AIECE General Report Autumn 2022

Part 1

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1 Multiple challenges ahead

Private households, companies and governments in Europe are facing enormous challenges. First, far-reaching transformations in economic life are on the horizon for the current decade and beyond. Demographic developments are exacerbating the shortages of skilled workers that already exist in many economies and reinforcing the associated obstacles to production. Climate change requires fundamental societal and economic changes. Technological progress and the many dimensions of digitalisation are putting business models across all sectors under considerable pressure to modernise. And last but not least, the efficiency and productivity potentials that we have been accustomed to for a long time can obviously no longer be reaped from more intensive international cooperation.

Second, the pandemic and the war in Ukraine are creating additional and unprecedented adjustment burdens in many countries. The Corona pandemic was accompanied by immense strains on the supply and demand side of the economy: Production processes were widely disrupted by missing workers and disrupted supply networks (Figure 1-1). Demand came to a standstill as a result of lockdowns – especially in the personal services sectors. With the continuing success of vaccination against Corona, consumption and exports returned to normal. However, global supply networks are still not running smoothly. Production and logistics are still affected by the pandemic. As a result, investment activity has failed to return to pre-crisis levels.

Figure 1-1: Multiple disruptions of global value-added chains

Source: Institut der deutschen Wirtschaft

Since February 2022, many European economies, some of which are still in crisis mode, have been affected by the burdens and uncertainties associated with the Russian invasion of Ukraine. The war is having an impact primarily through three channels:

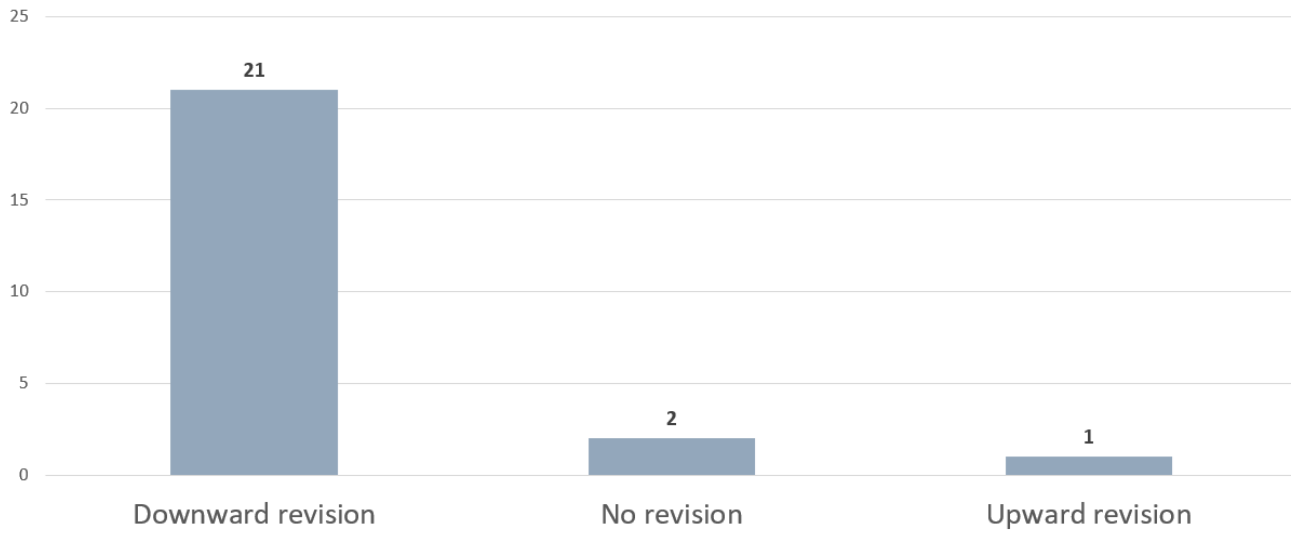
1. **Additional production shocks**: In addition to the supply disruptions caused by the pandemic, some European countries have been facing considerable adjustment burdens in energy supply since spring 2022. The level of burden depends on the respective national energy mix and on the country's own resource endowment. Although substitution options have been developed and deployed to date, the energy supply – mainly for companies in individual countries – is not fully secured in the winter half-year 2022/2023. Disruptions to critical infrastructure can exacerbate production problems. All this not only affects individual companies, but also complex supply networks.

2. **Additional cost shocks**: In addition to this quantitative problem, historically high costs for intermediate inputs and raw materials have already occurred in 2021. In addition, the supply problems with energy and raw materials, mainly due to the war, are leading to unprecedented cost shocks in many European economies. This is causing increasing uncertainty among companies, additional transaction costs and is changing international competitiveness on a global scale, but also within Europe. Rising labour costs – with the graspable aim of limiting the loss of purchasing power of private households – can further impair the competitiveness of companies. In some areas, it is not possible to pass on these sharply rising costs to customers, with the result that there is a risk of a sharp drop in corporate earnings, which would continue to have a negative impact on investment activity.

3. **New demand shocks**: The significantly higher prices at the producer and consumer level in many countries have a direct impact on the demand for consumer and investment goods. High inflation rates are eroding the purchasing power of private households. In view of the uncertain economic outlook and rising financing costs, companies are holding back on investment. In addition, there are possible long-term structural and reallocation effects as a result of inflation. The global economy is losing momentum again, which is affecting foreign trade in many countries.

Figure 1-2: Forecast revisions of AIECE Institutes

Please indicate if and how you have revised your forecast of your country GDP growth for 2023. Number of AIECE members (rest to 25 institutes: no answer)



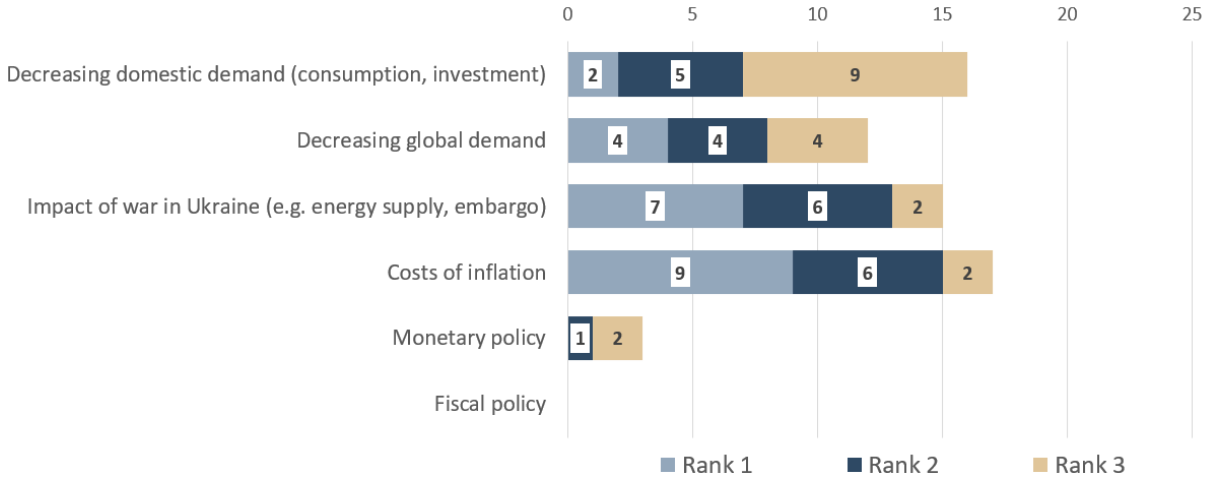
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

In view of these multiple burdens caused by the war in Ukraine, economic momentum in many economies is slowing down considerably. Against this backdrop, the majority of AIECE institutes have revised their forecast

for 2023 downwards (Figure 1-2). In some cases, companies are still suffering from the burdens of the pandemic. This distinguishes the current situation from previous economic crises, which were usually preceded by an economic boom. Figure 1-3 describes the arguments put forward by the AIECE institutes for the downward revision of their forecasts for their own economies. Accordingly, the effects of high inflation and the direct impact of the war in Ukraine – for example, through restricted energy supplies or trade restrictions as a result of the sanctions – are the main reasons for the poorer economic outlook in the respective economies.

Figure 1-3: Reasons for downward revisions

If you revised downward your forecast for your country GDP growth for 2023, please choose the three most important factors, ranking them from 1 to 3, with 1 being the most important. Number of AIECE members (rest to 25: no answer)



Sources: AIECE Institutes; Institut der deutschen Wirtschaft

For this AIECE General Report, the responses of 25 participating AIECE members were analyzed. The survey took place from 25 October to 4 November 2022. AIECE (Association d'instituts européens de conjuncture économique) is an association of European economic research institutes. Founded in 1957, the association includes around 40 institutes from 20 countries and international organisations such as the OECD, the International Monetary Fund and the European Central Bank.

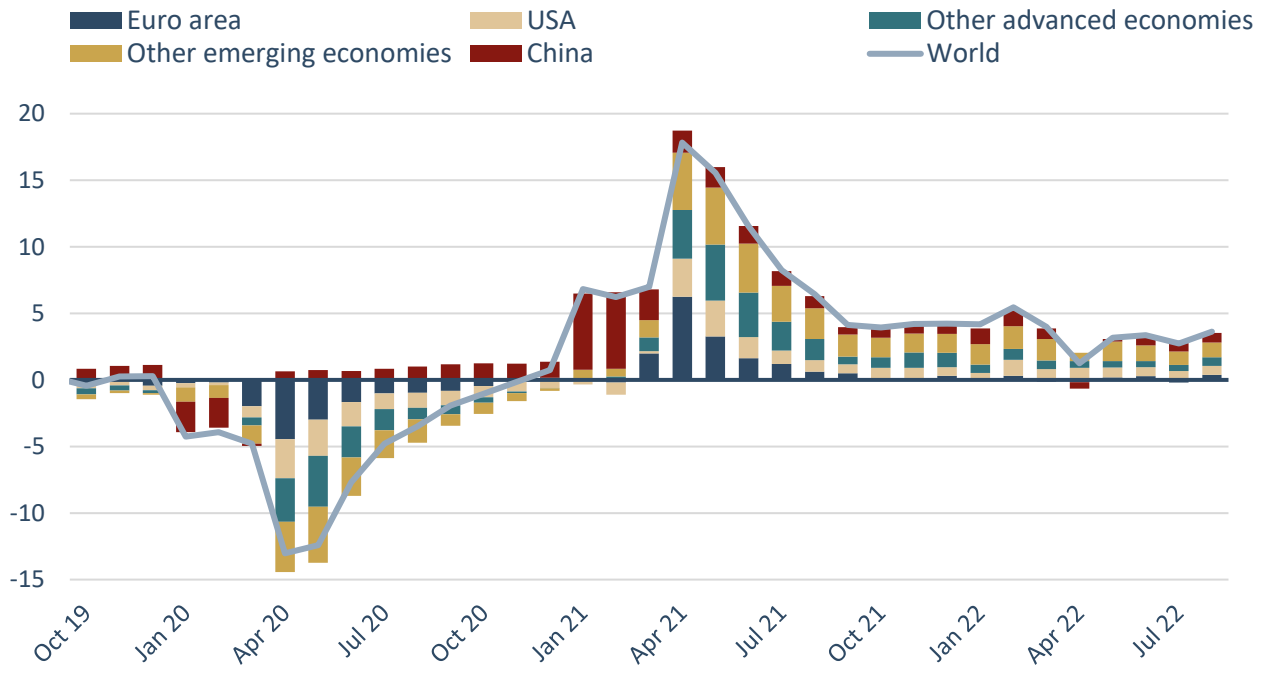
2 External environment

The Russian invasion of Ukraine has created a new reality. It has led to an **energy crisis** which is causing enormous price increases for energy sources and poses major medium-term challenges, especially for the energy-intensive industries in Europe. The high production costs are a burden on companies and passing on the higher prices to consumers reduces the purchasing power of private households. The cost-of-living crisis in many countries is also putting pressure on pent-up demand. **Geopolitical uncertainties** and a weak external environment mean that hardly any growth impulses can be expected from investments and exports in the short term. High uncertainty usually has a negative impact on the investment and consumption decisions of companies and households.

The expansion of the global economy came to a standstill in spring 2022 under the influence of high energy costs, existing supply bottlenecks and major geopolitical uncertainties (Figure 2-1). The growth rate of global industrial production fell significantly from 5.5 per cent in February 2022 to 1.3 per cent in April 2022 because of the Russian invasion of Ukraine. A slowdown in growth momentum in China and advanced economies such as the U.S. caused a slowdown in global growth momentum. In many advanced economies, GDP growth was still positive in the first half of 2022, but slowed significantly compared to the previous year. China contributed negatively to global industrial production in April 2022 for the first time, after still providing significant growth momentum in the first half of 2021. Nevertheless, production expanded in the Southeast Asian countries. Economic output also grew strongly in Latin America. Thus, other emerging markets had a positive contribution to the growth rate of global production in the first half of 2022. In August 2022, global industrial production was 3.6 per cent higher than in the same month of the previous year.

Figure 2-1: Global economic slowdown

Contributions to growth in global industrial production (in percentage points) compared to the same month of the previous year



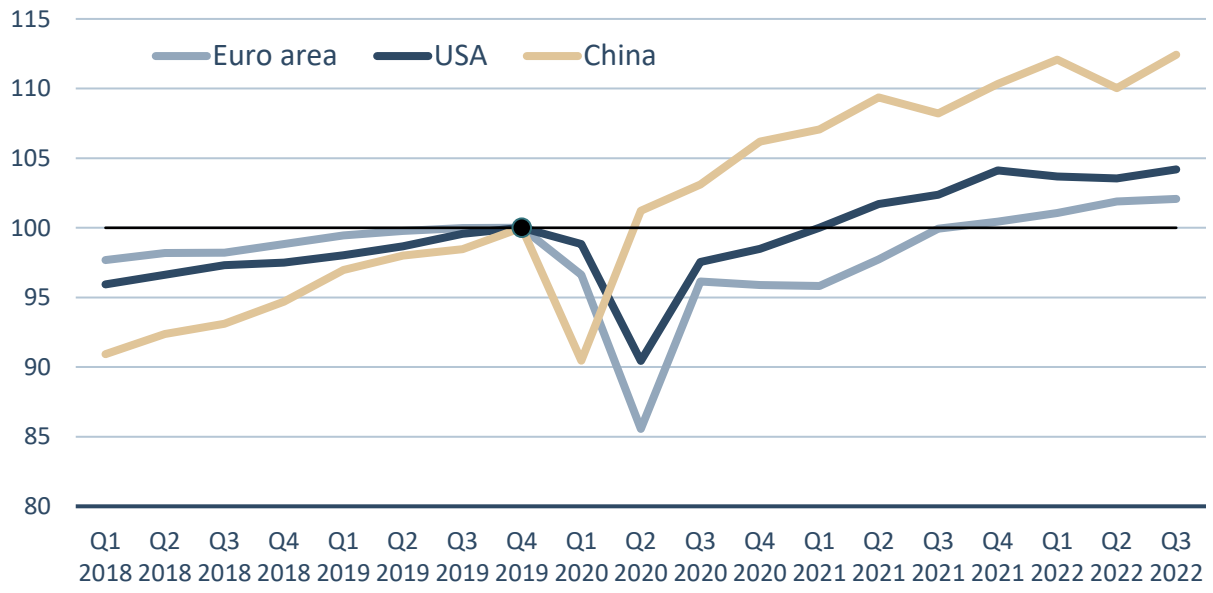
Sources: CPB; Institut der deutschen Wirtschaft

World trade volume is heading for a slowdown. We have seen subdued activity over the summer 2022 due to the high level of geopolitical uncertainty and reorganisation of trade relations following the outbreak of the war in Ukraine. However, in August 2022, global trade was still 10 per cent above pre-crisis levels at the end of 2019, recovering from the pandemic shock within just six months. Trade dependencies and geopolitical tensions are weighing on international trade, with efforts to strengthen supply chain resilience and secure strategic autonomy potentially leading to further protectionist tendencies.

The **euro area** (EA) economy performed better than expected in the first half of 2022 (Figure 2-2). Stimulus to economic activity through the withdrawal of the corona restrictions and the boost to investment activity outweighed negative effects resulting from high inflation rates. Compared to the U.S. or China, the energy crisis has had a stronger structural impact in Europe. The **United States** has been in a technical recession since the beginning of 2022. Growth momentum returned in the third quarter with real economic growth. Economic forecasts for the U.S. diverge widely due to the different signals from the American economy. The labour market is very robust despite the key interest rate increases by the Fed. In addition, there is further stimulus from the multiple expansionary fiscal packages that President Biden has implemented. The Fed's medicine seems to be working; consumer prices fell to 7.7 per cent in October 2022. In **China**, the strict zero-covid policy and persistent problems in the real estate sector are slowing economic activity. GDP contracted significantly by 2.2 per cent in the second quarter of 2022 compared to the previous quarter. The continuing poor performance of the real estate market and energy shortages in electricity production are slowing down the domestic economy. Downside risks come from the increase in military pressure on Taiwan.

Figure 2-2: Economic development in the three largest economic regions

Real GDP growth, seasonally adjusted, quarterly, index Q 4 2019 = 100



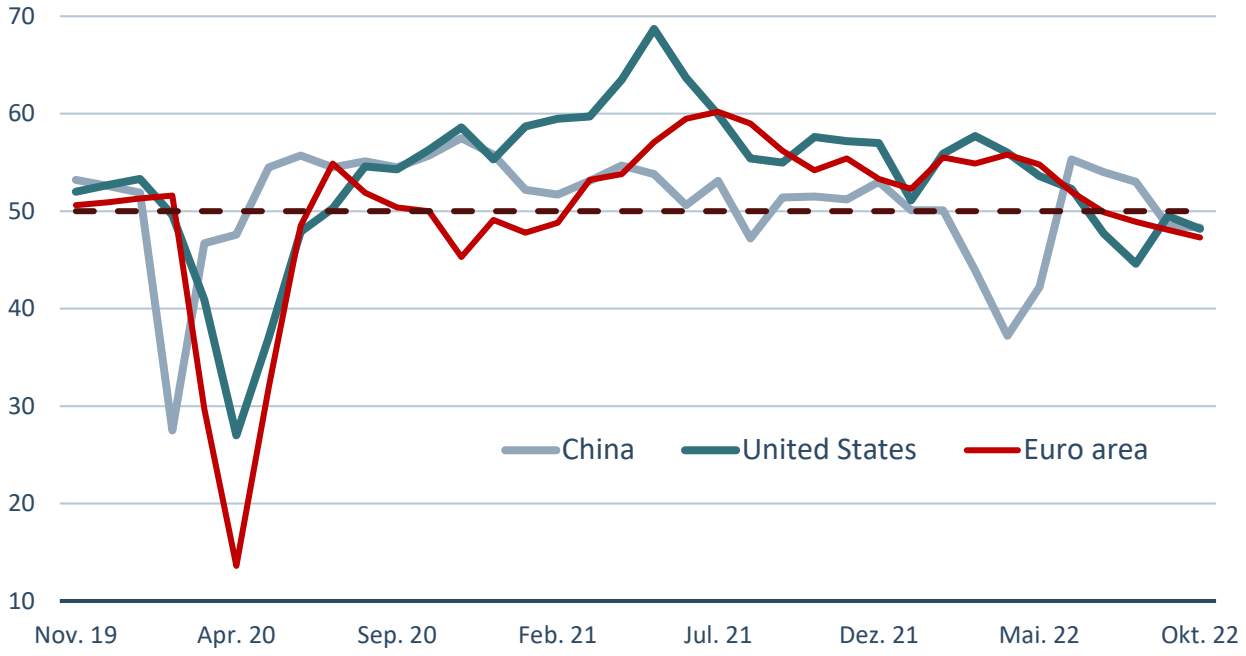
Sources: Institut der deutschen Wirtschaft; Macrobond

The economic outlook is negative but, compared to the pandemic, relatively stable (Figure 2-3). Within the three largest economic regions the composite PMI in the euro area increased from 52 in the first half of 2021 to almost 56 in April 2022, but subsequently fell underneath the expansion line (of 50) to only 47 in October

this year. In the U.S., the composite PMI came down from a high level of almost 69 in May 2021 but remained relatively high until March 2022 and fell below the expansion threshold of 50 in July 2022. Currently, it stands at 48. Following the strict lockdowns in Chinese cities, the composite PMI fell sharply to 37 in April this year and recovered in summer, now standing at the level of 47. Overall, this picture is consistent with the IMF's World Economic Outlook (October 2022), which expects that more than a third of the global economy will contract either this or next year, with economic growth stalling in the three largest regions: the U.S., China and the EU.

Figure 2-3: Outlook negative but relatively stable

Composite PMI output index for the whole economy, seasonally adjusted, > 50 = expansion

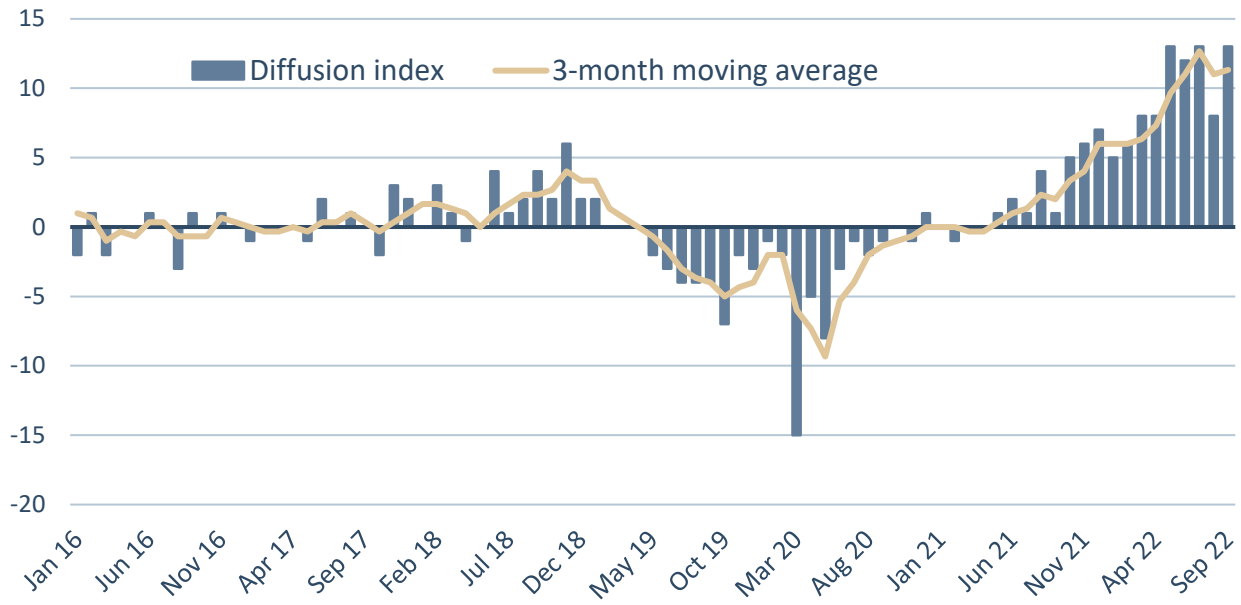


Sources: Institut der deutschen Wirtschaft; Macrobond

Monetary policy is becoming more restrictive worldwide (Figure 2-4). Since June 2021, the difference between central banks raising their respective policy rates and the ones lowering policy rates has become positive. In September 2022, only one central bank (Turkey) reduced its policy rate, while 15 central banks raised it. However, rate hikes take time to affect the economy. Moreover, it remains an open question whether the respective level of policy rates is high enough to dampen aggregate demand (see Section 4). The current discussion thus centers around a soft or hard landing of central bank policy. For instance, while the Fed has already raised the funds rate to almost 4 per cent (see Section 4), the ECB is taking a more gradual approach and is likely to stay behind the curve. The combination of weaker global growth and the waning impact of supply shocks could lead to easing price pressures.

Figure 2-4: Monetary policy is increasingly restrictive in OECD countries

Diffusion index of central banks (difference of central banks with interest rate increases and reductions)

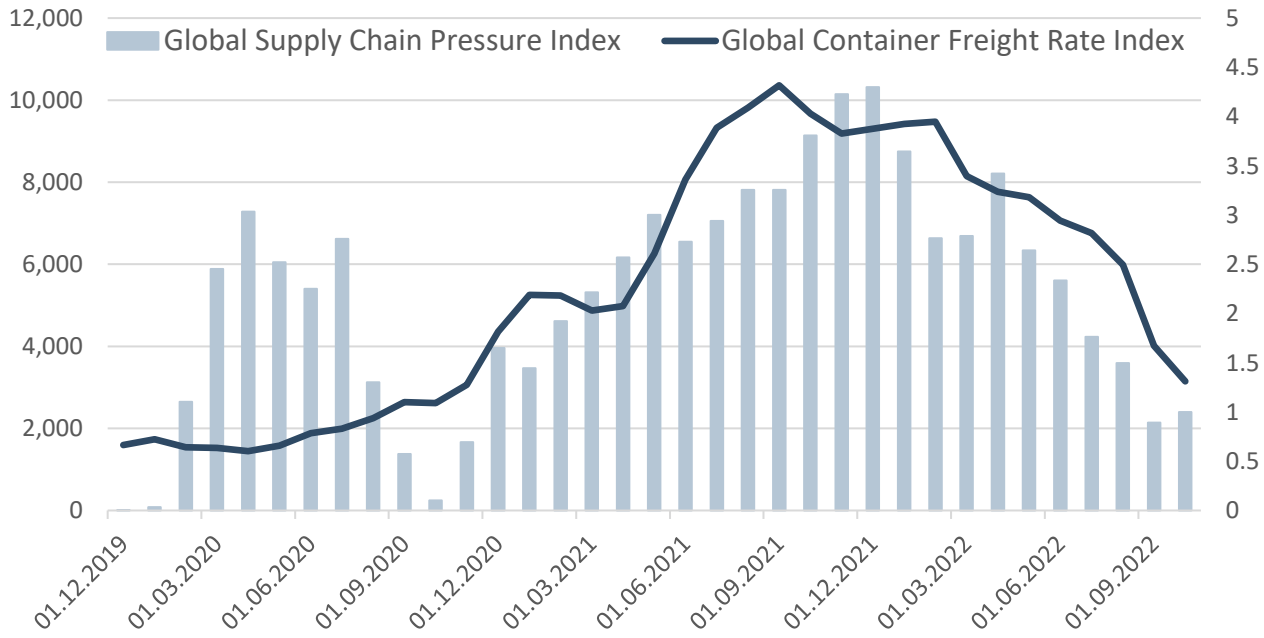


Note: 21 OECD countries with national central banks and 17 countries from the euro area.
Sources: Institut der deutschen Wirtschaft; Macrobond

Global supply chain pressure is easing (Figure 2-5). The Federal Reserve Bank of New York's Global Supply Chain Pressure Index has declined in recent months — largely because congestion at Chinese ports has decreased and the situation on the U.S. West Coast has normalised. However, it is still above its normal level, indicating continuing disruptions. Freight rates for container ships have also fallen significantly.

Figure 2-5: Some ease of supply chain pressures but on high level

Global Supply Chain Pressure Index (right axis) and Container Freight Rate Index (left axis)



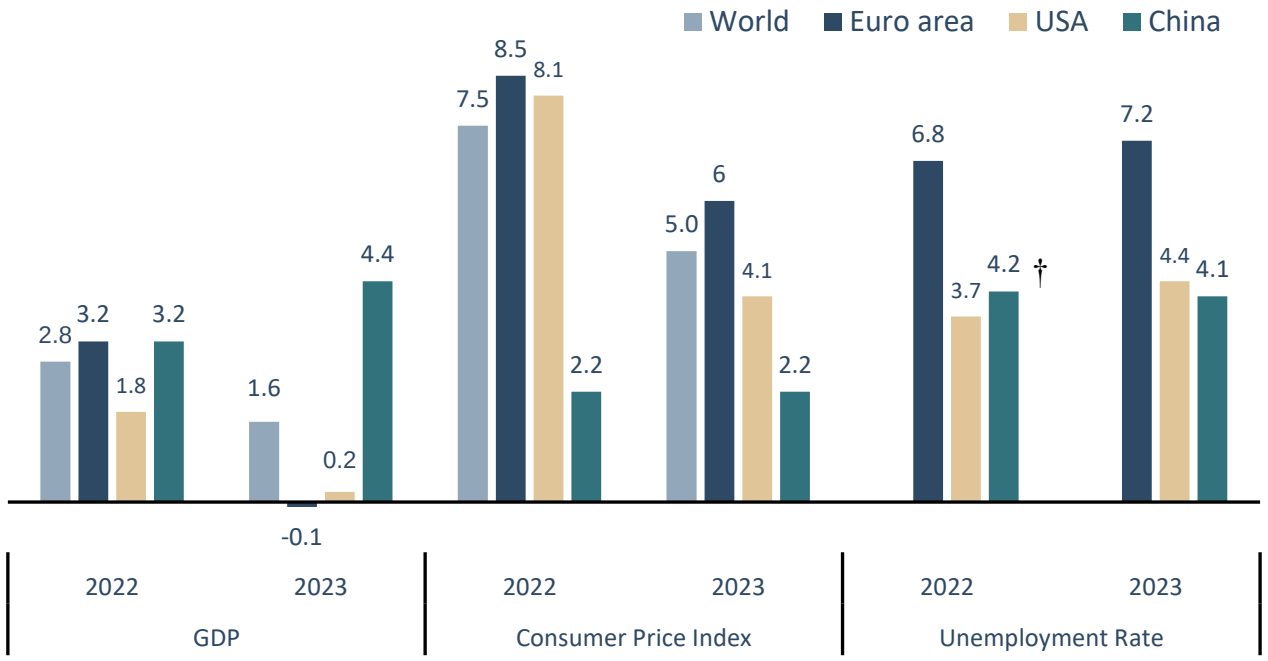
Sources: Institut der deutschen Wirtschaft; Macrobond

If supply chain disruptions continue to gradually decline, this could support companies' production, e.g. firms would be able to work off a high order backlog that still exists. Supply disruptions were not visible merely in the market for goods and services due to clogged global supply chains: The pandemic and the subsequent recovery in demand also squeezed domestic labour markets.

In November 2022, Consensus Forecasts (CF) expects global GDP growth to slow from 2.8 per cent in 2022 to only 1.6 per cent in 2023 (Figure 2-6). Bracing for a recession the CF expects G7 central banks to aggressively hike policy rates (except for the Bank of Japan). Even though European governments have attempted to cushion the impact of the cost-of-living crisis, it remains to be seen whether there will be room for further fiscal support. Higher borrowing costs and growing budget deficits threaten debt sustainability. Moreover, a recession is predicted for major economies such as Germany or the UK next year. GDP growth in the U.S. is forecast to fall from 1.8 per cent this year to 0.2 per cent in 2023. Monetary policy remains challenged by high inflation rates, although the CF expects them to fall in 2023 in both the Euro area and the US. As the recession hits most G7 countries, corporate profits are also expected to decline next year. Rising input costs are hurting domestic producers, particularly in Europe.

Figure 2-6: Consensus forecasts for macroeconomic indicators in 2022 and 2023

Annual average growth rates (in per cent) in comparison to previous year for GDP and CPI, unemployment rate in per cent



Sources: Consensus Economics; Institut der deutschen Wirtschaft

The AIECE Institutes broadly share the view that global economic growth is slowing (Table 2-1). After a period of relatively strong real economic growth of almost 6 per cent in 2021, global GDP expansion is expected by most AIECE institutes to decline in 2022 and 2023. The 2022 average growth estimate of AIECE members for 2022 is 2.9 per cent, and hence only marginally above the CF forecasts of 2.8 per cent that year. For 2023, on the other hand, the CF forecasts appear to be more pessimistic than those proposed of AIECE members, who on average expect global GDP growth of 2.4 per cent next year. However, the differences

between the estimates of global GDP growth are also significant. For this year, the maximum estimate is 3.6 per cent and the minimum estimate is only 2.3 per cent. Next year, there is also a variation of 2 percentage points between 1.6 per cent and 3.6 per cent. Only in 2024, where all AIECE members expect a rebound in global GDP growth of 3.1 per cent, are the variations between a minimum of 2.7 per cent and a maximum of 3.5 per cent quite small.

Table 2-1: AIECE forecasts for global GDP growth

Real GDP growth in comparison to previous year (in per cent)

	2022	2023	2024
Average	2.9	2.4	3.1
Minimum	2.3	1.6	2.7
Maximum	3.6	3.6	3.5

Sources: AIECE Institutes; Institut der deutschen Wirtschaft

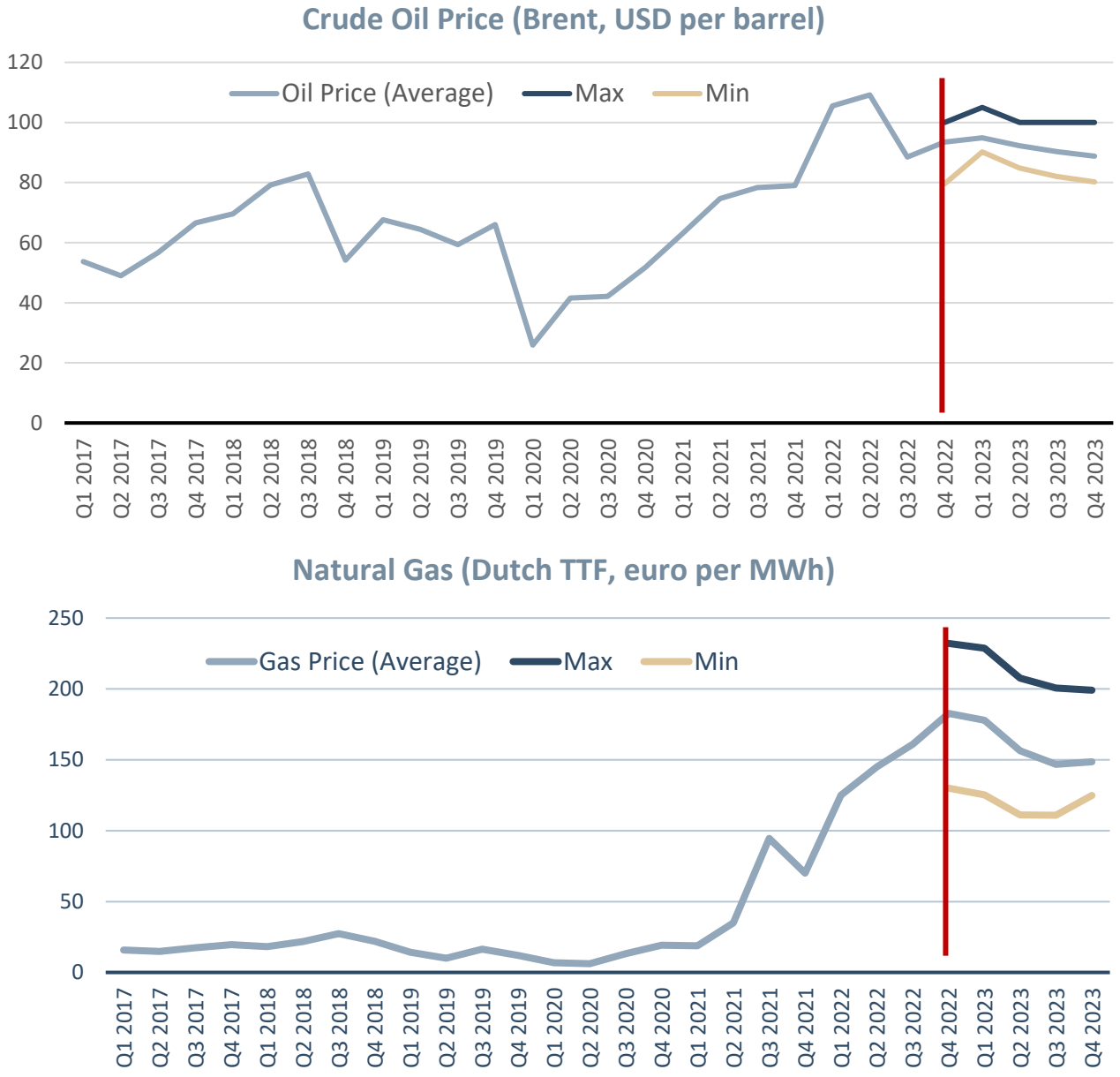
Energy inflation has stabilised since the summer of this year, albeit at a high level. Accelerating gas and electricity prices offset slowing fuel prices. Figure 2-7 shows the actual development of the oil price until Q3 2022. After a doubling of the oil price between Q3 2020 and Q4 2021, the oil price reached its peak in Q2 2022 with 109 US-Dollar per barrel. The crude oil price recently fell to 88.5 in Q3 2022 due to slowing global demand. AIECE members generally expect a normalisation of oil prices on a high level. This trend will continue until the end of 2023[1], with oil prices roughly remaining on the same level as in Q3 2022. Most AIECE institutes expect a temporary peak in Q1 2023 with maximum values at 105 US-Dollar per barrel and minimum values at 90 US-Dollar per barrel.

This relative stability, however, conceals important compositional changes within the energy inflation mix, as the gradual decline in fuel inflation induced by falling Brent oil prices is offset by substantial increases in natural gas prices. Large increases in wholesale prices over the summer 2022 are gradually reflected into retail gas and electricity prices. **The Dutch TTF gas price** more than tripled in 2021 from almost 19 euros per MWh to 70 euros per MWh by the end of last year. This year was marked by high uncertainty and therefore led to a volatile price development with the natural gas price climbing up to 161 euros per MWh in Q3 2022. AIECE members expect the price to rise to 183 euros per MWh (on average) with an overall declining trend in 2023 leading to a lower but still elevated gas price of 149 euros per MWh on average. However, there are large variations between the maximum and minimum values, which is due to the increased uncertainty of these forecasts. As a maximum value, the natural gas price is expected to stand at almost 200 euros per MWh by the end of 2023 and as a minimum value at 125 euros in Q4 2023.

[1] We left out 2024 for oil and gas prices due to a low number of estimates send back by the AIECE institutes.

Figure 2-7: AIECE forecasts of energy prices

What is your forecast for energy prices?



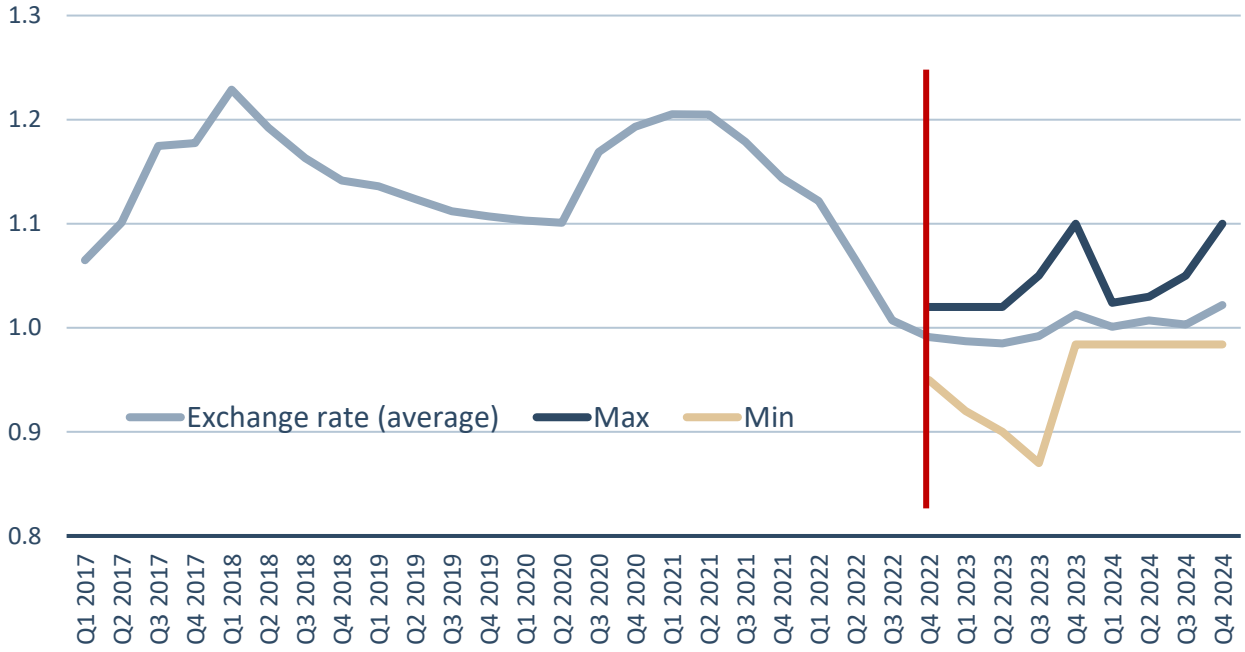
Forecast starting in Q4 2022.
Sources: AIECE Institutes; Institut der deutschen Wirtschaft; Macrobond

A look at the exchange rates indicates a stabilisation of the euro. The euro has substantially weakened against the US dollar since 2021 (Figure 2-8). Global financing conditions have tightened with rising policy rates and higher bond yields, leading to a stronger US dollar. Moreover, the shock in Europe caused by the war in Ukraine has contributed to a weak euro reaching parity with the US dollar for the first time since the introduction of the euro. Since the beginning of 2022, the euro has depreciated by more than 10 per cent against the US dollar (by Q3 2022) and by more than 16 per cent since summer 2021. Looking ahead, AIECE institutes expect the exchange rate (USD per euro) to remain at parity on average until Q4 2023 and strengthen slightly to 1.02 USD by the end of 2024. However, while some AIECE members expect a further

depreciation of the euro against the US dollar, others expect the euro to appreciate to 1.1 USD by the end of 2023.

Figure 2-8: AIECE forecasts of the USD per euro exchange rate

Provide the expected path of the following exchange rates (annual and quarterly averages), here: USD per euro



Forecast starting in Q4 2022.
Sources: AIECE Institutes; Institut der deutschen Wirtschaft; Macrobond

There are considerable downside risks. Although the gas market situation has eased recently due to mild temperatures in October, full storage levels and falling demand for liquefied gas (LNG), in extreme cases, there could still be a gas shortage. The associated risks of production losses and cascading effects in the value chains could hit European industry this and next winter. Particularly in gas-intensive industries, for example metal production and processing or basic chemicals, we observe significant declines in production already in the second half of 2022. The current economic outlook and forecasts are therefore subject to considerable uncertainties, which we will discuss in more detail in Chapter 5.

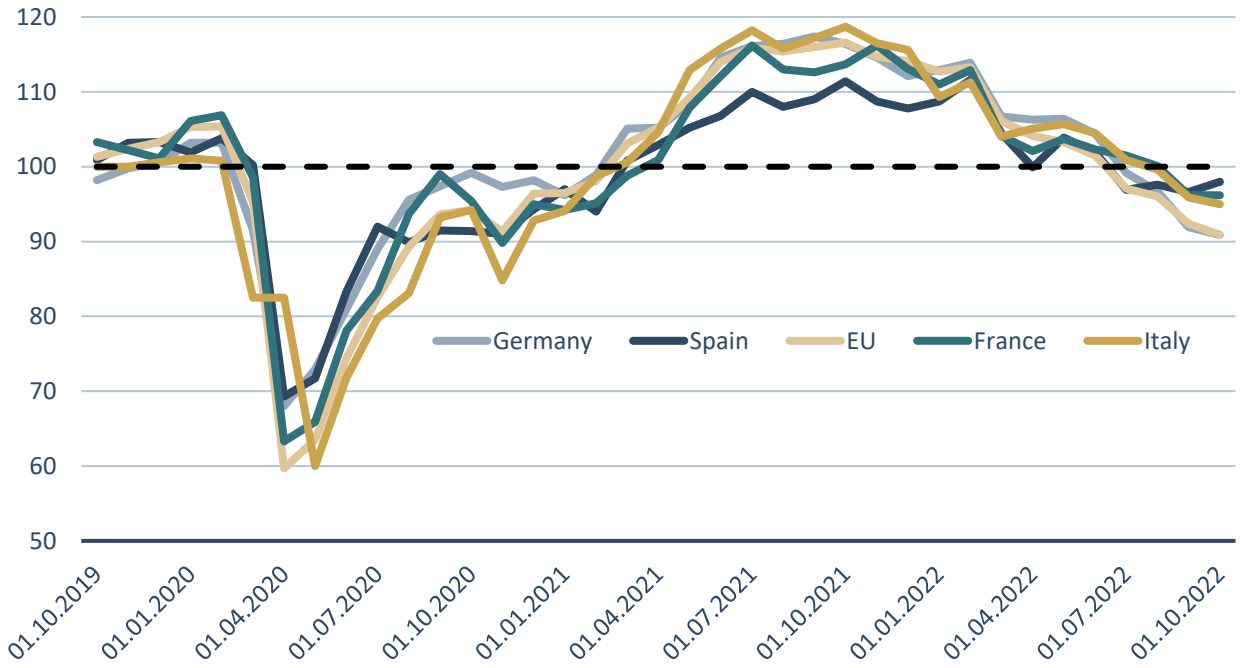
3 Outlook for Europe

The external shocks caused by the Russian invasion in Ukraine are clouding the economic outlook in Europe. The European Commission's autumn 2022 forecast predicts economic growth of 3.2 per cent in the euro area (20 countries including the Croatia's forthcoming accession) and 3.3 per cent in the EU this year. However, real economic growth will weaken significantly at the turn of 2022; with powerful headwinds still holding back aggregate demand, economic activity will be subdued. In 2023, GDP is expected to grow by only 0.3 per cent in both the EU and the euro area. Inflation is expected to peak at the end of 2023 and then gradually decline. Annual inflation this year is estimated at 9.3 per cent in the EU and 8.5 per cent in the euro area. Inflation is expected to decline in 2023, but to remain high at 7 per cent in the EU and 6.1 per cent in the euro area, before moving further towards target inflation in 2024 at 3 per cent and 2.6 per cent, respectively. With inflation easing, GDP growth is forecasted to rebound by 1.5 per cent in the euro area and 1.6 per cent in the EU in 2024. **After a surprisingly strong economic performance in the first half of 2022,** caused by resumed consumer spending, particularly on services, European economies are facing more headwinds following the easing of COVID-19 containment measures.

Economic expansion continued in the third quarter 2022, though at a considerably weaker pace. High inflation rates are leading to an erosion of household purchasing power. **Weaker domestic and external demand as well as elevated uncertainty are** weighing on investment and exports**. The energy supply shock lingers on,** hitting particularly countries with a large industrial sector. The European Commission expects a recession in Germany with –0.6 per cent in 2023. There are only two other countries predicted to have a recession in Europe: Sweden with also –0.6 per cent and Latvia with –0.3 per cent next year.

Figure 3-1: Economic sentiment falling since beginning of 2022

Economic Sentiment Indicator, seasonally adjusted, index



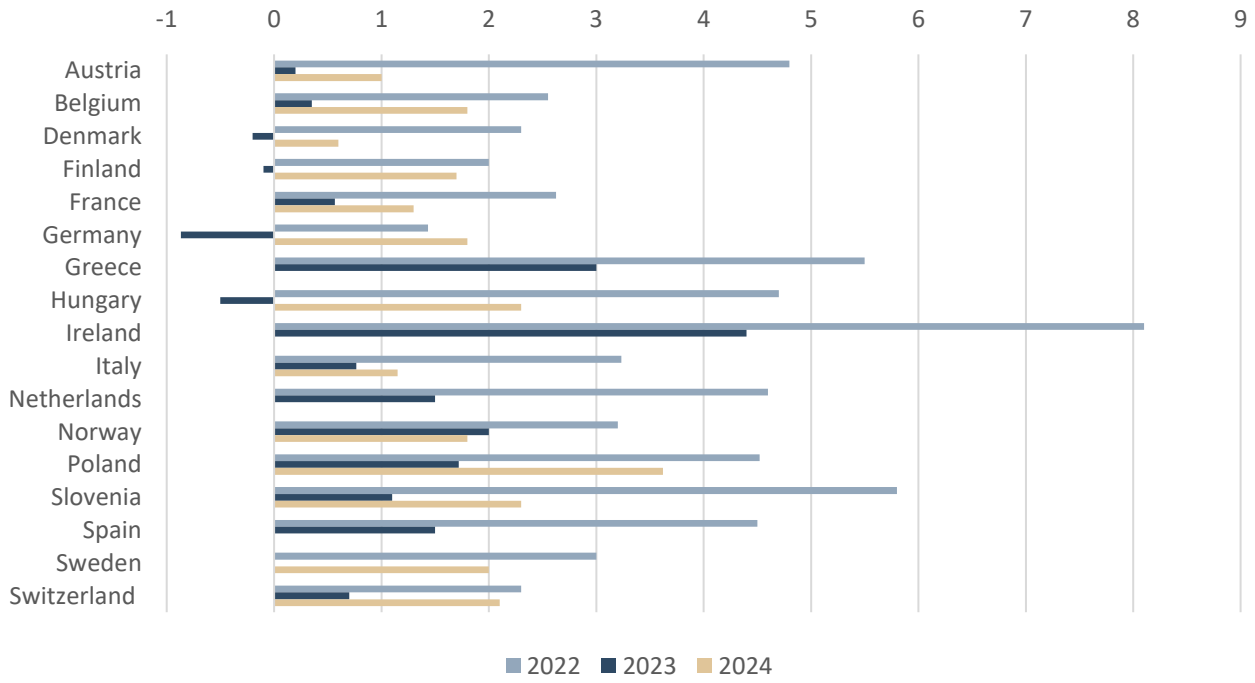
Sources: DG ECFIN Economic Surveys; Institut der deutschen Wirtschaft

Plummeting economic sentiment indicators show that growth fatigue will set during Q4 2022. The economic sentiment indicator has been declining since February this year both in the EU as a whole and in major European economies (Figure 3-1). In Germany and the EU, the balance stands well below 100 at 90 points. In France, Spain and Italy, economic sentiment has stabilised around 95 to 98 points. Even though this indicates a worsening of business and consumer confidence, it must be pointed out that this is a declining trend but not an abrupt decline such as at the beginning of pandemic in spring 2020.

AIECE members expect real GDP growth in the EU27 to be 3.1 per cent this year, but to slow considerably to 0.6 per cent next year, ranging between 0.1 per cent and 1.2 per cent, and hence no AIECE member expects the EU to go into a recession next year. A strong rebound of growth is indicated for 2024 with 1.8 per cent on average. Growth expectations are similar for the euro area: AIECE institutes see GDP growth on average to be 3.1 per cent this year, only 0.3 per cent next year and a more dynamic environment in 2024 at 1.6 per cent. However, growth expectations for 2023 range from –0.9 per cent (minimum) to 1.3 per cent (maximum). Hence, there is considerable variation and uncertainty for next year, and in contrast to the EU27, a recession is expected for the euro area in 2023. However, the average growth expectations are overall in line with the autumn forecast of the European Commission presented above. The **country forecasts** (Figure 3-2) indicate that AIECE members expect strong economic growth in a few European countries this year, for instance 8.1 per cent in Ireland, 5.8 per cent in Slovenia or 5.5 per cent in Greece. However, there is a general pattern of slow growth in 2023. Four out of 17 countries are expected to go into a recession next year, namely Denmark, Finland, Germany, and Hungary, which contrasts with the European Commission's forecast mentioned above. Except for Germany, where the EU Commission also expects a recession, the forecast for 2023 in Denmark is zero per cent, for Finland it is 0.2 per cent and for Hungary 0.1 per cent.

Figure 3-2: AIECE forecasts of country GDP growth

Growth of real GDP against previous year in per cent



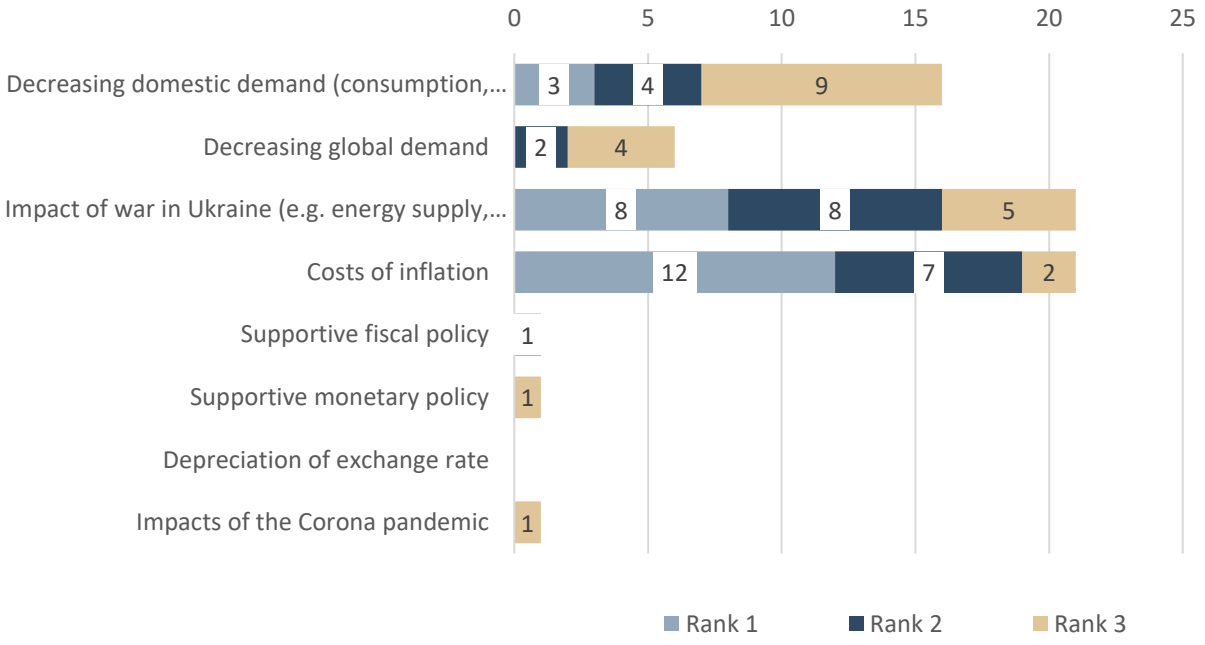
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

3.1 Euro area countries

Regarding the question what will drive GDP growth in the euro area 2023 we see that both, the impact of the war in Ukraine and costs of inflation are perceived to be the main factors influencing GDP growth in the next year (Figure 3-3). 12 AIECE members rank the costs of inflation as the number one issue in that context. In relation to the question of diminishing purchasing power, AIECE members see decreasing domestic demand as the third most important issue. 16 members rank this as an important factor for economic growth, but the majority ranks this only number 3. The impact of the corona pandemic as well as a supportive policy environment take a back row seat in their importance for the euro area business cycle in 2023.

Figure 3-3: Expected drivers of the euro area business cycle in 2023

Please choose the three most important factors according to their effect on economic growth for 2023 in the euro area, and rank them from 1 to 3, with 1 being the most important.

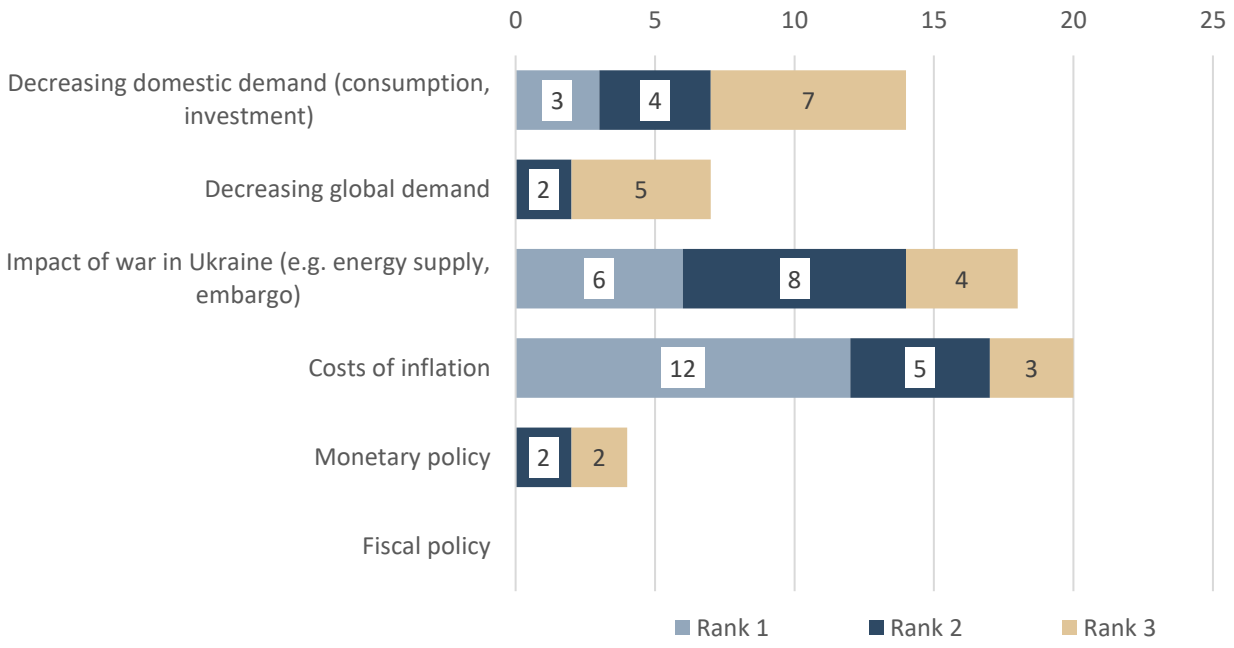


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Most AIECE institutes have downgraded their growth forecasts for 2023. Out of 21 respondents 20 AIECE members have revised their forecast downward and only 1 AIECE member has made an upward revision for euro area GDP growth in 2023 (Figure 3-4). When asked about the reasons for the downward revisions the picture is quite consistent with the expected factors driving the business cycle in the euro area in 2023. 20 AIECE members rank costs of inflation between 1 (most important) and 3. This is followed by the impact of the war in Ukraine and decreasing domestic demand. 4 AIECE members rank monetary policy as the second and third most important issue.

Figure 3-4: Reasons for downward revisions of euro area growth forecasts

If you revised downward your forecast for the euro area GDP growth for 2023, please choose the three most important factors, ranking them from 1 to 3, with 1 being the most important.



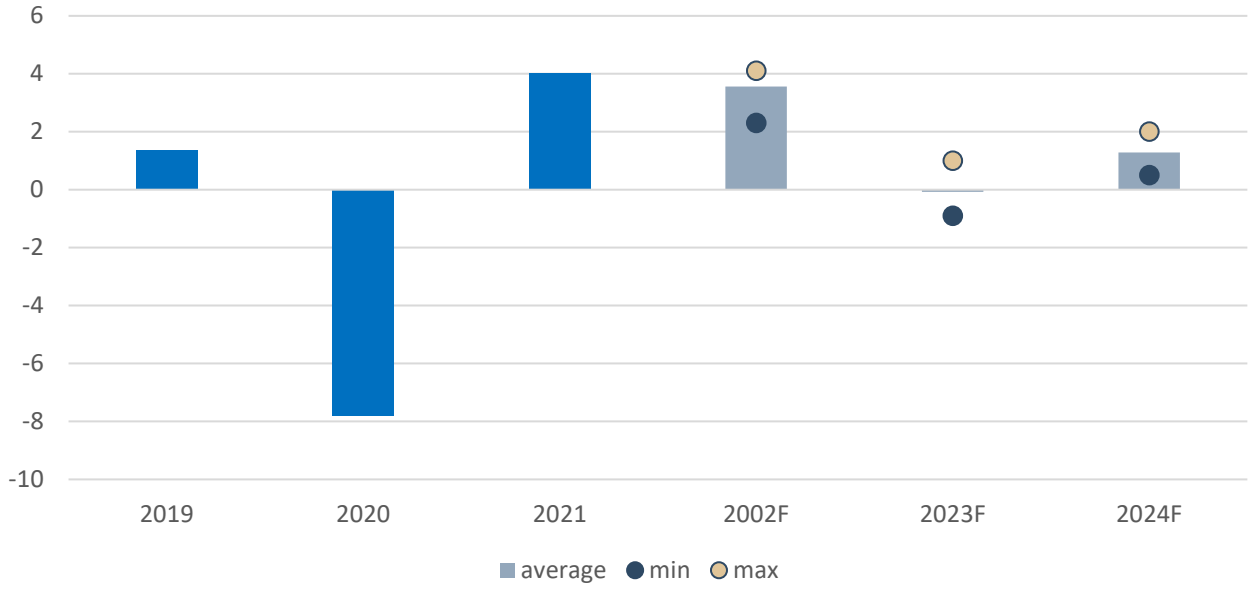
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Household consumption is under pressure due to the cost-of-living crisis. AIECE members expect private consumption to grow by 3.6 per cent on average and to shrink slightly by 0.1 per cent due to high inflation rates (Figure 3-5). In 2024, private consumption picks up again with 1.3 per cent. However, **public consumption** in EA19 should grow by 1.5 per cent this year and by 0.9 per cent in 2023 highlighting the role of fiscal policy trying to ease the adverse impact of the energy crisis on households and businesses. **Investments** should have added significant stimulus in 2022 as it is expected to grow by 2.7 per cent in 2022 and still grow slightly by 0.2 per cent in 2023. Investment is expected to rebound in 2024 with 2.5 per cent on average.

According to the AIECE members **strong labour market conditions, a supportive fiscal policy and increasing nominal wages** are the most important positive effects on private consumption in 2023 (Figure 3-6). Furthermore, the AIECE institutes name saving behaviour to help the households with high inflation rates. A strong labour market performance in 2022 should have kept household incomes somewhat stable and supportive fiscal policy seems to provide optimism by dampening the negative effects of the energy crisis for vulnerable household groups. However, AIECE members expect **private consumption to stagnate** or mildly shrink in 2023. Hence, the negative effects overall outweigh the positive ones. A clear contender for explaining a reduction of private consumption of households is inflation. 24 out of 25 respondents mention inflation to be the major issue, of which 19 rank inflation to be the most important factor in driving weak private consumption spending next year. This is closely followed by an expectation of worsening consumer confidence. Consumer pessimism is increasing according to the AIECE institutes. The third most important factor is a more restrictive monetary policy with increasing interest rates having adverse effects on private consumption. Tighter credit conditions come in fourth followed by trade-related shocks, savings behaviour, and labour market conditions. The latter two factors thus serve a dual role in explaining private spending next year.

Figure 3-5: AIECE forecasts for private consumption in the euro area

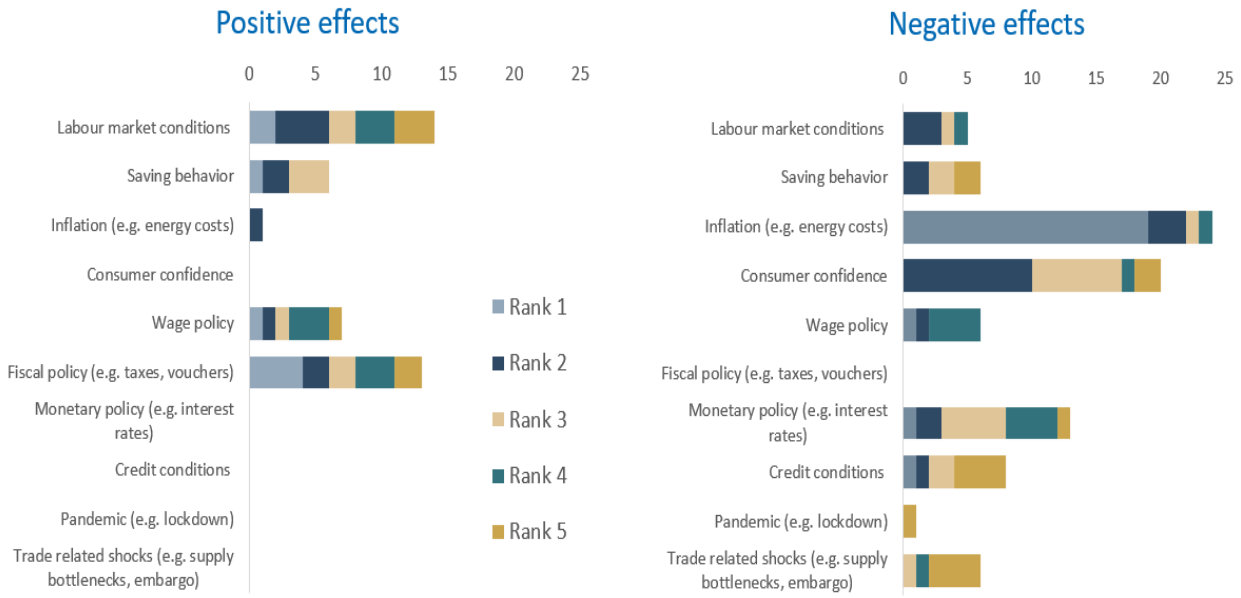
Private consumption, change in per cent against previous year



Sources: AIECE Institutes; Institut der deutschen Wirtschaft; Macrobond

Figure 3-6: Expected determinants of private consumption in 2023

Please choose the five most important factors according to their effect on private consumption in 2023 in your country. Rank them from 1 to 5, with 1 being the most important, and indicate the direction of the effect (positive or negative) by choosing the column. Number of AIECE members

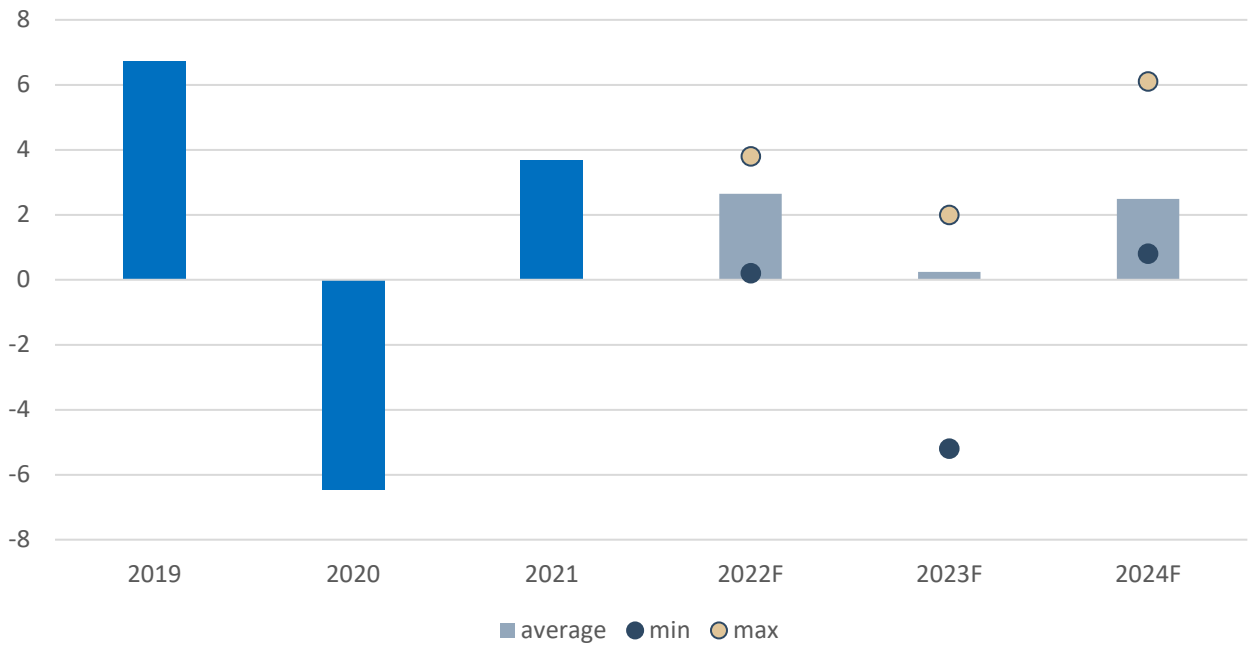


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Investment in the euro area has rebounded after it collapsed during the pandemic and fell by 6.5 per cent in 2020. In 2021, gross fixed capital formation grew by 3.7 per cent in 2021. AIECE members expect investment growth to fuel the economy this year, but at a lower level. On average, members expect both public and private to grow by 2.7 per cent on average in 2022, with the maximum value to be 4 per cent and the minimum estimate only 0.2 per cent, but still positive.

Figure 3-7: AIECE forecasts for investment in the euro area

Gross fixed investment, change in per cent against previous year



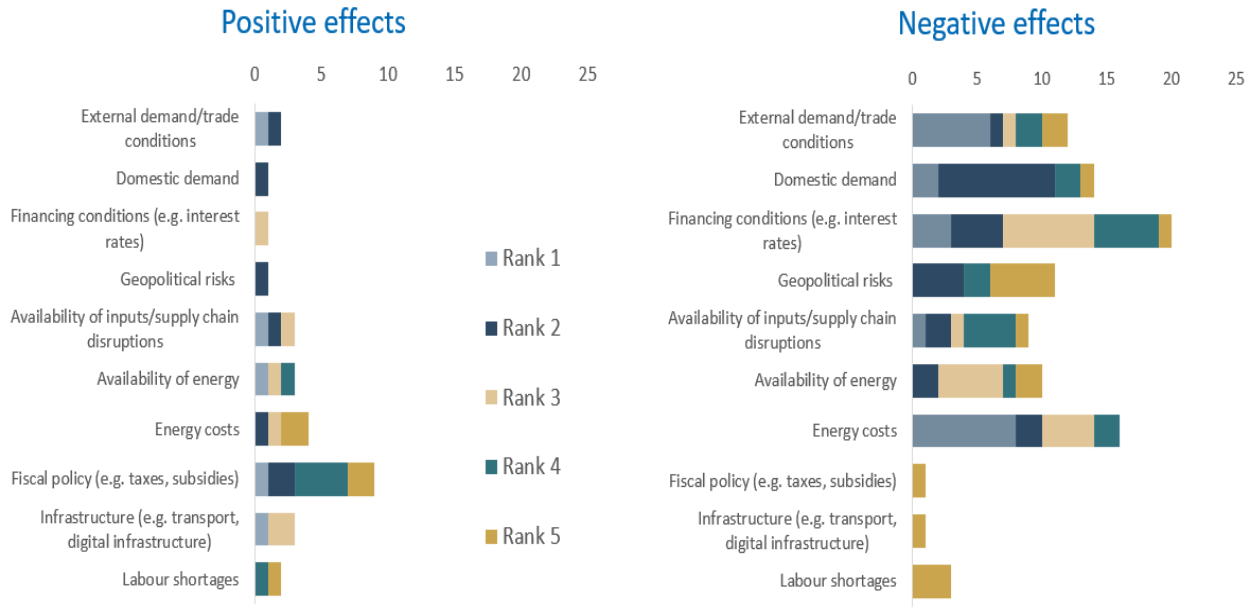
Sources: AIECE Institutes; Institut der deutschen Wirtschaft; Macrobond

There are many more AIECE members who find that negative effects will dominate private investment in 2023. 20 respondents see financing conditions to be a major negative factor, followed by 16 respondents who view energy costs to weigh on private investment, and 14 respondents who expect declining domestic demand to drive weak private investment. External demand and trade conditions are mentioned by 12 AIECE members, of which 6 members rank this to be the most important issue. The availability of energy is also a major concern, but energy costs are ranked to be the most important factor by 8 respondents.

A cornerstone of future growth is private investment. AIECE members expect private investment to be positively affected by fiscal policy, increasing pressure from energy costs and the need for better infrastructure (e.g., transport and digital). Further supply side issues such as the availability of inputs, an easing of supply chain disruptions or availability of energy will affect private investment positively next year. Moreover, labour shortages might induce businesses to invest more into their capital stock. However, the total number of AIECE members that see positive effects on investment over the next year is limited.

Figure 3-8: Expected determinants of private investment in 2023

Please choose the five most important factors according to their effect on private investment in 2023 in your country. Rank them from 1 to 5, with 1 being the most important, and indicate the direction of the effect (positive or negative) by choosing the column. Number of AIECE members



Sources: AIECE Institutes; Institut der deutschen Wirtschaft

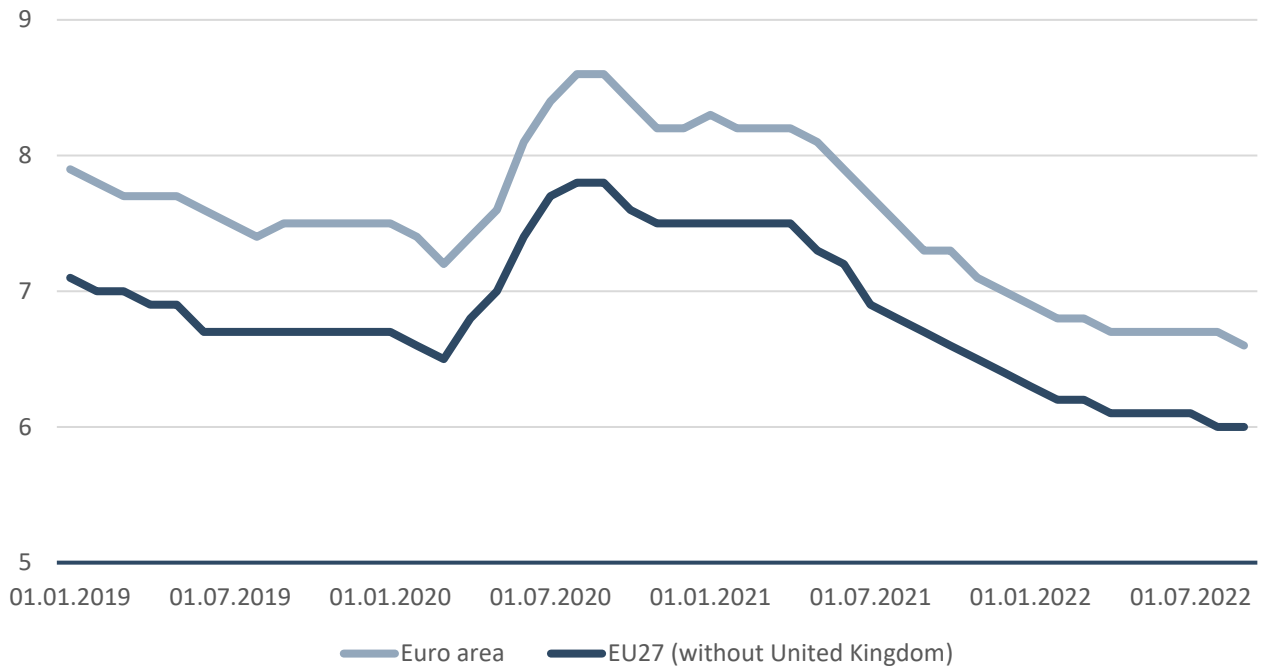
3.2 Labour market

Labour markets have remained robust with unemployment rates falling to an all-time low (Figure 3-9). Unemployment rates peaked in the EU27 and the euro area during the pandemic in autumn 2020 with levels being 7.8 per cent in the former and being 8.6 per cent in the latter. Since the beginning of 2021 labour markets have seen a continued fall to historic low levels of 6 per cent in the EU27 and 6.6 per cent in the euro area.

AIECE members expect unemployment rates in the euro are to fall to 6.8 per cent this year but to increase slightly to 7.1 per cent next year and to 7.2 per cent in 2024 (Figure 3-10). This upward trend might reflect the expectation of negative effects on aggregate demand caused by a more restrictive monetary policy of the ECB. On top, the high uncertainties according to the war in Ukraine also can explain the moderate labour market perspectives.

Figure 3-9: Unemployment rates on historic lows

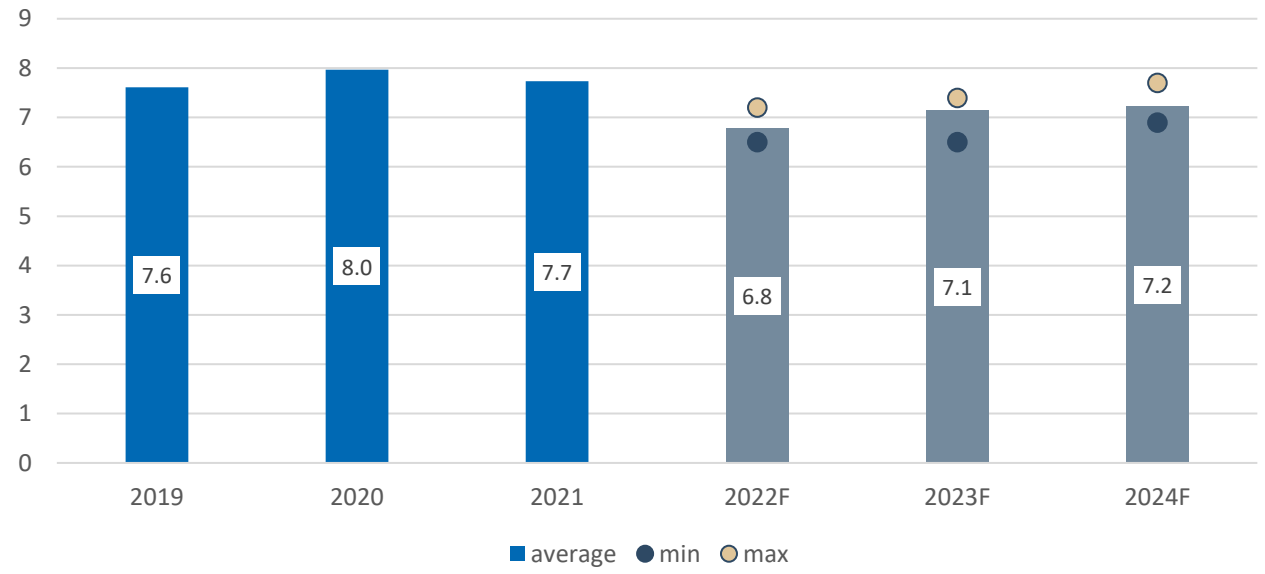
Unemployment rates according to ILO Definition in per cent, seasonally adjusted



Source: Macrobond

Figure 3-10: AIECE forecasts for the unemployment rate in the euro area

Unemployment rates according to ILO definition in per cent, seasonally adjusted



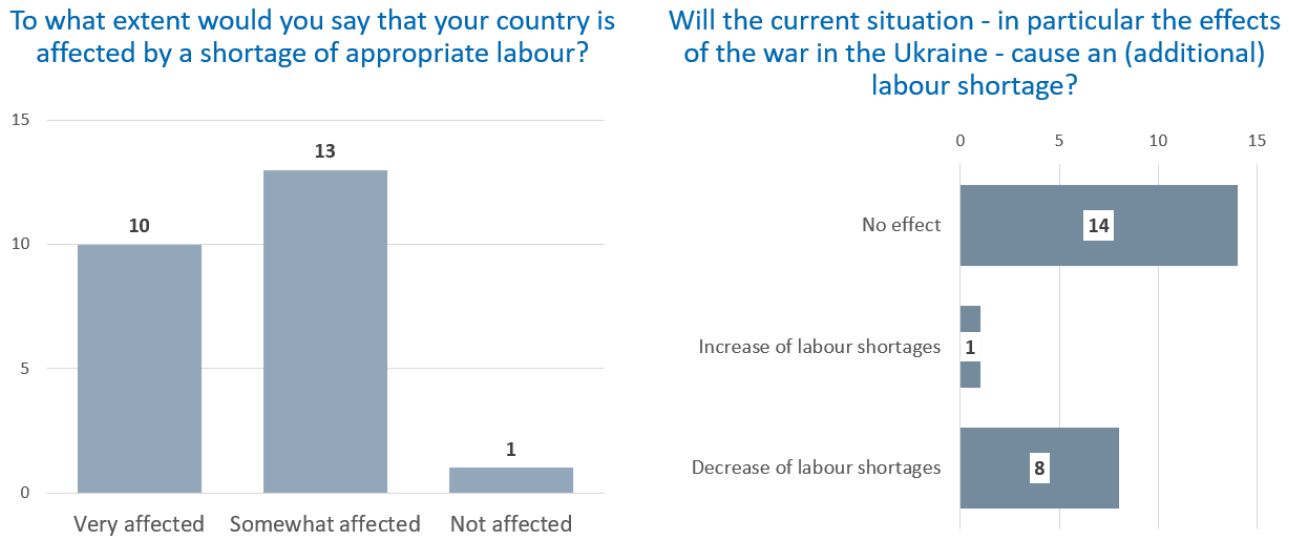
Sources: AIECE Institutes; Macrobond; Institut der deutschen Wirtschaft

When asked about the influence of **labour shortages** (Figure 3-11), 10 AIECE members state that their labour markets are very affected, and 13 members are somewhat affected indicating that labour markets are

running hot and increasingly labour mismatches might play a role. **Concerning the war in Ukraine** the majority of AIECE institutes do not expect additional labour shortages. Furthermore, eight institutes even expect the situation to improve and labour shortages to decrease.

Figure 3-11: Labour shortages – and the impact of the war

Number of AIECE members (rest to 25 institutes: no answer)



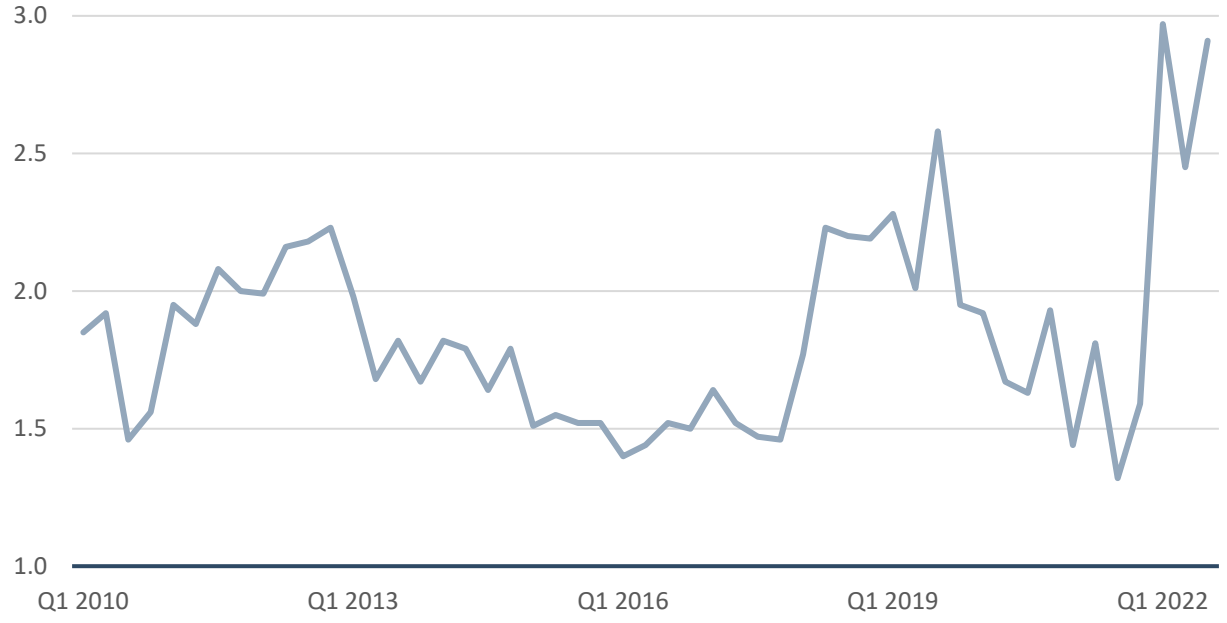
Source: AIECE Institutes; Institut der deutschen Wirtschaft

For some time, it has been expected that a perceived further tightening of the labour market could **push up wage growth** and the high inflation rates could lead to a **wage-price-spiral**. Figure 3-12 shows the development of negotiated wages in the euro area. At the turn of this year, negotiated wages increased to almost 3 per cent in Q1 2022, up from 1.6 per cent in Q4 2021. This is also due to onetime payments such as in Germany. However, after having increased strongly in the first quarter of this year, the ECB's indicator of negotiated wages has showed few signs of further pressure. The indicator declined to 2.4 per cent in Q2 2022 before rebounding to 2.9 per cent in Q3 2022. In terms of real wages this is not enough to keep up with high inflation rates. Nevertheless, country results can differ quite substantially, and available wage data might not give the full picture. In Germany for instance, trade unions have significantly increased their wage demands in 2022 up to two-digit figures. In Italy and Sweden, trade union claims have been more moderate.

The AIECE institutes largely share this view (Figure 3-13). 19 out of 25 AIECE members expect real wage growth to decline either moderately or strongly. Three members expect nominal wages to keep up with inflation rates and two members think that nominal wage growth will outpace inflation rates in their country. 20 AIECE institutes view declining real wages as an increasing problem to some extent (12 members) or to a large extent (8 members) indicating that wage policy alone is not enough to dampen the adverse effects of inflation.

Figure 3-12: Wage growth in the euro area

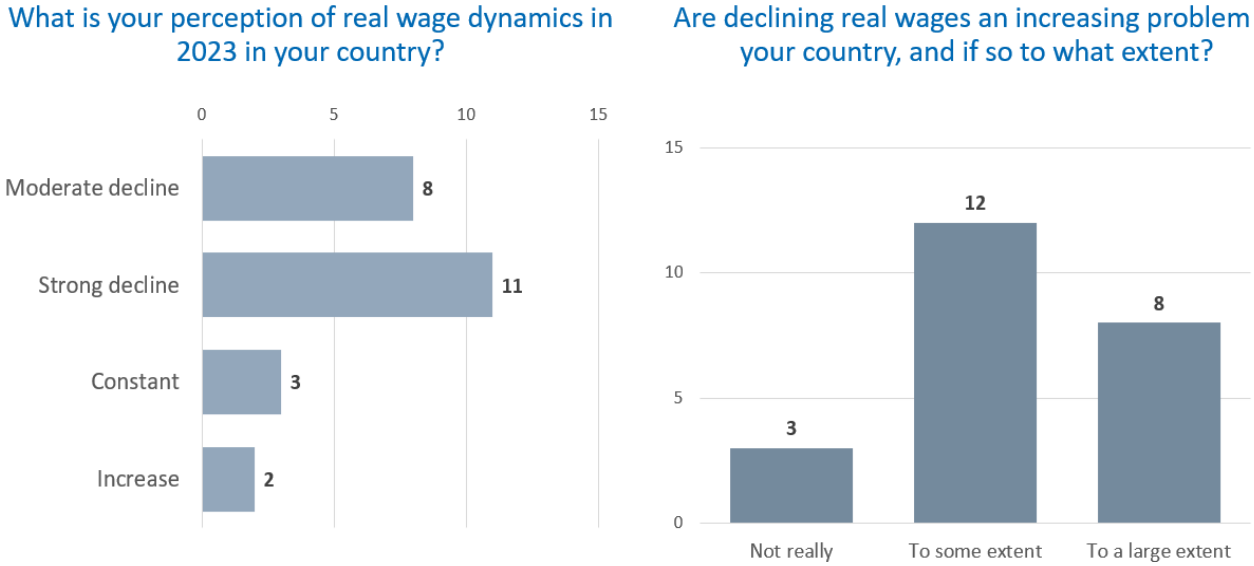
Indicator of negotiated wages, change against previous year in per cent, neither seasonally nor working day adjusted



Source: ECB

Figure 3-13: Excepted wage dynamics in AIECE member countries

Number of AIECE members (rest to 25 institutes: no answer)



Sources: AIECE Institutes; Institut der deutschen Wirtschaft

3.3 Non-euro area member countries

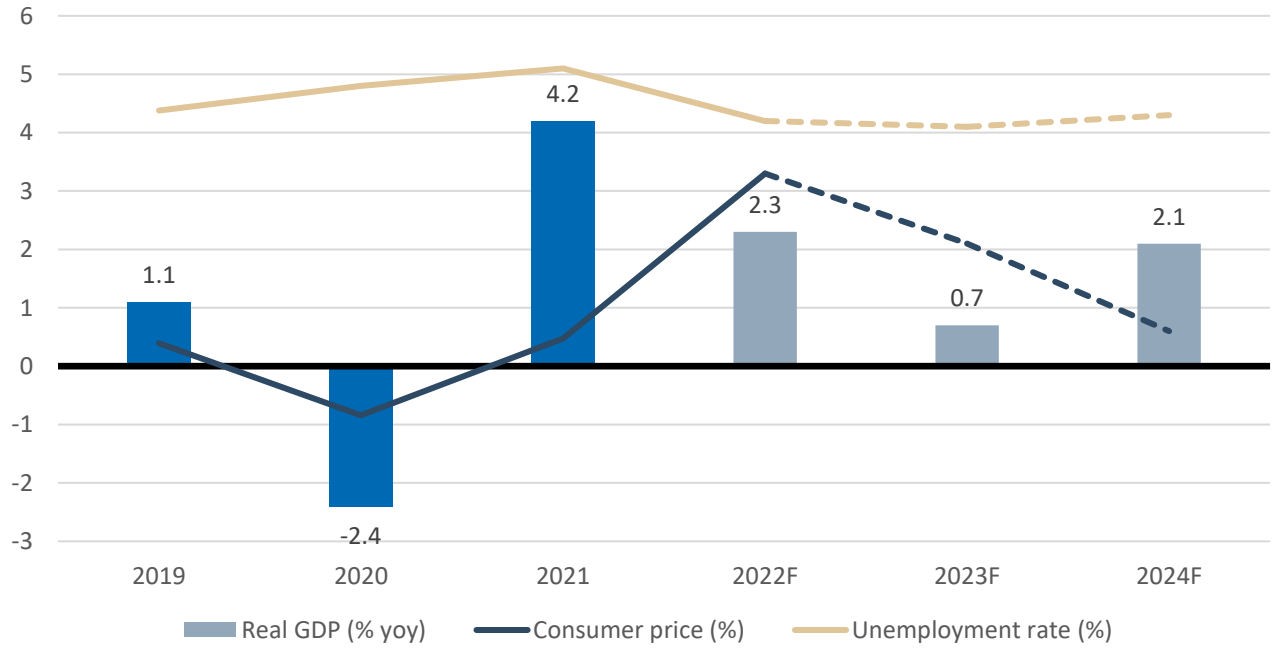
Among the non-euro area countries there are some with the lowest inflation outlook over the forecast horizon (Norway, Sweden or Switzerland). The economic outlook for non-euro area countries shows moderate growth in 2022–2024, reflecting weaker external demand and lower growth of disposable income of households, while little change is expected in labour markets.

Switzerland

In the first half of 2022, output increased due to service sector and private consumption picking up after the lifting of COVID-19-related containment measures, while exports also continued to perform strongly. Switzerland's real GDP growth forecast is a solid 2.3 per cent this year, 0.7 per cent next year and 2.1 per cent in 2024 – after strong GDP growth of 4.2 per cent in 2021 (Figure 3-14). The expected slowdown in economic growth in 2022 is mainly caused by a fall in public consumption from –0.6 per cent this year to –5.5 per cent in 2023. Private consumption is also expected to fall but remain positive with 2.2 per cent growth next year. Investment is expected to increase from 0.7 per cent this year to 1.9 per cent next year. In contrast to other countries the Swiss economy has been able to shield itself – among other factors by a strengthening Swiss currency – from the large increases in global energy and food prices. Hence, consumer prices are expected to remain at 3.3 per cent this year and fall further to 2.1 per cent in 2023 and 0.6 per cent in 2024. The unemployment rate is expected to change only slightly from 4.2 per cent this year to 4.1 per cent next year and to increase slightly to 4.3 per cent in 2024. The Swiss labour market thus remains robust. However, a slowdown in growth in the main trading partners will lead to a weakening of external demand. Imports are expected to have grown faster than exports in 2022, showing pent-up demand in the domestic economy.

Figure 3-14: Macroeconomic Outlook - Switzerland

Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



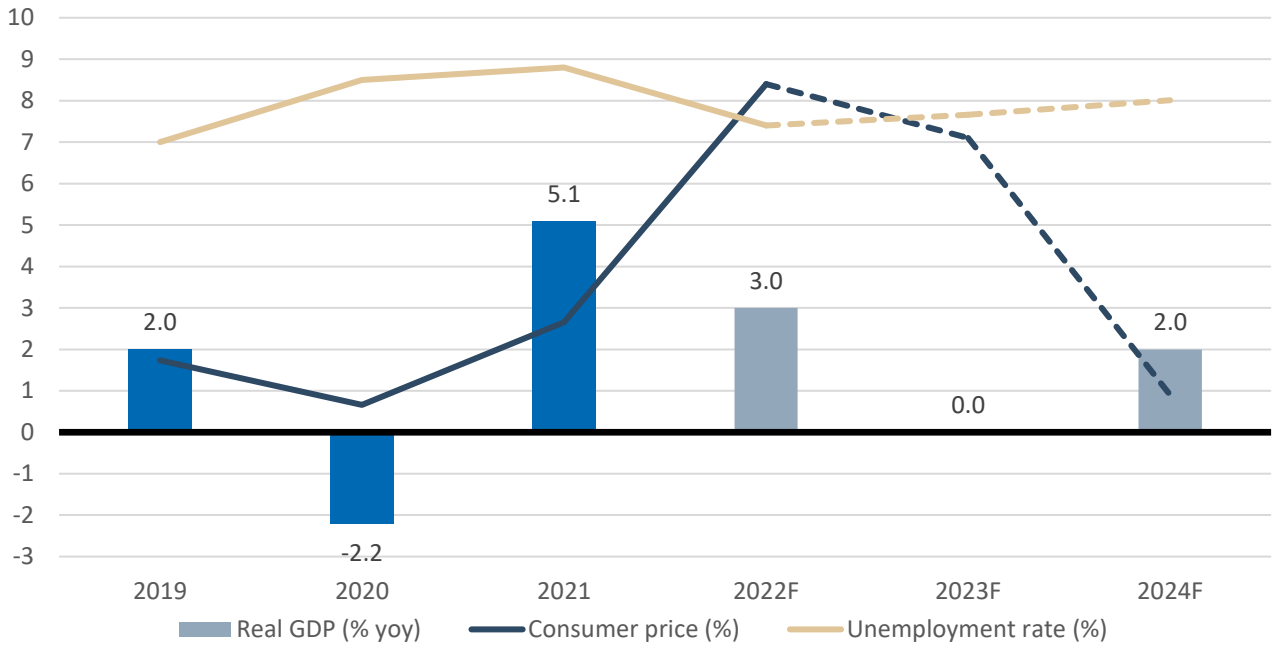
Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

Sweden

The forecast for real GDP growth in Sweden is 3 per cent this year, 0 per cent next year and 2 per cent in 2024 – after very strong real GDP growth of 5.1 per cent in 2021 (Figure 3-15). This year private consumption and private investment (excluding dwellings) are expected to have grown strongly at 3 per cent for the former and 6 per cent for the latter. Strong investment in the housing sector and a robust labour market performance have also contributed to economic growth. However, consumer prices are expected to have increased strongly to 8.4 per cent this year and remain high at 7.1 per cent next year before significantly dropping to 0.9 per cent in 2024. The unemployment rates are expected to remain at 7.4 per cent this year, 7.7 per cent next year and continue to rise slightly to 8 per cent in 2024.

Figure 3-15: Macroeconomic Outlook – Sweden

Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



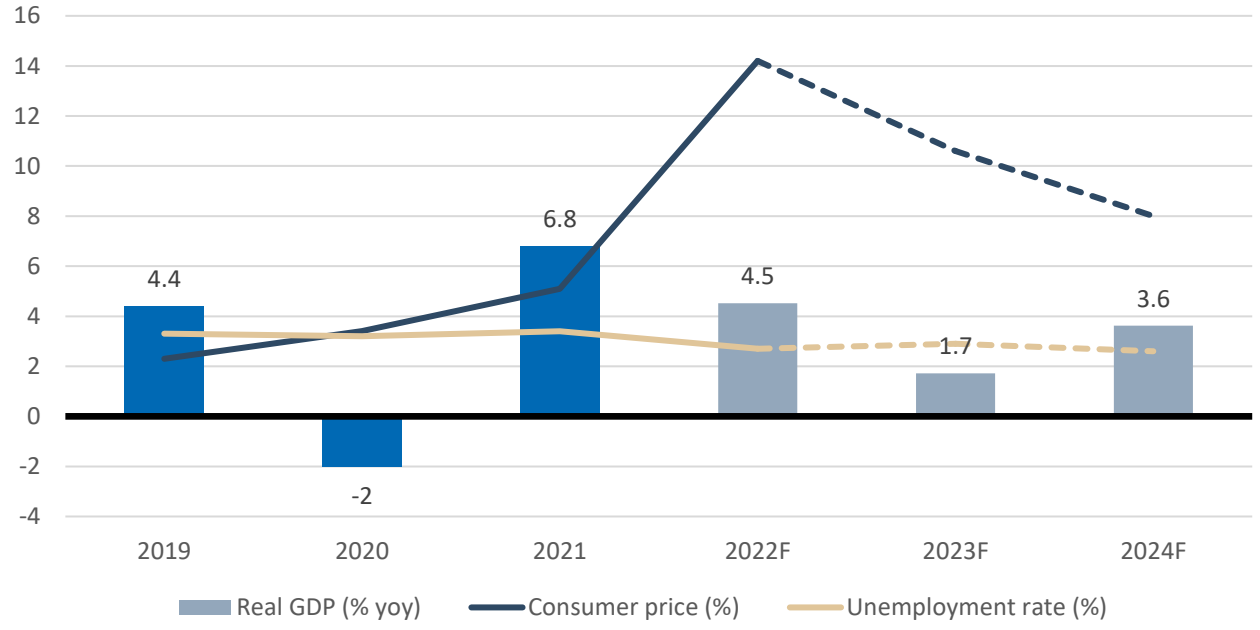
Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

Poland

Following strong GDP growth in 2022, economic activity in Poland is expected to weaken due to closer proximity to the war in Ukraine, a tightening of financing conditions by the Polish central bank as well higher production costs that continue to be passed on to consumers and hence keeping inflation high. Macroeconomic data suggest that the Polish economy continued its upward trajectory in 2022 but drops in investment and inventories led to a contraction of GDP growth in Q2 2022. Despite a deterioration in confidence indicators, the Polish economy is expected to grow by 4.5 per cent in 2022 (Figure 3-16). In 2023, economic growth is expected to decelerate to 1.7 per cent, still driven by public consumption and investments. In 2024, GDP growth is expected to rebound to 3.6 per cent. However, inflation remains an issue, which is expected to peak at more than 14.2 per cent in 2022 and then gradually decline to 10.6 per cent in 2023 and 8 per cent in 2024.

Figure 3-16: Macroeconomic Outlook – Poland

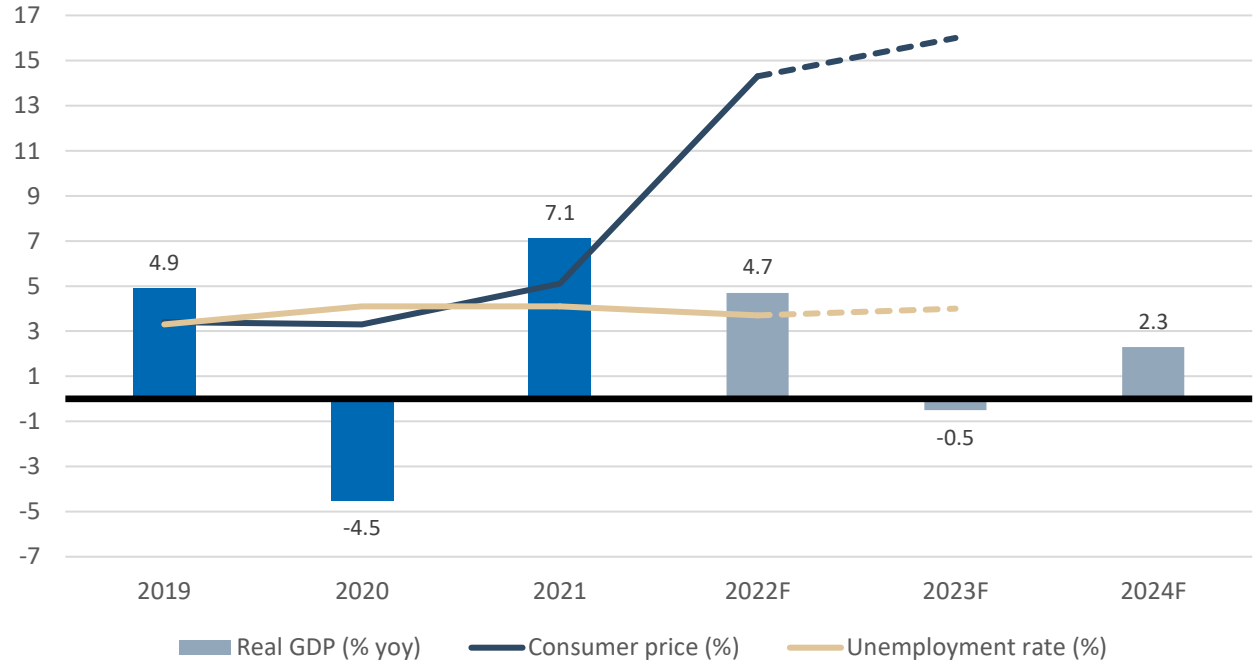
Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

Figure 3-17: Macroeconomic Outlook – Hungary

Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

Hungary

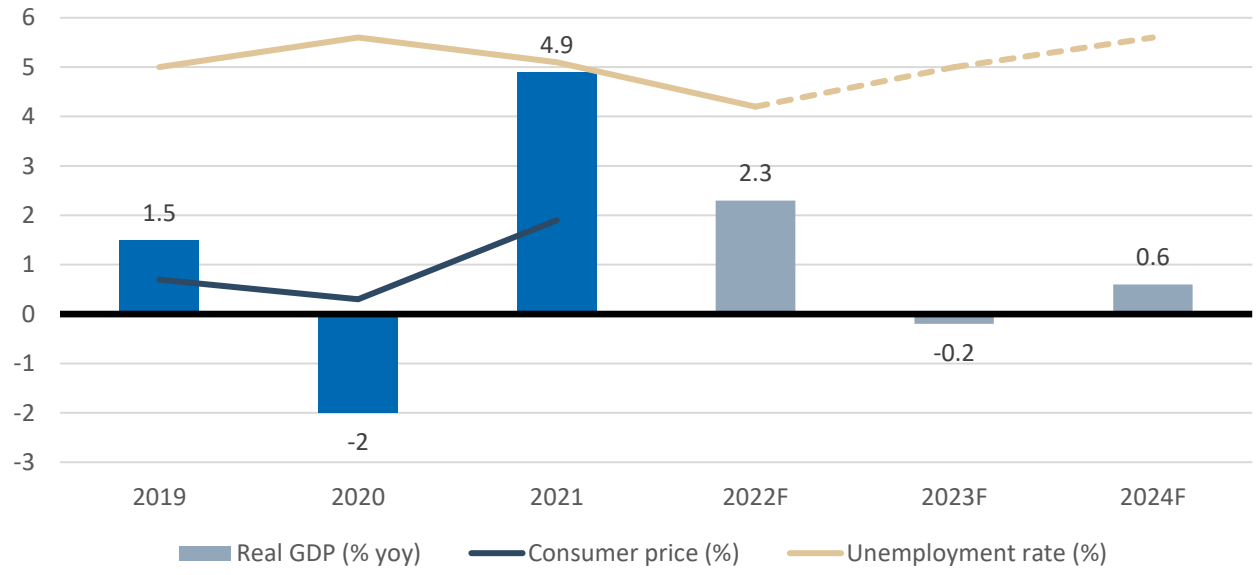
The forecast for real GDP growth in Hungary is 4.7 per cent this year after very strong real GDP growth of 7.1 per cent in 2021 (Figure 3-17). The Hungarian economy maintained its strong growth momentum in the first half of 2022 but contracted already in Q3 2022. Higher inflation and tighter financing conditions will further constrain economic activity in the coming quarters, with real GDP growth projected to contract by –0.5 per cent in 2023 and recover to 2.3 per cent only in 2024. Households remain partially shielded from rising energy prices and financing costs through administrative caps on energy prices and reduced fuel prices through the introduction of motor fuel price cap. However, consumer prices have also increased substantially and are expected to be 14.3 per cent this year, accelerating further to 16 per cent in 2023. Downside risks remain. Energy supply disruptions, for instance, could have a large economic impact. Hungary has only limited possibilities to substitute oil and gas imports from Russia in the short term. Labour markets remain robust, and the unemployment rates are expected to fall slightly from 4.1 per cent in 2021 to 3.7 per cent this year. Due to labour shortages, it is also expected to remain low at 4 per cent in 2023, despite the mild recession.

Denmark

Following strong economic growth in Q2 and Q3 2022, economic activity will decelerate in late 2022 and beginning of 2023. The forecast for real GDP growth in Denmark is 2.3 per cent this year, going into a recession of –0.2 per cent next year and subdued economic activity of 0.6 per cent in 2024 – after very strong real GDP growth of 4.9 per cent in 2021 (Figure 3-18). The unemployment rate is expected to increase from 4.2 per cent in 2022 to 5 per cent in 2023 and 5.6 per cent in 2024.

Figure 3-18: Macroeconomic Outlook – Denmark

Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

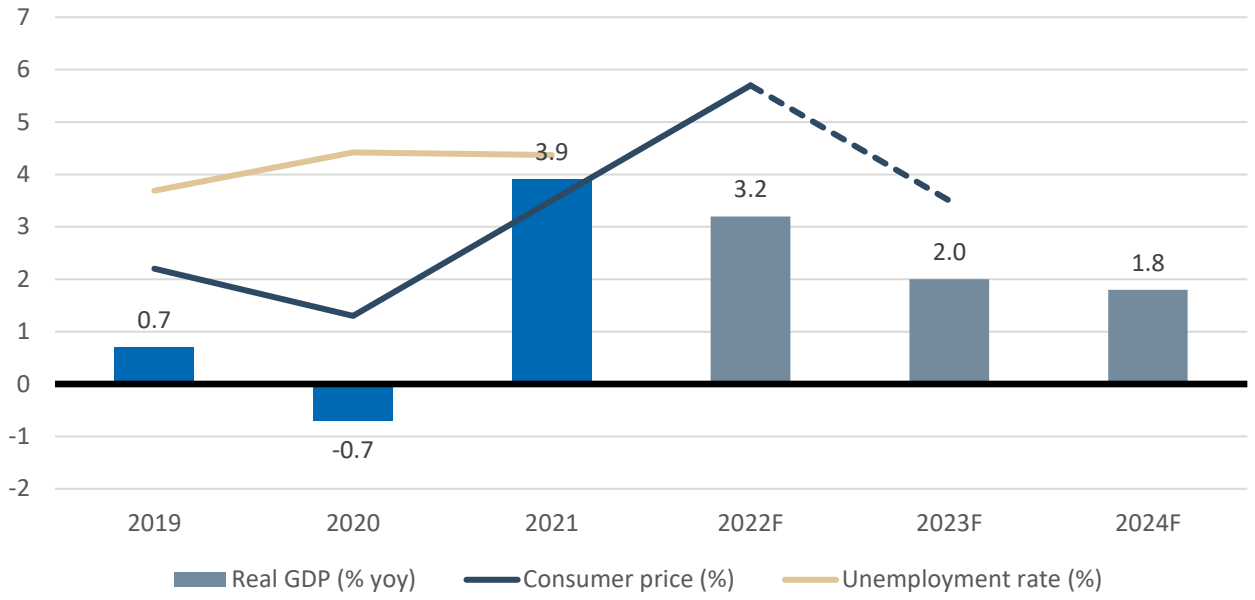
Norway

The economic rebound lost some steam in Q3 2022, but remains buoyant, with real GDP expected to expand by 3.2 per cent this year before slowing down to 2 per cent next year and remaining quite stable at 1.8 per cent in 2024. Private consumption and employment growth have supported economic activity this year. However, consumer prices are expected to pick up in Norway from 3.5 per cent in 2021 to 5.7 per cent in 2022

before declining back to 3.5 per cent in 2023. Net exports could add to growth benefiting from higher oil and gas prices.

Figure 3-19: Macroeconomic Outlook – Norway

Real GDP growth and change in consumer prices in per cent against previous year, unemployment rate in per cent



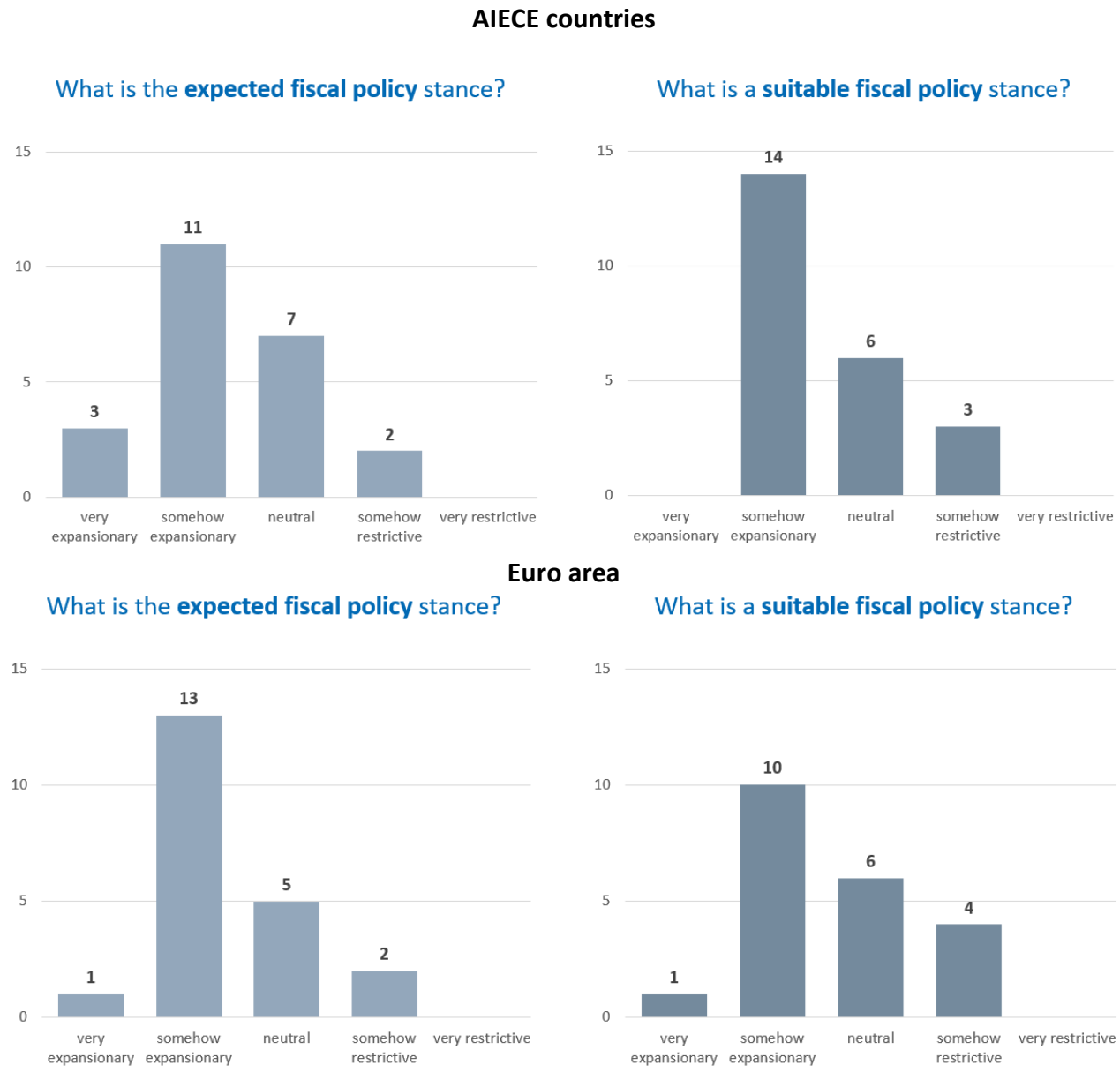
Sources: AIECE Institutes; Eurostat; Institut der deutschen Wirtschaft

4 Policy environment

The economic challenges outlined above have their impact on economic policy. Both fiscal policy and monetary policy are responding to the supply and demand shocks associated with the effects of the war in Ukraine. On the one hand, the measures are aimed at securing energy supplies in response to the loss of supplies from Russia. On the other hand, an attempt is being made to counteract the effects associated with the enormous energy price increases. These represent a considerable cost burden for companies, which in turn leads to a sharp rise in producer prices. With a time lag, the higher production costs of companies lead to an increase in consumer prices. Moreover, the inflation rate measured on the basis of consumer prices is itself driven up to a large extent by higher energy costs.

Figure 4-1: Evaluation of fiscal policy stances in 2023 in AIECE member countries and the euro area

Number of AIECE members (rest to 25 institutes: no answer)



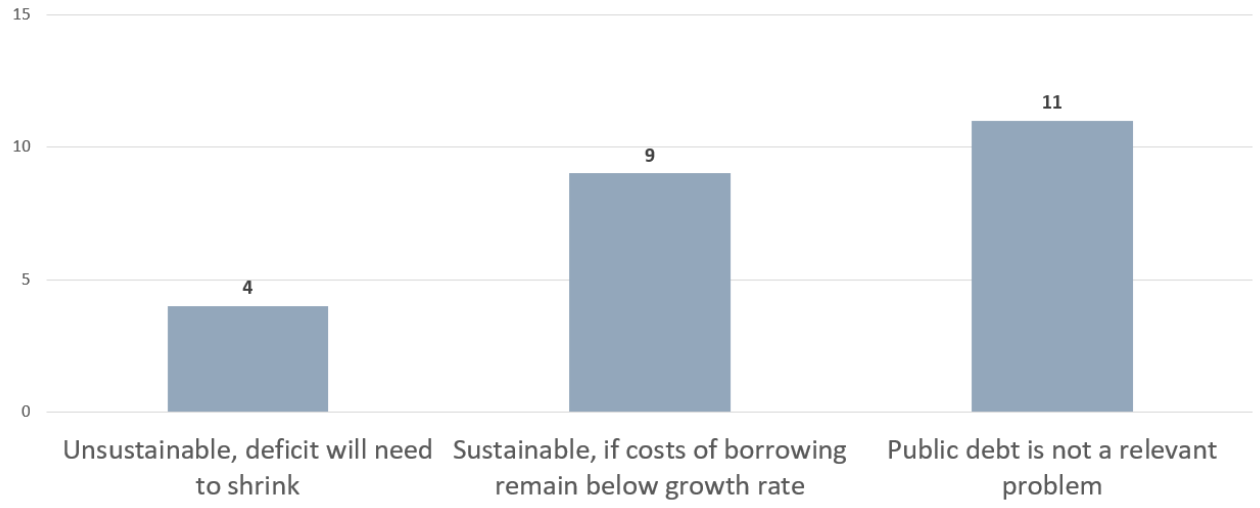
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

On the fiscal policy side, a number of measures have so far been decided in the individual economies to reduce the loss of purchasing power of private households by means of tax policy and transfers. The aim is to prevent existential hardship, especially for low-income groups. Against this background, fiscal policy in most European countries will have an expansionary effect in 2023 (Figure 4-1). According to the AIECE survey, 3 institutes expect a very expansionary effect of fiscal policy in their country, while another 11 institutes see expansionary effects. While 7 institutes expect a neutral fiscal policy, 2 participants even assume a restrictive effect. Overall, the majority of institutes would like to see a somewhat expansionary effect of fiscal policy – 3 institutes would rather see a somewhat restrictive effect of the government in their country. The response pattern for the euro area is not significantly different.

Given the expansionary orientation of fiscal policies in many European economies – and also the affirmation by the majority of the AIECE institutes surveyed – the sustainability of public budgets assumes additional importance. Already the multiple and expansionary bailouts in the wake of the Corona pandemic have led to a renewed increase in the public debt burden in European countries. Nevertheless, 11 of the AIECE institutes responding to this question do not see the government debt situation as a relevant problem (Figure 4-2). Only 4 institutes describe the government debt ratio in their country as unsustainable, with the conclusion that the government's current budget deficit must fall. 9 institutes rate the current debt situation as sustainable, on the condition that borrowing costs remain below the growth rate.

Figure 4-2: Expected sustainability of public debt in AIECE member countries

Do you believe public debt in your country is sustainable in the medium term (3–5 years)? Number of AIECE members (rest to 25 institutes: no answer)

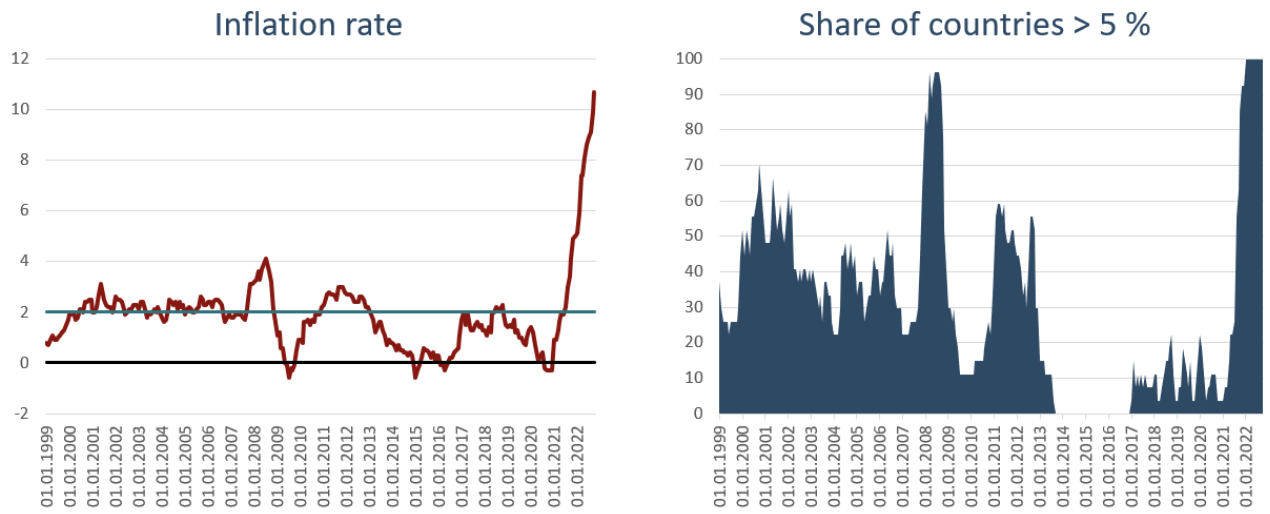


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

It has already been explained that in the wake of the supply problems and the associated huge cost increases, inflation rates have shot up to historic levels. In October 2022, the average inflation rate in the European Union (EU27) was over 10 per cent. There are noticeable differences within this group of countries. Figure 4-3, nevertheless, shows that all countries have inflation rates above 5 per cent. If we take the European Central Bank's inflation target for a stable price level of 2 per cent, this economic policy target is clearly missed, both for the euro area and the EU as a whole.

Figure 4-3: Inflation in the European Union

Change of HICP against previous year in per cent and share of countries with an inflation rate above 5 per cent (in per cent of EU-27)

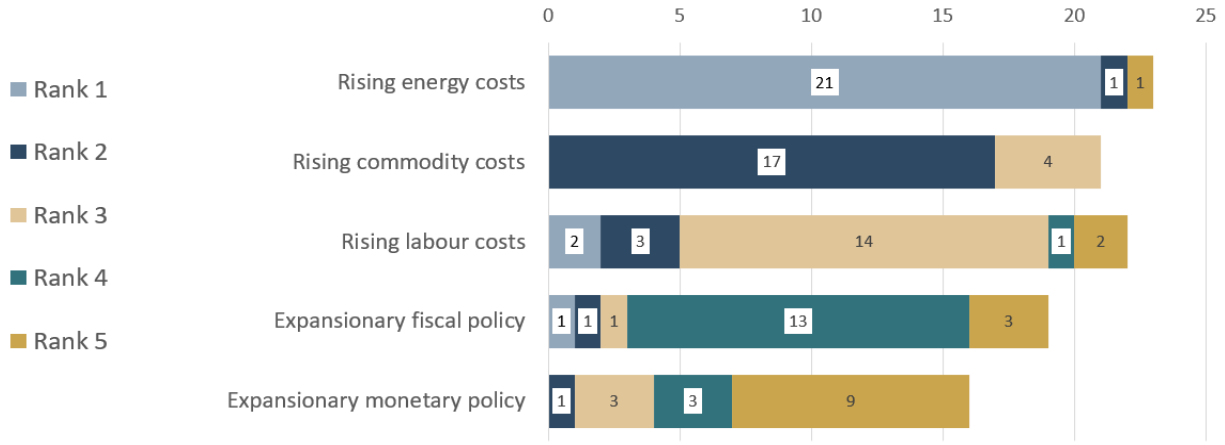


Sources: Eurostat; Institut der deutschen Wirtschaft

Admittedly, this can be explained by the extraordinary consequences of the pandemic and the war – specifically the considerable production disruptions as well as the restricted energy raw materials. The AIECE survey (see Figure 4-4) points to higher energy costs as the as the main driver of inflation in 2023. In addition, there are the price-driving effects of higher material costs. However, there is also a risk that these external shocks in the form of imported inflation will also lead to so-called second-round effects. Via sharply rising labour costs, which in turn are intended to maintain purchasing power by preserving real incomes, home-grown cost shocks may reinforce inflation. In any case, the AIECE institutes also point out that rising labour costs must be considered among the drivers of inflation in 2023.

Figure 4-4: Expected drivers of inflation in AIECE member countries in 2023

What are the main factors that may contribute to an increase of HICP in your own country in 2023? Rank them from 1 to 5, with 1 being the most important. Number of AIECE members (rest to 25 institutes: no answer)

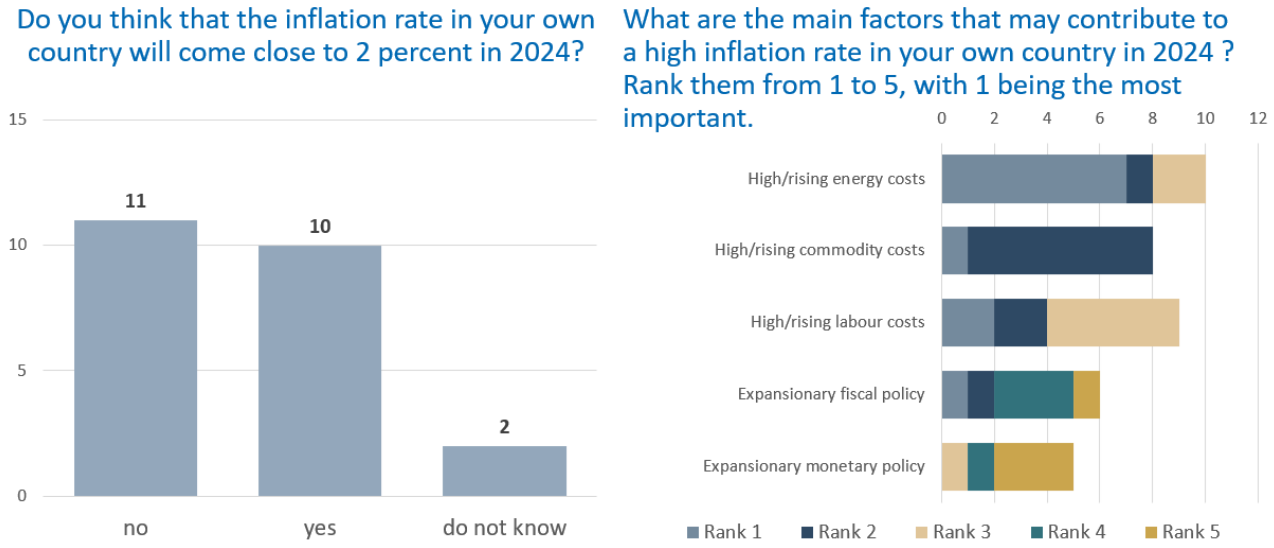


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Looking at the inflation expectations for 2024, the picture is mixed with regard to the AIECE members participating in this question. On the one hand, half of the institutes expect the inflation rate in their country to come close to the 2 per cent target again in 2024. On the other hand, the other half does not expect the price level stability target to be reached again in 2024 (Figure 4-5). Persistently high and possibly further rising energy costs are cited as the reason. This also applies in a somewhat weaker form to material prices. This can be interpreted to mean that the underlying supply problems for energy and materials continue to exist and obviously cannot be overcome in the foreseeable future.

Figure 4-5: Inflation outlook and expected drivers of inflation in AIECE member countries in 2024

Number of AIECE members (rest to 25 institutes: no answer)



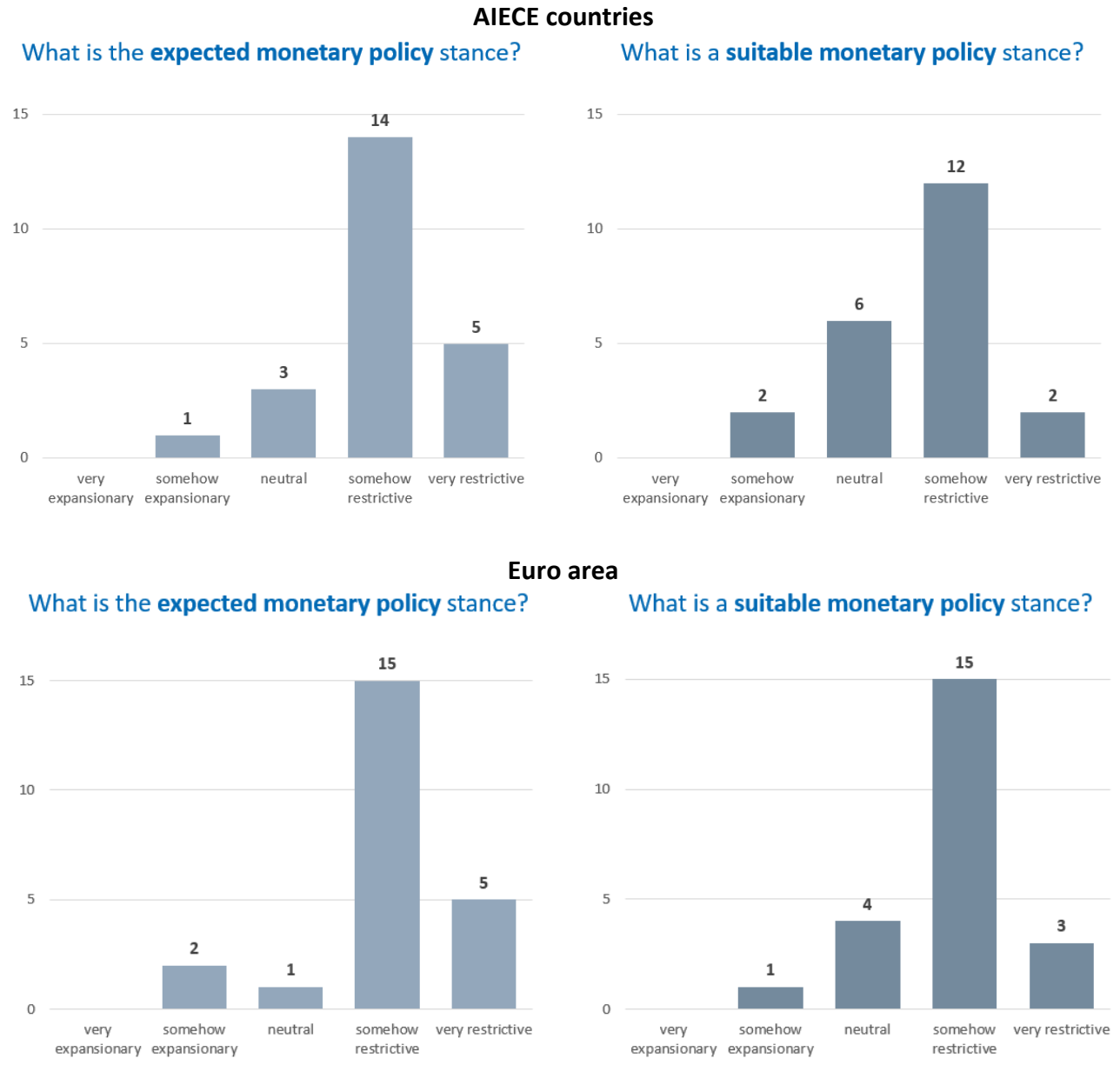
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Against this background, the AIECE institutes were also consulted on their assessment of monetary policy (Figure 4-6). The vast majority of the institutes expect monetary policy in their own country to have a restrictive effect in 2023. 5 institutes even expect the central bank to adopt a significantly restrictive stance. By and large, this assessment is in line with the desired orientation of monetary policy, although the share of institutes wishing for a neutral monetary policy is higher.

The survey makes it clear that the assessment of the monetary policy of the European Central Bank is somewhat stricter (see also Figure 4-6). The institutes rate the current monetary policy as restrictive to a greater extent – and they also expect the ECB to do so to a greater extent in the near future.

Figure 4-6: Evaluation of monetary policy stances in 2023 in AIECE member countries and the euro area

Number of AIECE members (rest to 25 institutes: no answer)

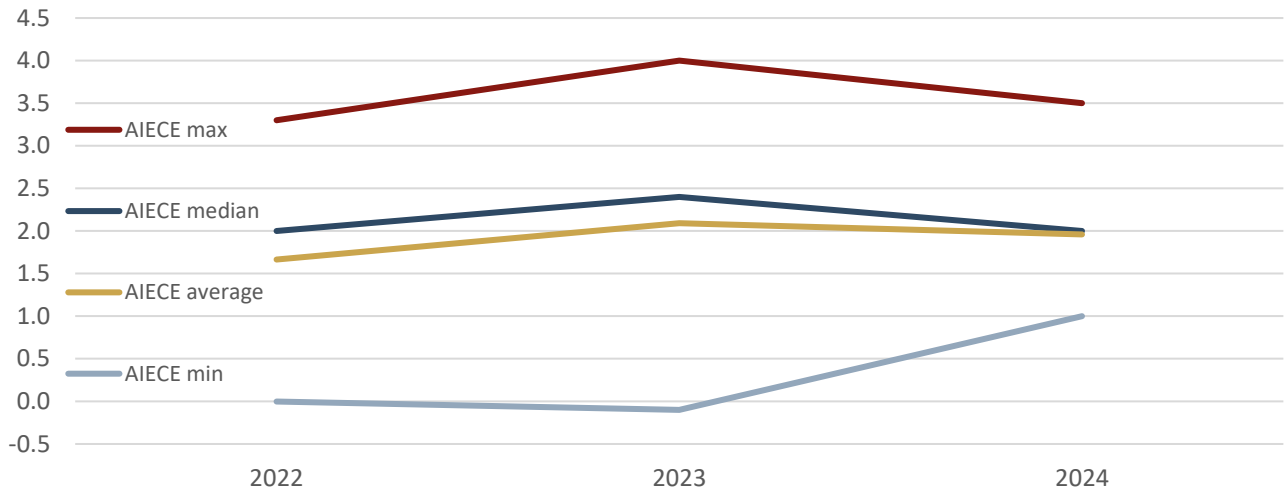


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

In any case, with the exception of Japan, central bank interest rates rose significantly during 2022. Compared to the interest rate situation before the start of the Russian invasion of Ukraine, key interest rates increased by 2 percentage points in the euro area, by 2.5 percentage points in the United Kingdom, by 1.25 percentage points in Switzerland, by 1.75 percentage points in Sweden and even by 3.75 percentage points in the United States. For the euro area, the AIECE institutes expect a further increase of just under half a percentage point on average in 2023 (Figure 4-7). Nevertheless, it is assumed that the rise in interest rates will not continue in 2024. The average and median key interest rate of the ECB will be around 2 per cent in 2024. In any case, it is clear that the foreseeable economic circumstances will be accompanied by permanently higher central bank interest rates – with a clear positive gap to zero interest rates.

Figure 4-7: AIECE forecasts for the euro area interest rate

Key interest rates in per cent

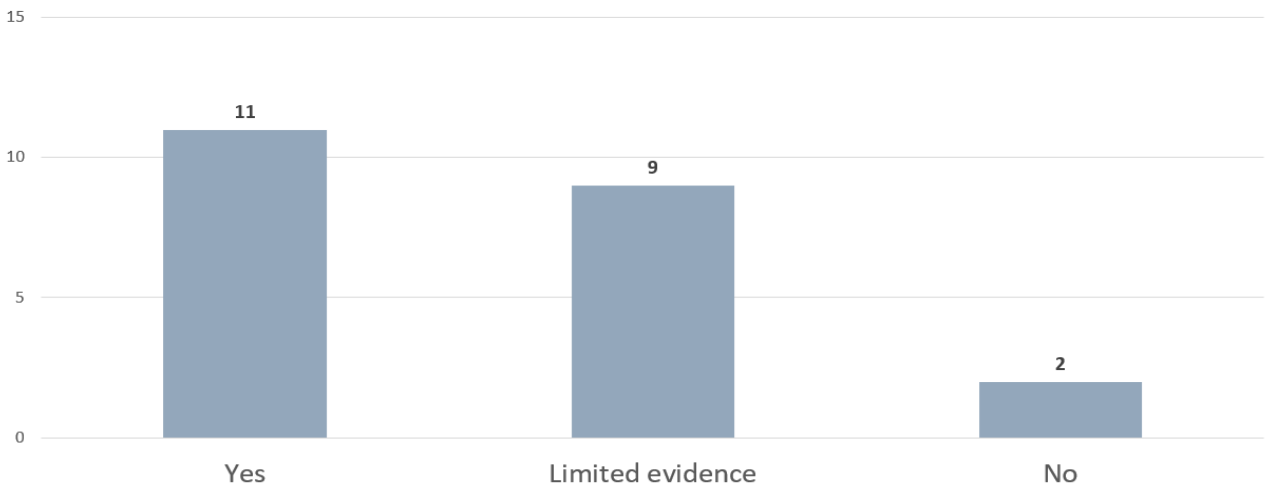


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

In this context of higher central bank interest rates and significantly higher capital market interest rates, the AIECE institutes were asked whether there is already evidence of negative knock-on effects of rising interest rates in their respective economies (Figure 4-8). For example, it could be argued that higher financing costs could have a negative impact on investment activity. This can possibly be clearly seen in a decline in construction activity. An increase in the cost of real estate loans may also be associated with adjustment processes in the real estate markets in the respective countries. 11 of the AIECE institutes participating in this question stated that negative effects of higher interest rates were already apparent. Another 9 institutes spoke of limited evidence.

Figure 4-8: Evaluation of the effects of rising interest rates in AIECE member countries

Is there already any evidence in your country of negative effects due to rising interest rates? Number of AIECE members (rest to 25 institutes: no answer)



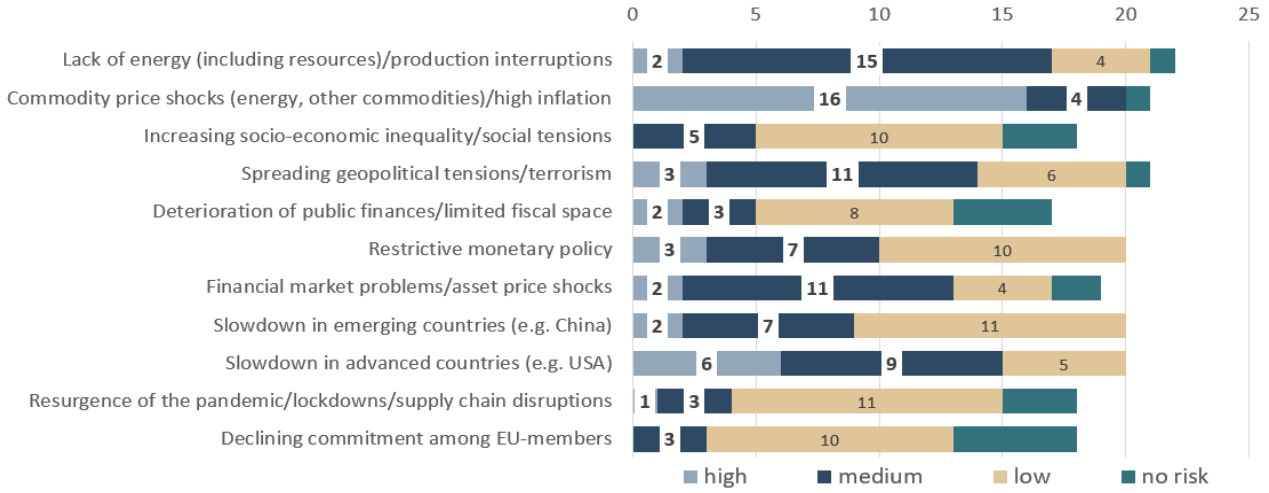
Sources: AIECE Institutes; Institut der deutschen Wirtschaft

5 Risks and special questions

Given the high economic risks posed by the war in Ukraine and the pre-existing production disruptions resulting from the Corona pandemic, the current economic outlook and forecasts are subject to considerable uncertainty. In this context, AIECE members were asked how they assess certain downside risks to their forecasts. The focus is on the forecast for the AIECE member's respective economy. Figure 5-1 shows the assessment based on the arguments given in the questionnaire. These could each be rated according to their importance. Accordingly, the commodity price shocks and the associated high inflation rates represent the highest downside risk. 16 institutes rated this as a high risk, another 4 as a medium risk. Another important factor in the risk profile is the possibility of restricted energy supply and the associated production interruptions. This also applies to a somewhat lesser extent to an expansion of geopolitical conflicts, including attacks on critical infrastructure. From a demand perspective, a slowdown in advanced economies, such as the U.S. economy, also poses a significant downside risk to economic forecasts.

Figure 5-1: Downside risks for growth projections in AIECE member countries

What are the main downside risks to your projection for growth in your country in 2023? Please evaluate each of them according to their importance from 1 to 4, with 4 being the most important. Number of AIECE members (rest to 25 institutes: no answer)

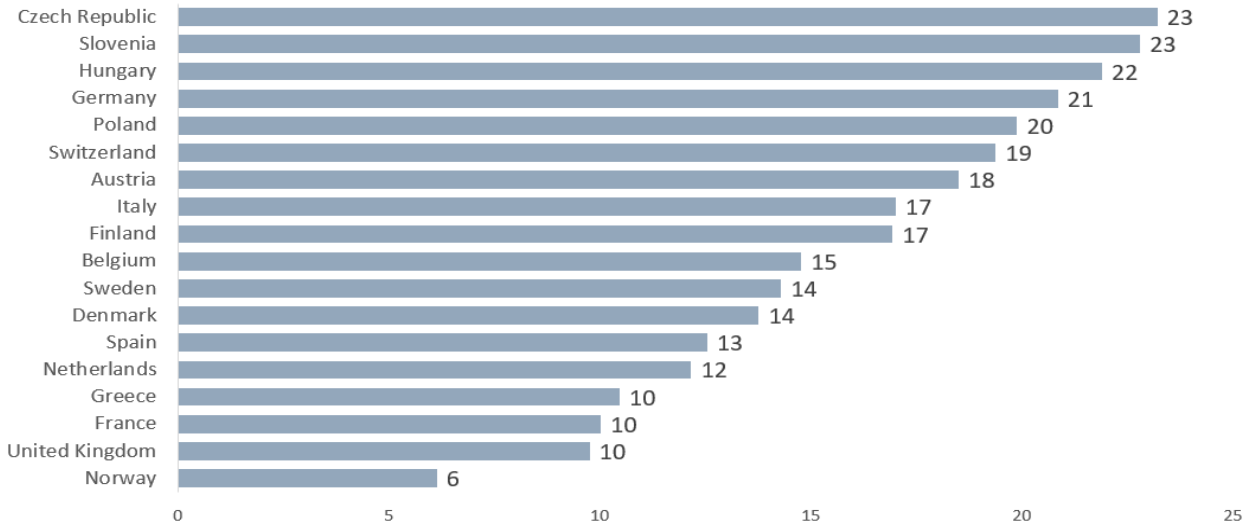


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

Against the backdrop of the high burdens on companies, the question is being raised in Germany, for example, whether sustainable permanent structural changes can occur in the wake of the current economic situation. In this context, the discussion is not aimed at the secular effects of climate change and the associated decarbonisation, the effects of demographic change or the impacts of digitalisation on the economic structure. Rather, the focus is on whether and how the current geopolitical ruptures and the effects of supply and production disruptions and their associated price effects can have a lasting impact on the international competitiveness of companies in individual economies and, by extension, on business locations and the economic structure. Specifically, the question is whether current adjustment burdens can lead to a permanent de-industrialisation. Figure 5-2 shows that this question may well have different relevance in the individual countries. In any case, the economies listed here differ significantly in terms of their industrial shares (share of manufacturing without energy in per cent of total value added).

Figure 5-2: Manufacturing shares in international comparison

Manufacturing (without energy) value added as a percentage of total economy; 2021

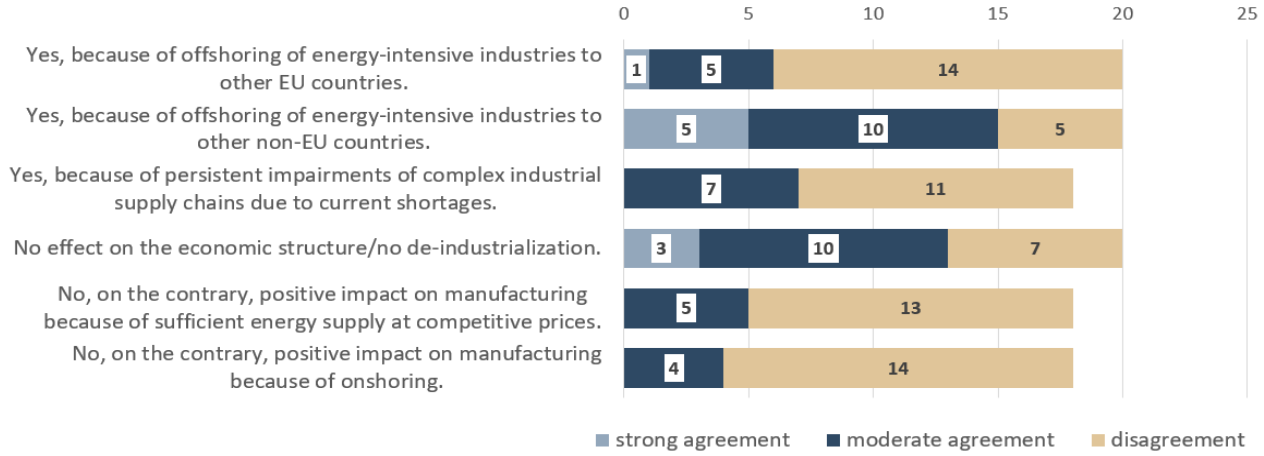


Sources: Institut der deutschen Wirtschaft; OECD

The AIECE institutes were given a question with six possible answers to assess the risk of de-industrialisation (Figure 5-3). Of the total of 25 participating institutes, 20 took part in this discussion. With regard to their own economy, 13 institutes stated that they do not expect the current energy problems and the associated price effects to have any lasting impact on the economic structure and therefore do not expect a de-industrialisation. Nevertheless, the institutes also point out that structural changes may occur because energy-intensive industries are relocated to non-European countries. Here, for example, reference can be made to countries such as the U.S., which can provide locational advantages due to the current geopolitical situation and their own energy resources. Within Europe, these relocation effects are estimated to be moderate.

Figure 5-3: Evaluation of the risk of de-industrialisation in AIECE member countries

Do you expect a sustained de-industrialisation in your country as a result of the current energy supply shortages and high energy prices? Please indicate your level of agreement using the defined categories. Number of AIECE members (rest to 25 institutes: no answer)

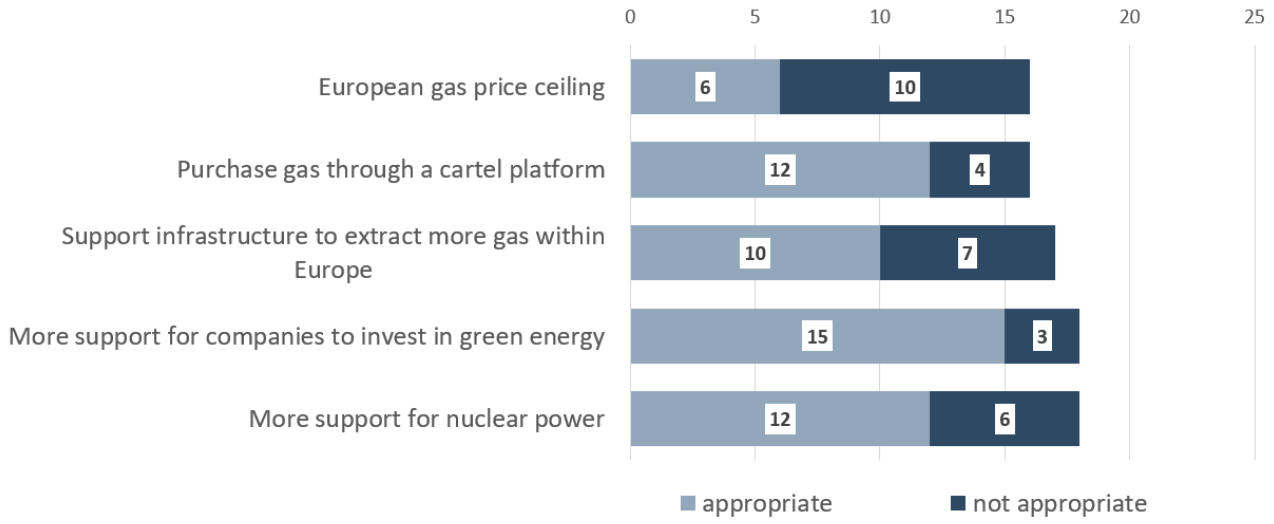


Sources: AIECE Institutes; Institut der deutschen Wirtschaft

This raises the question of what options countries in Europe currently have to deal with the problematic energy supply situation. These options were also posed to the participating institutes in the current AIECE survey. Figure 5-4 shows how the AIECE institutes evaluate the options given in the questionnaire.

Figure 5-4: Evaluation of energy policy tools of the EU

Please assess the main policy tools the EU should employ to ease the energy crisis. Number of AIECE members (rest to 25 institutes: no answer)



Sources: AIECE Institutes; Institut der deutschen Wirtschaft

The European electricity market has been operating for a long time and any potential reworking of the system should be evaluated very carefully. But taking into account geopolitical developments as well as the lessons learnt from the current crisis, a change in the future energy landscape and generation mix, not least because of new emerging technologies, seems on the cards. EU countries will have to find a new equilibrium of security of supply, reasonable costs and prices, and climate neutrality. The current energy price crisis is having a negative impact on European households and businesses. Extreme energy prices fuel inflation and contribute to economic uncertainty. They also reduce the purchasing power of households and the investment capacity of companies. The EU's energy markets operate through a marginal cost mechanism that sets power prices based on the production costs of the last plant needed to meet demand. Thus, currently, gas prices are pushing up energy prices and countries have tried to de-link them from the price of power. Proposals to achieve this goal range from introducing a price cap – following the model already employed in Spain and Portugal – to creating a separate auction-based market for renewables only.

With gas setting the overall price, European economies do not benefit from low-cost renewables like wind farms, which can be sold at large profit margins. Policymakers now are looking for ways to untie gas, aiming for greater reliance on cheaper, greener energy. Two categories of measures are being considered – some short- and some long-term measures.

Short-term fixes

A gas price cap: A broad cap on wholesale gas prices to reduce power costs seems the most obvious measure, but the technical details are complicated. The wholesale price signal is essential for risk management. Any change would have to avoid boosting demand, subsidising electricity for foreign consumers or choking off

imports. The European Commission has been considering a temporary, dynamic cap to curb price volatility and ease the energy crisis. Alignment with state aid guidelines was a concern but has been addressed, and member states will be able to provide the necessary support measures to companies, provided they are temporary and well targeted.

The "Iberian model": Spain and Portugal have already taken the step of limiting the price of gas used in electricity generation. Gas-fired generators get to recover some of their lost revenue through a surcharge on consumer bills. The so-called "Iberian model" could lower wholesale prices across Europe. But as with a broader cap, lowering prices could discourage energy efficiency and increase power exports. Countries that use a lot of gas in power generation, like the Netherlands, could face a higher share of cost. In addition, some generators could make huge profits if they have already sold their production and get reimbursed.

Revenue limits: Non-gas generators can secure large profits by selling power that is based on the price of expensive gas. A revenue cap could limit this windfall, redirecting the excess to help offset household bills. The EU has agreed to implement such a cap at 180 euros per megawatt hour from December to June next year. The measure has attracted criticism because it takes away potential profits from efficient, clean and cheap technologies, thereby sending a detrimental signal to those interested in longer-term investments in this area.

These short-term measures are meant to ensure affordable prices and reduce costs for European citizens and businesses, including direct financial support for vulnerable consumers as well as for SMEs and energy-intensive industries. They, however, come at a price – the German 200 billion euro package, for instance, will be funded through debt. This in turn can fuel inflation and keep it at a higher level. Moreover, the support measures are only short-term solutions. However, support measures to mitigate the crisis should be temporary and targeted.

For the long-term

Splitting the market: Europe could split the wholesale market into two parts, keeping the current marginal pricing system for fossil fuels and creating a separate market for renewables where prices would be defined at the time of auction.

Local pricing: In the longer term, local electricity prices could be implemented to reflect the costs of transmission bottlenecks, instead of a nationwide wholesale price. However, this could increase investment risks as prices can swing with changes in the local supply-demand balance.

Pay-as-bid: Day-ahead power market auctions are currently conducted "pay-as-cleared," where everyone gets paid the price for which the most expensive producer offers to generate power. This could be changed to pay-as-bid, where prices would be closer to each generator's respective costs of production. This means that a wind farm would sell on the same market as a gas plant, only at a much lower rate. A weighted average price based on a pay-as-bid auction could more accurately reflect the electricity generation mix and potentially limit the impact of gas on power prices in markets with a high level of non-gas power generation However, this market intervention could increase speculative trading and lead to no or limited decline in power prices.

Some analysts say that a long-term power market redesign in the EU is not needed, leaving room for temporary interventions at most. The currently scheduled acceleration of renewables means that cheaper energy sources will increasingly set power prices as more wind and solar power is built, eventually displacing gas. Considering that the root cause of the current high energy prices is gas, it would be ideal to minimise the use of gas and increase the production and use of non-fossil energy to the extent that meets the energy demand. Investment in energy infrastructure is inevitable if the energy systems and the energy market are to develop and respond efficiently to current trends, including electrification, localisation, digitalisation and increasing renewable energy production and use. The increase in intra-country and cross-border interconnections contributes to the security of supply, but also equalises prices. In the short-term, this may be a drawback for those who enjoy lower prices within the different price ranges, but in the longer term, it helps to lower and stabilise prices.

Policy debates

A distinction should be made between price shocks caused by exceptional situations such as war and more regular price fluctuations. Fluctuations depend on many factors related to the supply and demand for energy. Due to the massive increase in the production of intermittent renewable electricity, price volatility in the electricity system is likely to increase. The market must therefore send adequate price signals to meet the need for flexibility. The European Union has proposed legislation asking for 15 per cent energy demand reduction by its members. For industrial actors this means changing their production processes, in the worst case, reducing or completely abandoning production in Europe. In parallel, though, there are also calls for more investment in a faster transition to a non-fossil and climate-neutral energy system, which could boost some economic sectors.

Discussions are also underway on solidarity between member states on energy supply (coordinated plans for gas storage until 2023) and on finding ways for joint gas purchasing to end competition between EU member states scrambling to secure their national energy supplies. A joint proposal by Germany and the Netherlands advocates the installation of a common EU gas purchasing platform. The same proposal also calls for stronger gas and electricity demand reduction measures, the introduction of long-term gas delivery contracts across the EU, and discussion of new benchmarks for LNG imports. The EU has imposed sanctions on imports of Russian oil by sea which will apply from 5 December. On the same day, the EU and the UK will ban their companies from shipping, financing and insuring tankers carrying Russian oil, unless the shipments are priced below a cap. However, a ban of Russian gas imports into the EU will not be easily implemented. But Russia has already announced that a gas price cap on gas would mean a complete halt in supplies.

Policymakers and investors must expect significantly higher wholesale prices for gas and electricity, which will exert pressure on retail energy prices as well as on most goods and services in the consumption basket. In October, EU member states decided to add a new REPowerEU chapter to the national recovery and resilience plans (RRPs) under NextGenerationEU, in order to finance key investments and reforms that will help achieve the REPowerEU objectives. The financing of the foreseen addition 20 billion euros should come from the Innovation Fund (75 per cent) and frontloading ETS allowances (25 per cent). The allocation key is to be based on a formula that takes into account cohesion policy, member states' dependence on fossil fuels and the increase of investment prices.