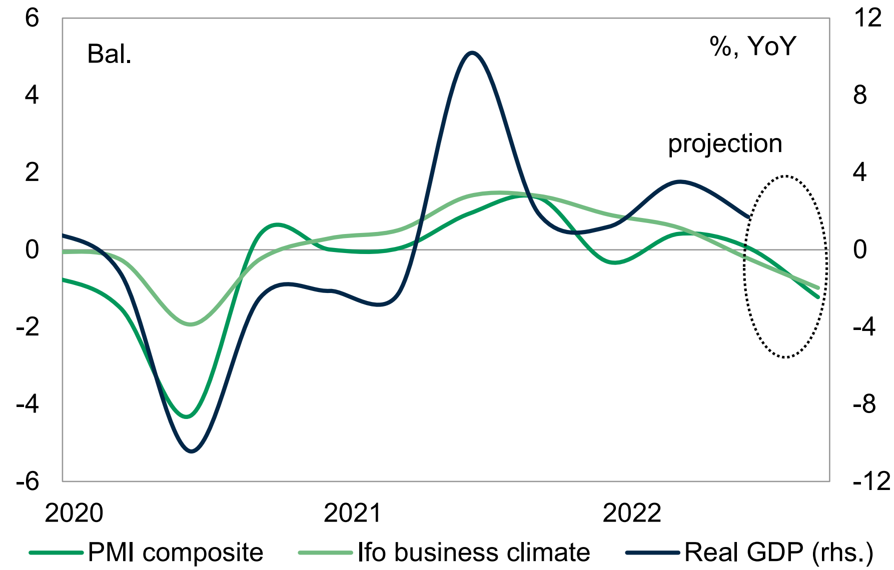
INDUSTRY AND HOUSEHOLD CONFIDENCE WANES

Trends in the main indicators



Sources: FSO, DB, Crédit Agricole SA/ECO

Business surveys and real growth



Sources: IFO, Crédit Agricole SA/ECO

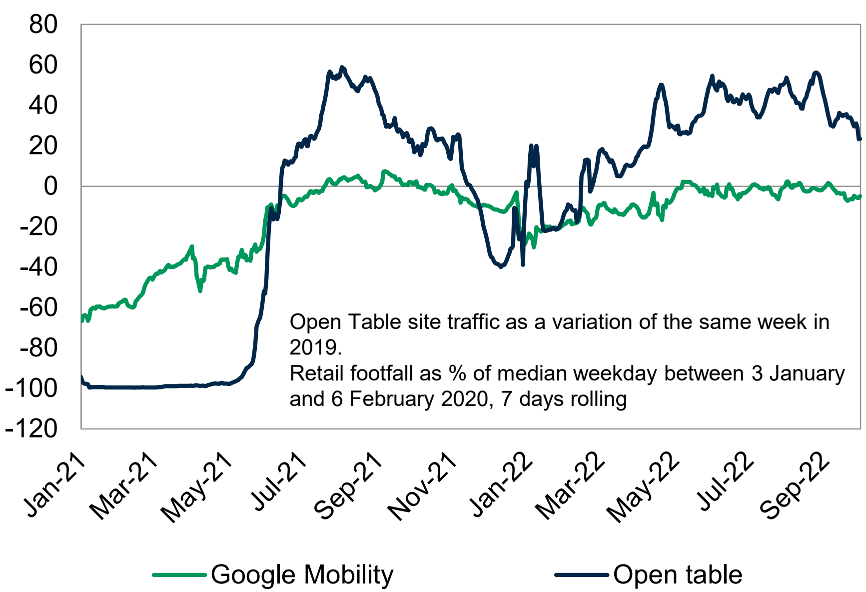
Industrial production declined for the second consecutive month in August due to headwinds from supply bottlenecks of intermediate products and the rising cost of imported energy, forcing companies to cut back output. New orders have dropped for the past seven months, in a blow to heavy industry, metals and the automotive sector. However, the growth overhang in the third quarter is still positive at 0.4%. Retail sales were down even further as inflation eats away at household purchasing power. Germany's trade balance continued to narrow as growth in exports lagged the increase in imports.

The composite PMI signals activity contracting in Q3 as both industry and services stall. The impact of soaring energy bills is greater in energy-intensive branches of industry, despite satisfactory demand. Some factories are cutting or halting production as a result. The ifo business climate index was also markedly more pessimistic in its assessment of the current situation in all sectors surveyed and in the six-month outlook. Business morale is shaken by heightened uncertainty surrounding potential energy rationing in the event of a severe winter or a tighter squeeze on energy supply.

RECENT ECONOMIC TRENDS

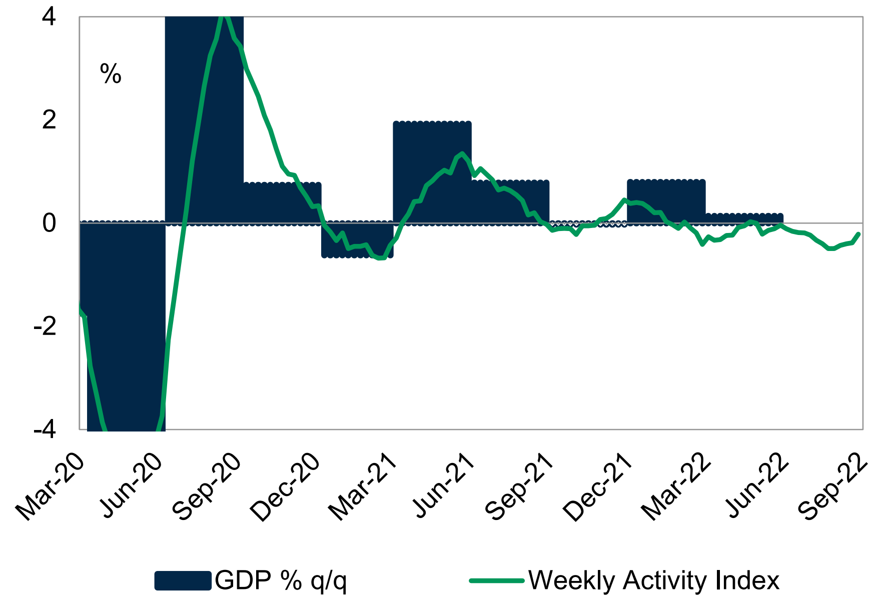
HIGH-FREQUENCY INDICATORS (CONSUMPTION AND ACTIVITY)

Decline in services



Sources: Opentable, Google-Mobility, Crédit Agricole SA/ECO

Weekly activity index and GDP growth



Sources: Apple mobility, Crédit Agricole SA/ECO

Demand for services weakened in the third quarter. With pandemic lockdowns now firmly in the rearview mirror, higher prices are putting the brakes on purchasing decisions. Retail footfall is still slight, suggesting that inflation is tightening its grip, as customers concentrate purchasing on consumer goods and much less on capital goods. The road traffic index, an indicator of industrial activity, picked up slightly, but remains well below where it was before the pandemic.

The Bundesbank's weekly activity index suggests a modest contraction in Q3, with an implicit GDP growth rate of -0.1% at the end of September compared with the last three months. We think that GDP could decline 0.2%, pushed down by the impact of rising prices on consumer spending, lower investment and slipping demand for German exports amid the global slowdown triggered by the war in Ukraine and spiking energy costs.

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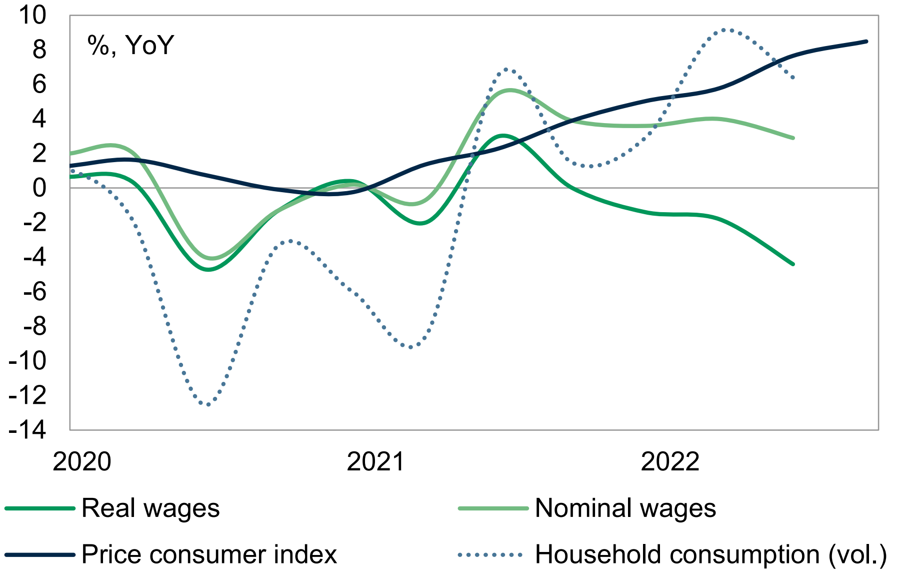
JOBS, WAGES AND CONSUMPTION

Wages, inflation and consumption



Sources: FSO, Crédit Agricole SA/ECO

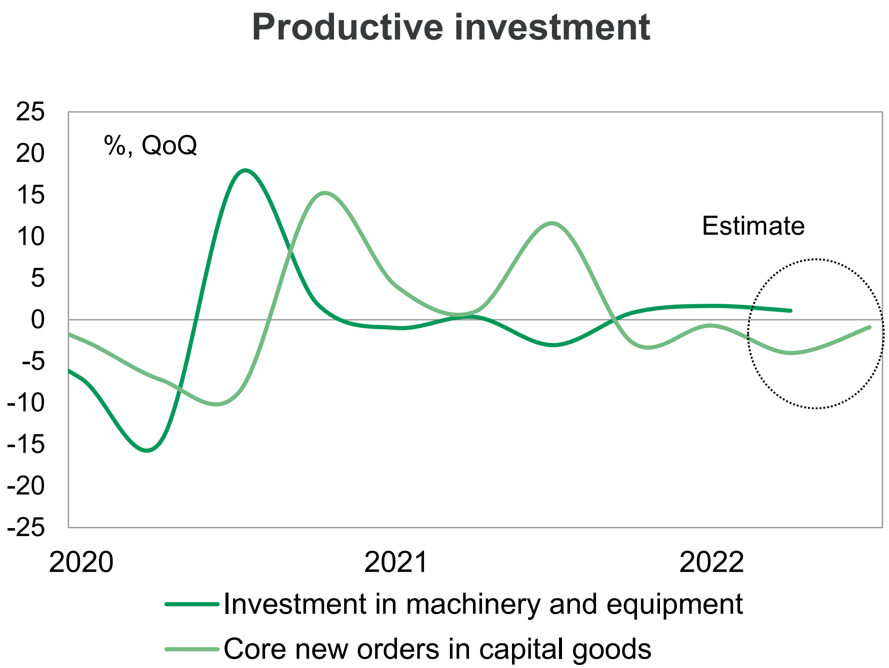
Number employed and unemployed

Sources: Agentur für Arbeit, Crédit Agricole SA/ECO

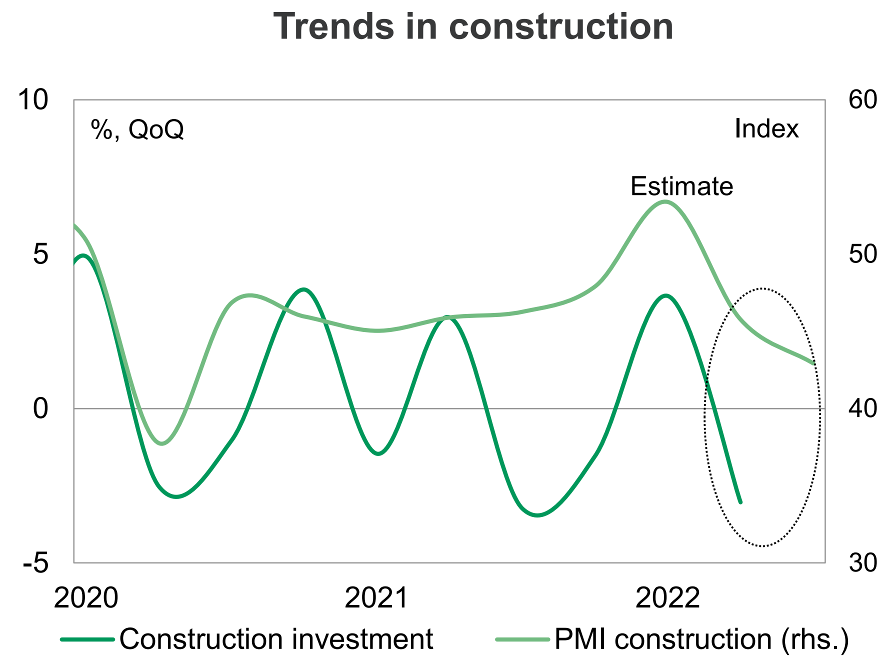
Nominal wages rose 2.9% year-on-year in Q2 2022, while the consumer price index rose 7.6%, for a near 4.4% dip in real wages. Inflation expectations were revised upwards for Q3 (+9.2%) and Q4 (+11.1%) signalling a net decline in purchasing power. The prospects for wages following union negotiations remain modest with an expected 2.9% increase in 2022, while real wages could increase 4.5%, supplemented by exceptional one-off bonuses. Only some sectors where labour is in short supply and wages are very low, such as hotels, restaurants, industrial cleaning or temporary work, will see more generous wage increases. The Germany government decision to increase the minimum wage to €12 an hour effective on 1 October will add 0.8 percentage points to the wage bill spread over this year and next: one-third this year and two-thirds in 2023. New job creation slowed in August and unemployment climbed for the third month in a row with immigrants from war-torn Ukraine reflected in the figures. The household savings rate returned to pre-pandemic levels, leaving consumers less wriggle room for future expenditure. We expect consumer spending to drop significantly in the third quarter (-0.2% q/q) and to slump even more in the fourth quarter (-0.6% q/q), as inflation eats away at what households can afford and confidence wanes amid the fallout from the grinding war in Ukraine.

OUTLINE OF OUR SCENARIO

INVESTMENT: SHORT-TERM OUTLOOK



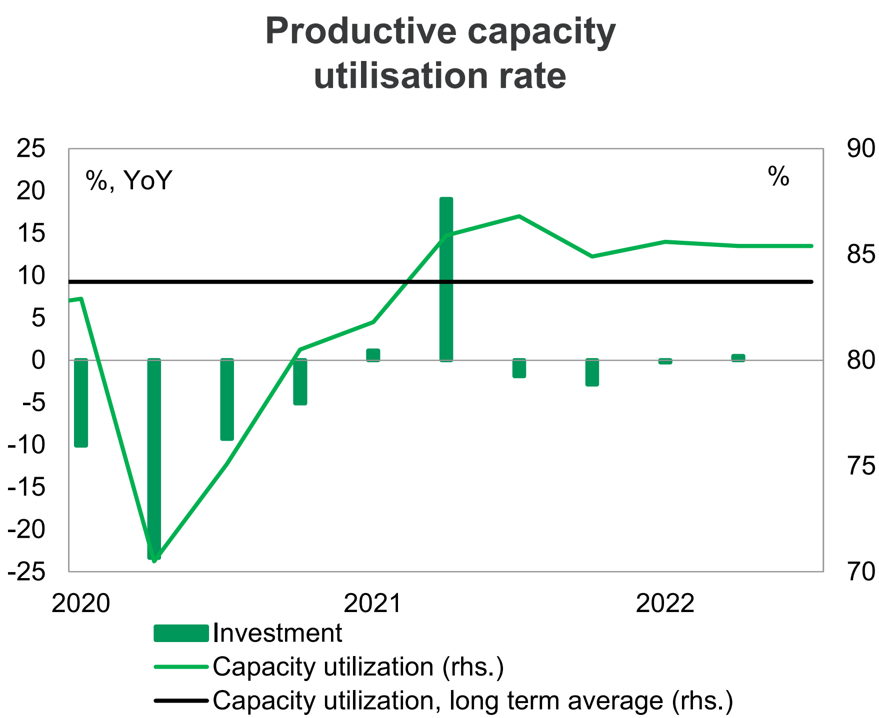
Sources: FSO, Crédit Agricole SA/ECO



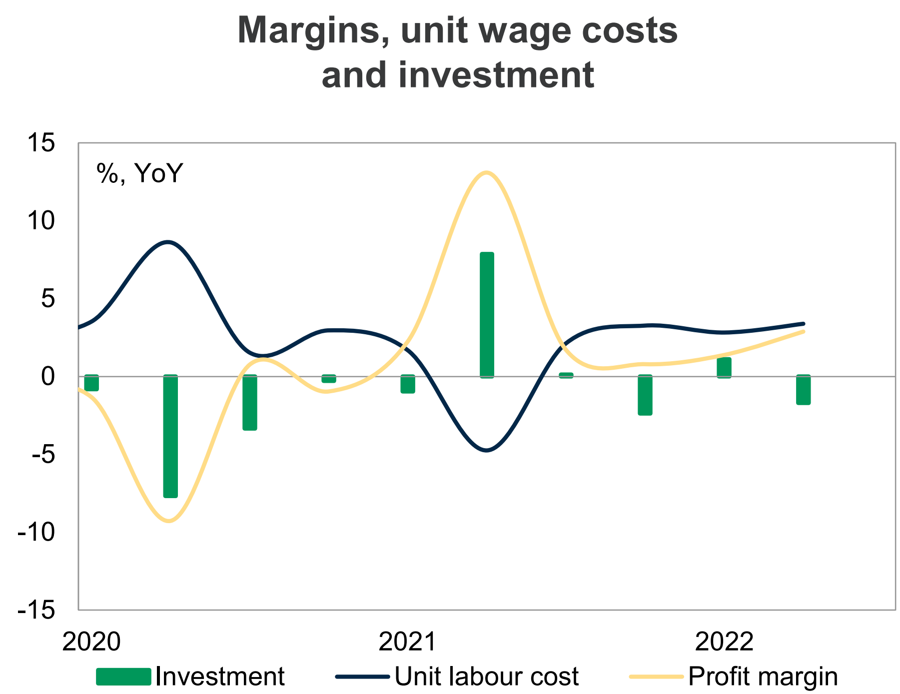
Sources: FSO, Markit, Crédit Agricole SA/ECO

The pace of increase in productive investment slowed to 1.1% qoq (vs. 1.7%) in the second quarter, 5.3% lower than where it was before the pandemic. The recent pick-up in domestic orders for capital goods suggests a further short-term increase in productive investment. But the pace of growth will be very modest to meet the urgent needs arising from the energy crisis, before a profound transformation of the country's manufacturing base in response to the pressing energy and environmental challenges. On the other hand, investment in construction contracted a sharp 3.4% q/q in Q2, as commodity shortages and higher material costs bit. The sector's PMI index pointed to a pronounced slowdown in activity in the short term, with higher input prices cutting into major projects in an environment where supply is hampered by external supply and mounting inflation is holding back demand. Investment is set to be almost zero for the year as a whole. It should pick up again in the middle of next year spurred by the need to decarbonise the German economy and industry and reduce dependence on imported sources of energy.

INVESTMENT: UNDERLYING TRENDS



Sources: Destatis, Crédit Agricole SA/ECO



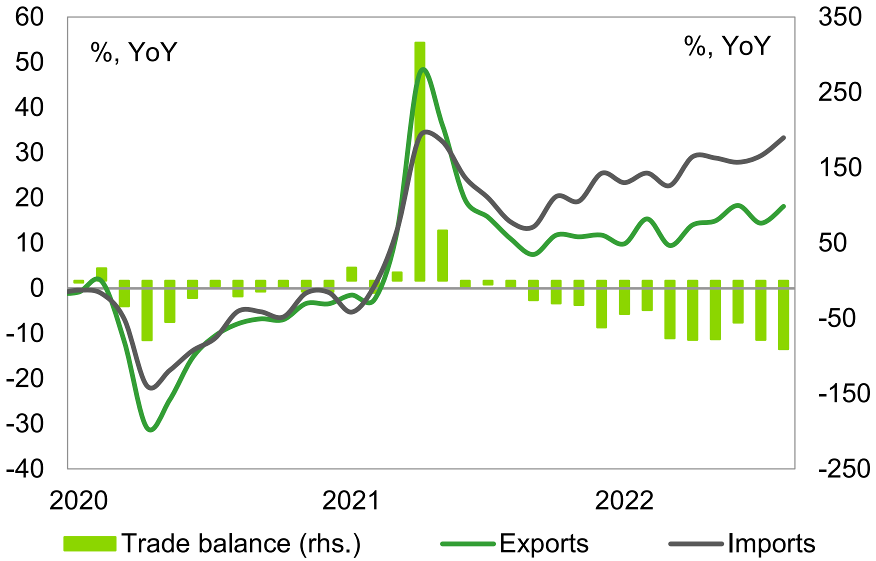
Sources: Destatis, Crédit Agricole SA/ECO

The capacity utilisation rate was stable and above its long-term average in Q3, suggesting ongoing supply tensions and a hefty order backlog. But orders have started to fall in recent months in a sign of weaker future demand. Industry helped keep the margin rate up in Q2, but the outlook for Q3 is far dimmer. We forecast very anaemic investment again this year with growth expected to edge up to just 0.2% before recovering in the second half of 2023. The forecast decline in growth (due to the impact of inflation on demand and decisions to scale back unprofitable production in response to higher energy costs) will pull down corporate margins over several quarters. Since, the lack of visibility on the recovery depends above all on how long inflation will continue to stifle demand, we expect productive investment to stay weak.

OUTLINE OF OUR SCENARIO

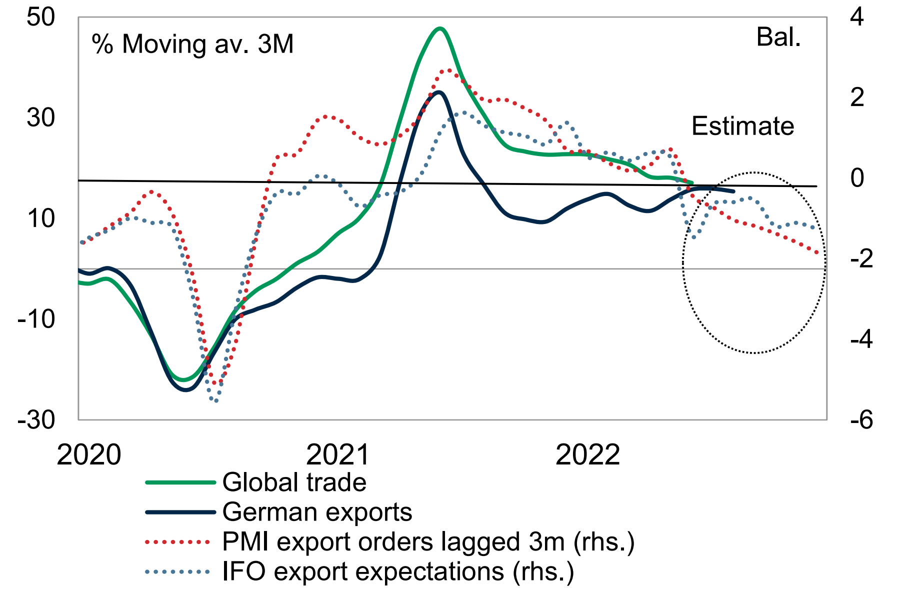
FOREIGN TRADE

The trade balance



Sources: Bundesbank, Crédit Agricole SA/ECO

Outlook for exports



Sources: Destatis, Crédit Agricole SA/ECO

Germany's trade surplus continued to shrink. Exports improved slightly in August on stronger demand from the US and, to a lesser degree, China and its Eurozone partners. Imports, especially from China, rose much faster than exports. The percentage of goods stuck in ports awaiting shipment has fallen; congestion in the port of Shanghai eased significantly over the summer. Both the PMI for export orders and the ifo's export forecasts point to a downturn in trade in the coming months. In our scenario, trade will be a drag on growth in 2022 (-1.8 points) and to a slightly lesser degree (-0.5 points) in 2023. Inflation will squeeze domestic demand while there is an even greater downside risk to export demand. Higher production costs for industry could dull the country's competitive edge over a longer period, which would take the shine off its products and slow growth.

RISKS TO OUR SCENARIO

Matrix of scenario risks

		Probability	Impact
↓	Winter hardship and gas rationing	High	High
	Sustained high inflation	High	High
	Epidemic outbreak	High	Medium
↑	Additional measures to support households and businesses	High	Medium

Source: Crédit Agricole SA/ECO

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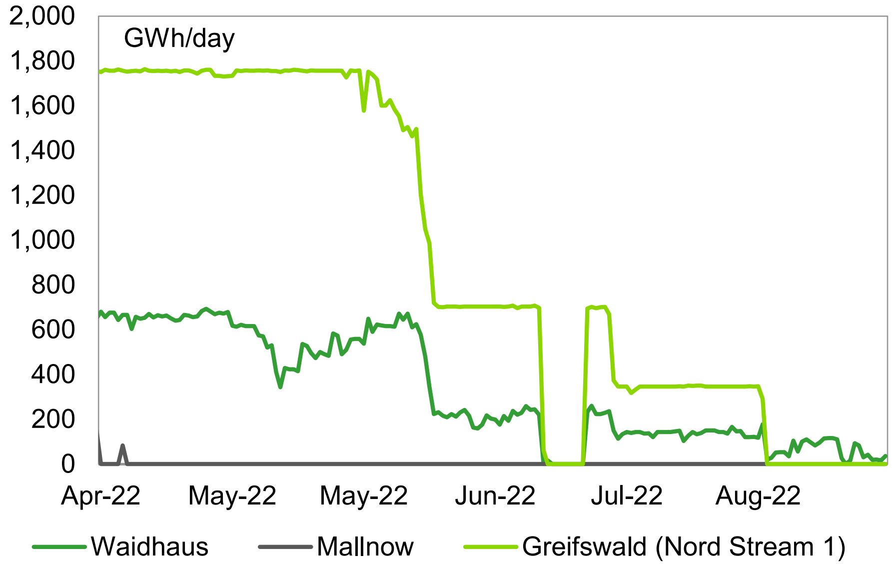
FOCUS: ENERGY-INTENSIVE INDUSTRIES UNDER PRESSURE

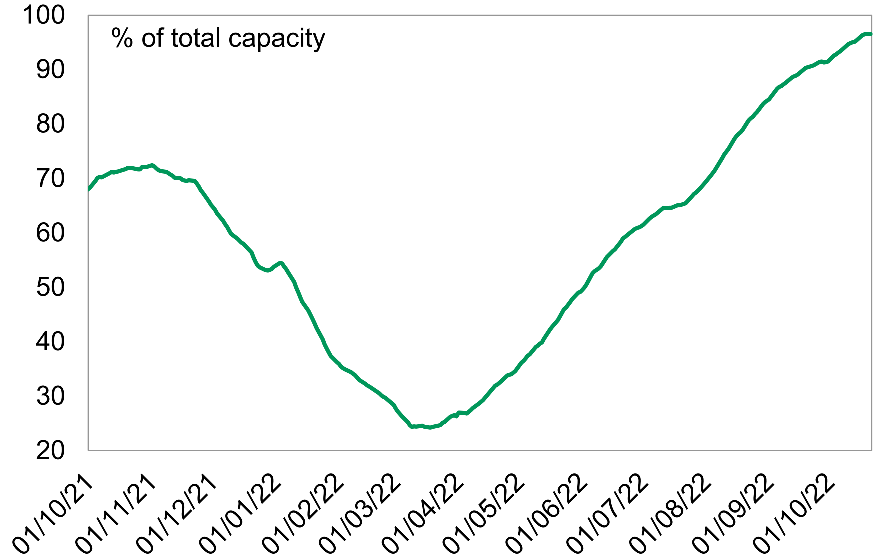
LOWER RUSSIAN GAS FLOWS, CONTINUED EUROPEAN FLOWS AND HIGH STOCKS

Gas flows from Russia



Sources: Bundesnetzagentur, Crédit Agricole S.A

Gas storage



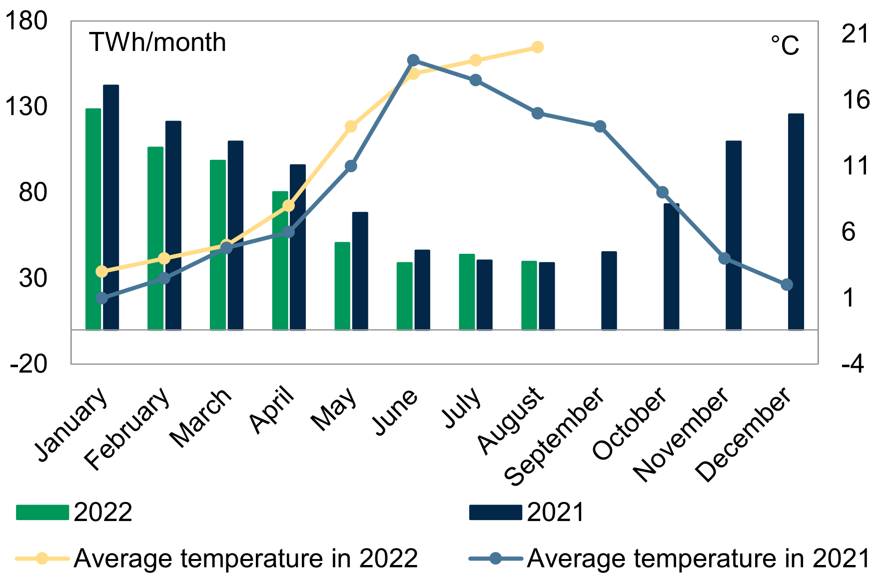
Sources: Bloomberg, Crédit Agricole S.A.

Russia choked back gas supplies to Germany this summer. Flows became increasingly erratic before being turned off completely at the end of September. The leaks found on Nord Stream 1 and 2 make it highly improbable that gas will flow through the pipelines before the end of the year. Germany also receives gas from Norway, Belgium and the Netherlands. Supplies from these countries have been steady and have even increased in 2021 – to around 50% of imported volumes – since Russia began its invasion of Ukraine. Strategic reserves are now at 96% of total capacity (estimated at 245 TWH), while gas consumption has fallen significantly since the beginning of the year. The government has also speeded up construction of four regasification terminals, two of which should be operational by next January. They will go some way towards making up one-third of lost capacity. New partnerships have also been formed as Germany looks to diversify supply. For example, it has agreed a deal with the United Arab Emirates for the supply of LNG.

FOCUS: ENERGY-INTENSIVE INDUSTRIES UNDER PRESSURE

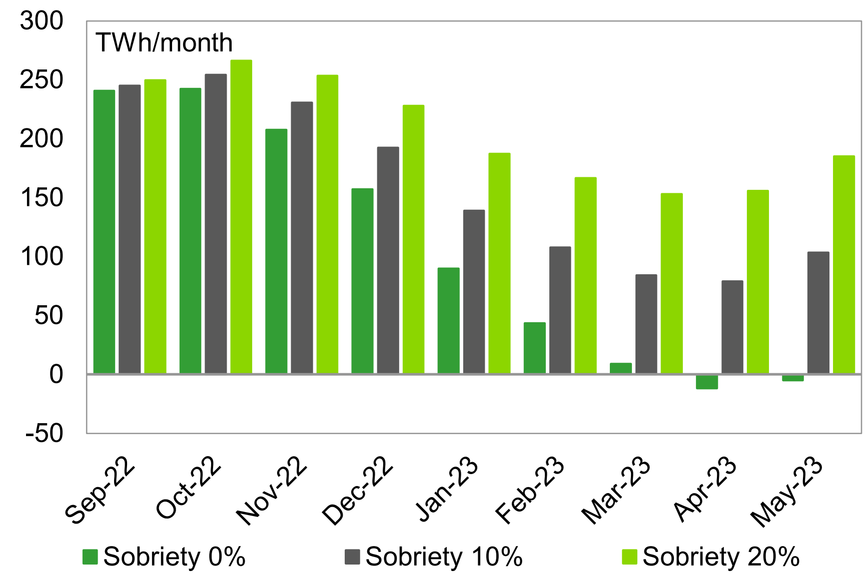
IS THERE ENOUGH GAS IN STORAGE TO GET THROUGH THE WINTER?

Monthly gas consumption



Sources: Bundesnetzagentur, Crédit Agricole S.A.

Gas stocks under different consumption-reduction assumptions



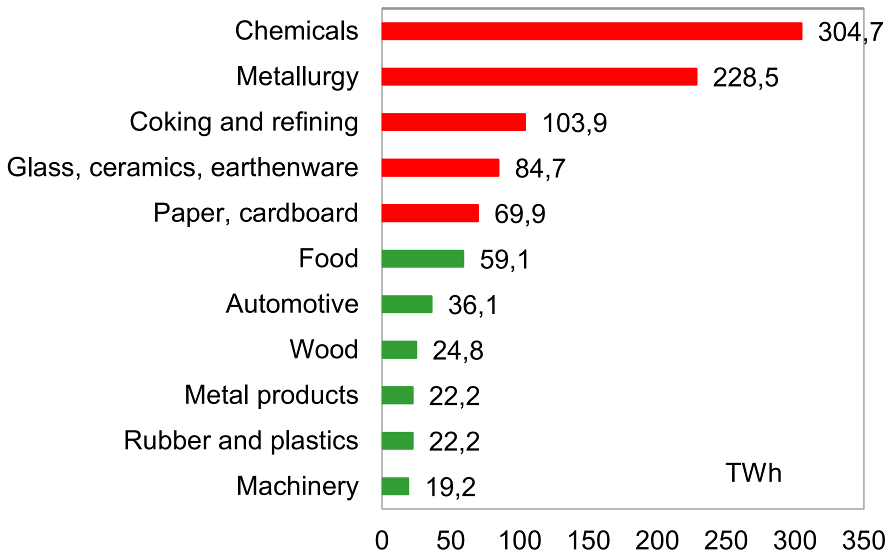
Sources: Bundesnetzagentur, Crédit Agricole S.A.

Since Russia invaded Ukraine, Germany has cut its monthly gas use by 12% on average compared with the same period one year earlier. Estimates of how Germany will manage its reserves over the winter are based on a number of assumptions: winter temperatures broadly the same as last year, flows from Russia cut off completely, supplies from Europe remaining steady and on several behavioural scenarios: no change from the previous year - 10% or 20% reduction in consumption based on changes that hinge on limited substitution of electricity for gas and voluntary efficiency savings by consumers and businesses. The bar charts show that the country could have enough gas to see it through the winter if it cuts its usual consumption by at least 10%. Reserves would be low and it would be complicated to replenish stocks for the following year, as current producers struggle to increase capacity.

FOCUS: ENERGY-INTENSIVE INDUSTRIES UNDER PRESSURE

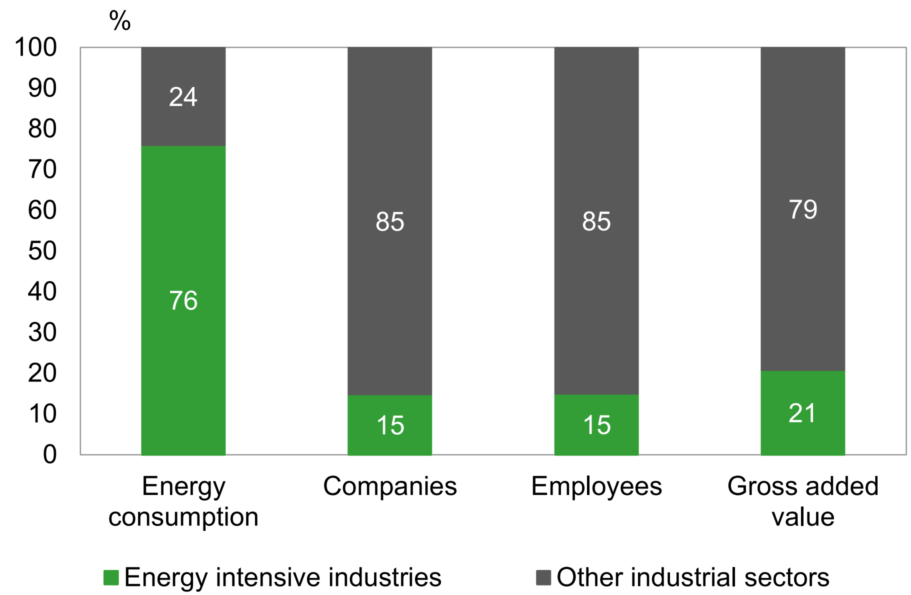
FIVE ENERGY-INTENSIVE SECTORS BUT WITH A LOW WEIGHTING IN VALUE ADDED

Energy consumption in industry by sector



Sources: Destatis, Crédit Agricole S.A.

Relative weighting of energy-intensive industries energy consumption



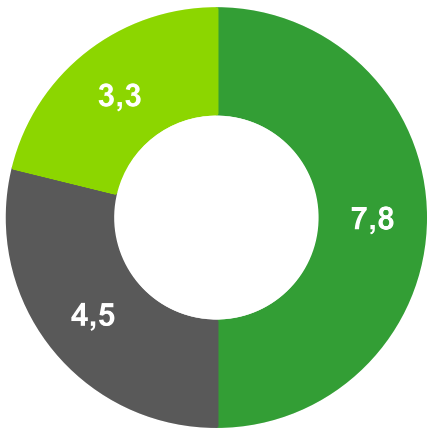
Sources: Destatis, Crédit Agricole S.A.

Chemicals, metals, refining, glass and ceramics and paper-cardboard are the industries on the sharp end of the rising energy prices. These five branches alone use 75% of all the energy (gas and electricity) used by the German industrial powerhouse, but account for only 15% of companies, 15% of employment and 21% of the added value contributed by the entire industrial sector. If these energy-intensive industries were to shut down some production lines to cope with higher costs, the negative economic impact would be limited and not more than what was observed during the crisis triggered by the pandemic or during the 2009 financial crisis. But, the disruption caused would reverberate along the value chains across industry. Take the motor industry: it would inevitably feel the impact of reduced production of metals and glass. The impact on other sectors would also be significant and the damage to growth would extend beyond the direct effect of partial shutdowns in energy-intensive sectors.

FOCUS: ENERGY-INTENSIVE INDUSTRIES UNDER PRESSURE

THE RISK OF PRODUCTION SHUTDOWN INCREASES WITH RISING ENERGY COSTS

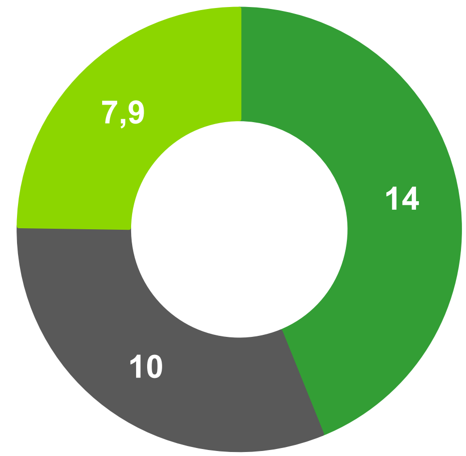
16% of industries forced to to scale back production



planned measures · measures in progress · measures already carried out

Sources: DIHK Energiewendebarometer 2022, Crédit Agricole S.A

32% of energy-intensive industries forced to scale back production



planned measures · measures in progress · measures already carried out

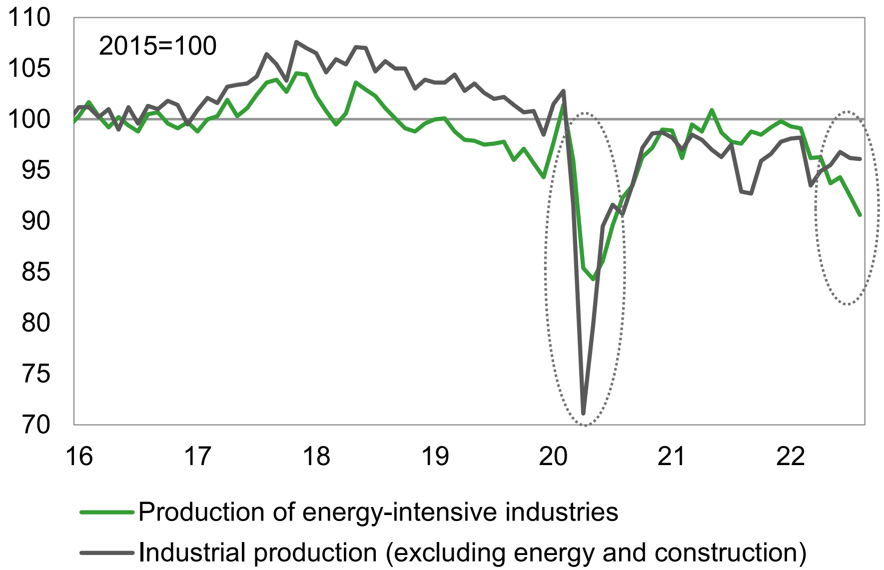
Sources: DIHK Energiewendebarometer 2022, Crédit Agricole S.A

Soaring energy prices are cutting deeper into German industrial output. A survey of 3,500 companies by DIHK, the association of German Chambers of Commerce and Industry, found that 16% of all industrial companies are either scaling back production or at least partially discontinuing operations in response to the energy crisis. A quarter of them have already reduced production. Another quarter are in the process of moving in that direction. Nearly half expect to plan for this type of measure. Of the most energy-intensive, 32% think they will have to take steps that will have a direct impact on production (twice as many as in branches that use less energy). Nearly one-quarter, or about 8% of the total, have already cut back production, while 10% of energy-intensive industries report that they are in the process of implementing reduction measures. 14% more are planning to do so. Sky-rocketing year-ahead electricity prices (up 250% year-on-year at 30 September) are a real threat to the growth and competitiveness of German industries in both the short and medium terms. The energy supply problem is not going away and the country faces the challenge of pushing ahead with the energy transition.

FOCUS: ENERGY-INTENSIVE INDUSTRIES UNDER PRESSURE

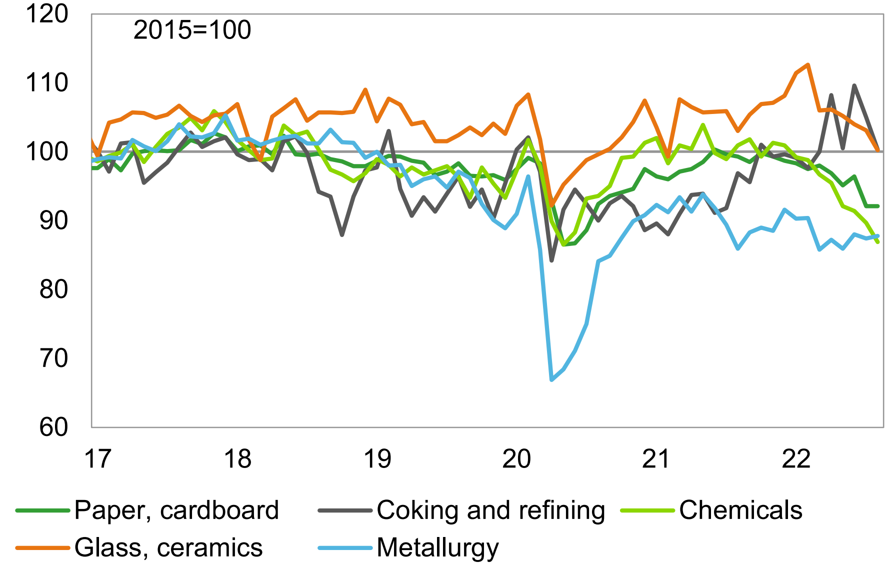
DECLINE IN INDUSTRIAL OUTPUT MORE CONCENTRATED IN ENERGY-INTENSIVE SECTORS

Production trends in energy-intensive industries



Sources: Destatis, Crédit Agricole S.A.

Energy-intensive industries: production indices



Sources: Destatis, Crédit Agricole S.A.

Comparing the index of industrial production in energy-intensive sectors with the standard index of industrial production highlights the impact of soaring energy prices on the most energy-intensive sectors. During the 2020 pandemic when energy prices were low, non-intensive industries suffered the biggest impact compared with energy-intensive branches. The picture has reversed since May

2022: rising energy costs have depressed output in energy-intensive industries more than in other industries. Compared to February 2022, before Russia invaded Ukraine, the decline in production in energy-intensive industries was 8.6% in August, four times that of 2.1% for less energy-hungry branches.

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13/07/2022	Germany - 2022-2023 scenario: from shortage to rationing…	Germany

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