

WAR IN UKRAINE DENTS EUROPEAN GROWTH PROSPECTS

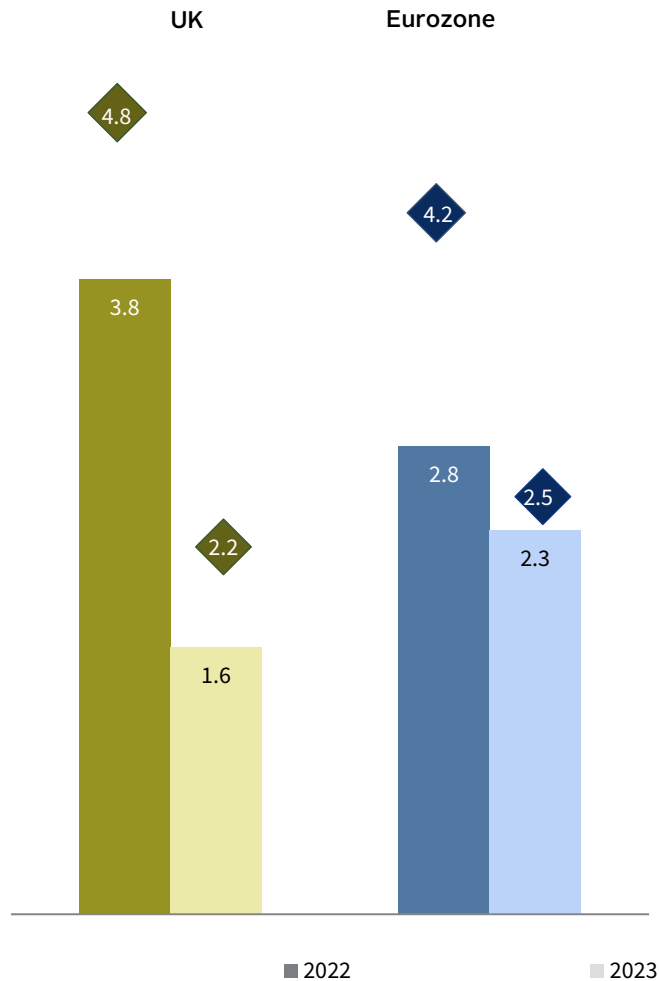
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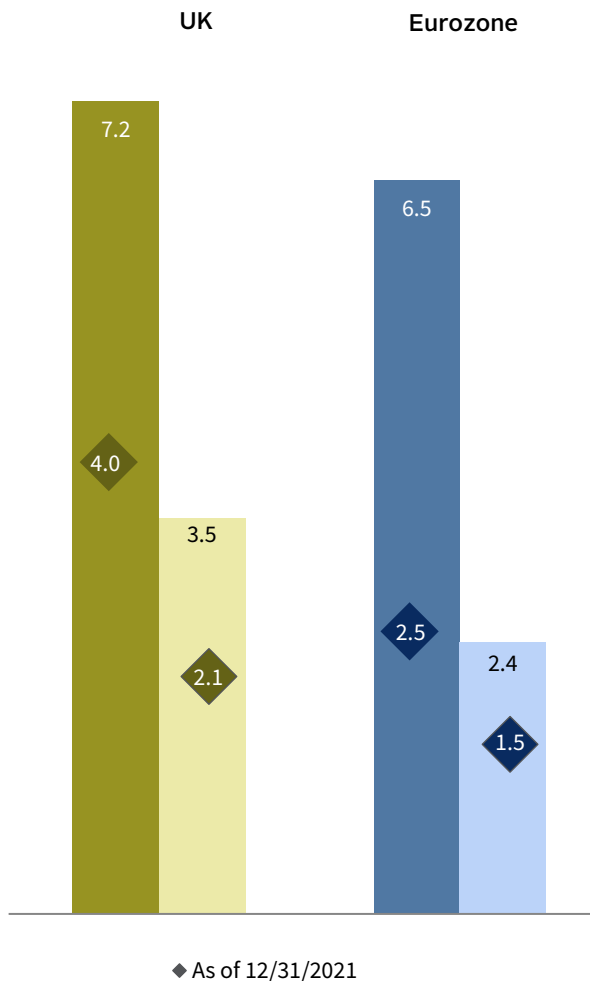
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- The ongoing war in Ukraine has exerted a material impact on both global economies and markets, primarily via a steep increase in commodity prices, especially energy.
 - Europe has been particularly affected due to its geographical proximity and the dependence of many of its nations on Russian fossil fuels.
 - Consumer confidence has plummeted, despite record low unemployment, as rising food and energy prices eat into wages and reduce purchasing power.
 - Forecasters have been cutting GDP growth estimates as the year has progressed, while raising their inflation projections.
 - The sharp rise in inflation has increased interest rate expectations. The Bank of England (BOE) has already begun a hiking cycle while the European Central Bank (ECB) is set to join soon.
 - Both the euro and Pound Sterling have depreciated markedly against the US dollar due to widening interest rate differentials and deteriorating trade balances.
 - UK equities have outperformed strongly year-to-date due to their value tilt, with their greater exposure to energy stocks a particular tailwind.
 - The big economic tail-risk scenario is that Russian fossil fuels are cut off entirely from Europe before suitable replacement plans have been implemented.

The impact of rising inflation has seen GDP growth projections revised down significantly

2022 & 2023 CONSENSUS GDP GROWTH ESTIMATES
As of May 11, 2022 • Percent (%)



2022 & 2023 CONSENSUS CPI ESTIMATES
As of May 11, 2022 • Percent (%)

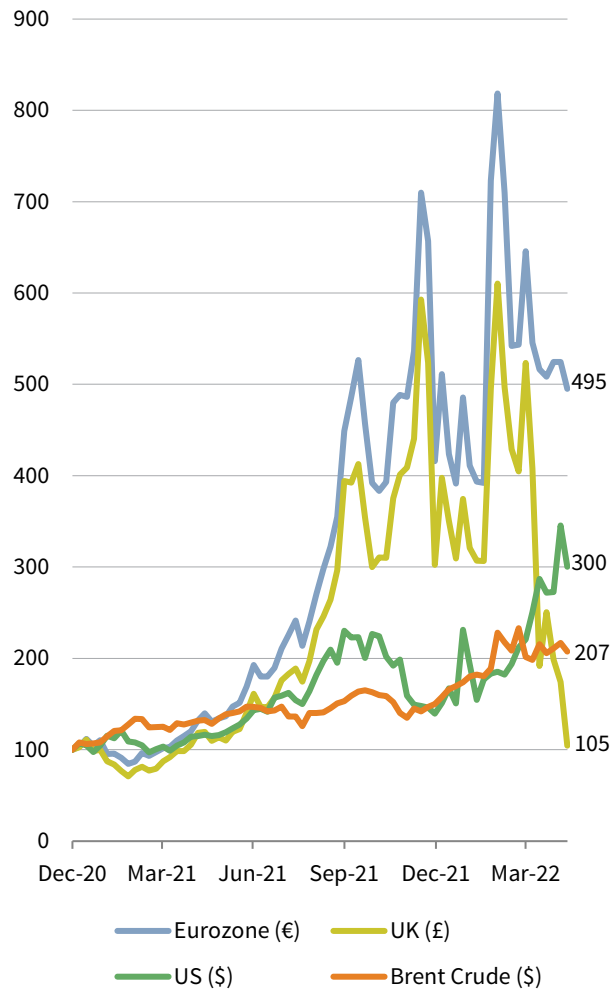


The war in Ukraine has had a material impact on current and expected economic conditions across the world. The upward pressure exerted by the conflict on commodity prices has been a primary channel for the transmission of this impact, with downstream impacts on consumer and business confidence. Geographical proximity and the ensuing energy linkages have ensured that the impact on Europe has outstripped that of other regions. Inflation forecasts for 2022 have been revised up by several percentage points, with 2023 seeing smaller, though still material, upward revisions. Similarly, more than 1% has come off this year's growth projections since year end.

European gas prices experienced an extraordinary surge over the past year

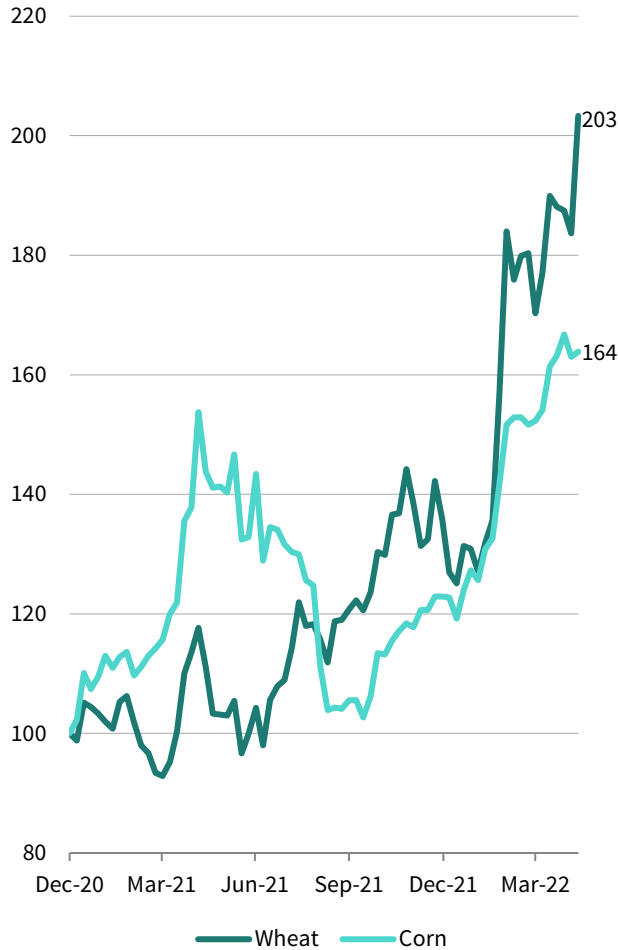
NATURAL GAS AND OIL PRICES

December 31, 2020 – May 12, 2022 • December 31, 2020 = 100



AGRICULTURAL PRICES

December 31, 2020 – May 12, 2022 • December 31, 2020 = 100 • US Dollar

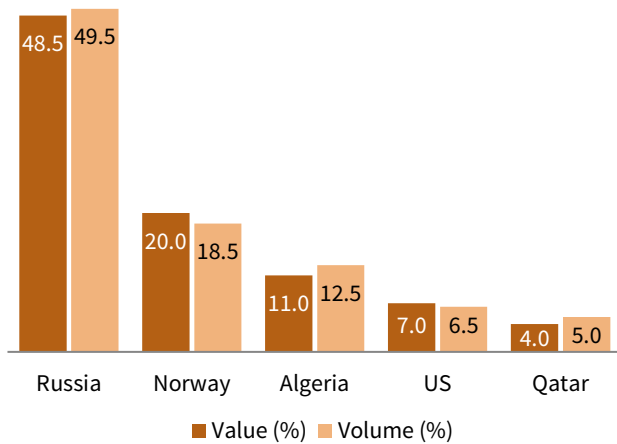


Energy prices were rising even prior to the start of the war in February. Post-COVID demand recovered more quickly than anticipated, while supply was constrained by commercial decisions, weak investment, and COVID-related logistical bottlenecks. Gas prices rose steeply in Europe due to lower-than-normal gas stock, which, in retrospect, appears to have been partially due to the activities of Russian state-linked firms. Fear of an energy embargo, whether directed by Europe or Russia, have helped to keep prices elevated. Ukraine's role in the global supply of grain has also led to rising food prices.

European energy dependence on Russia is significant, but other linkages are minimal

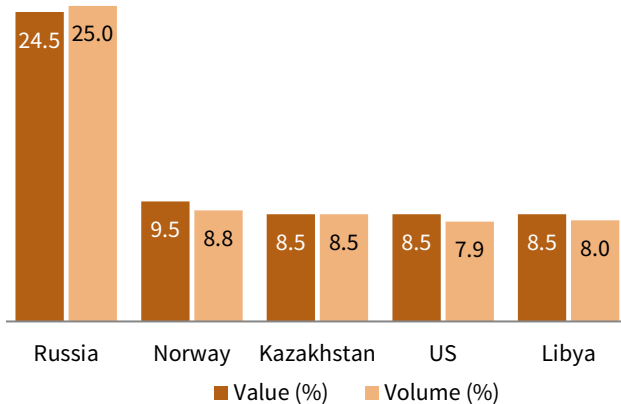
EU NATURAL GAS IMPORTS FROM NON-EU TRADING PARTNERS

January 1, 2021 – June 30, 2021 • Percent(%)



EU PETROLEUM OIL IMPORTS FROM NON-EU TRADING PARTNERS

January 1, 2021 – June 30, 2021 • Percent(%)



RUSSIAN TRADE OF GOODS

As of December 31, 2020

	US	EU	Japan	UK	China
As a Percent of GDP of Major Economies					

Imports from Russia	0.1	0.7	0.2	0.9	0.3
Exports to Russia	0.1	0.5	0.1	0.1	0.4

	US	EU	Japan	UK	China
As a Percent of Total Trade of Major Economies					

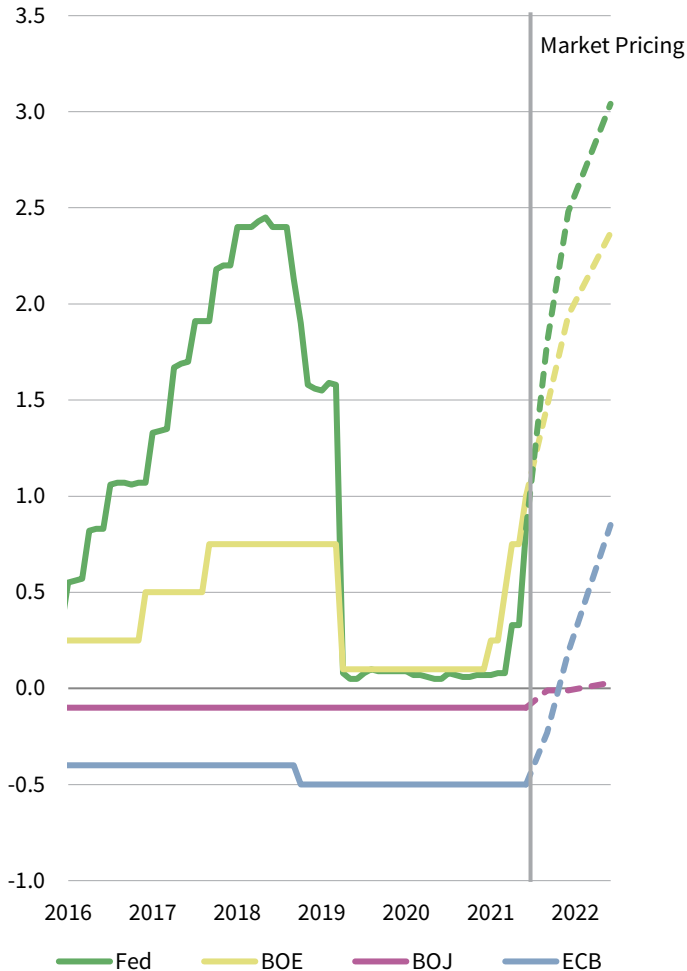
Imports from Russia	0.5	2.2	1.6	3.6	2.8
Exports to Russia	0.9	1.5	1.1	0.9	2.2

The linkages between Ukraine, Russia, and the rest of the world—including Europe—are primarily via commodity markets. Direct economic linkages remain very modest. This can be seen from the trade statistics and from the de minimis revenue exposure that major equity indexes have to the region. However, the energy linkages are significant, particularly for Europe. Nearly half of the EU's natural gas imports come from Russia, while for oil the proportion is close to a quarter. Within the bloc, some countries are more exposed than others. Of the largest members, Germany and Italy are most reliant on Russian gas. The cost and time required to install new importation infrastructure make it difficult to forego Russian imports.

Expected rate rises have driven tightening financial conditions and helped UK stocks outperform

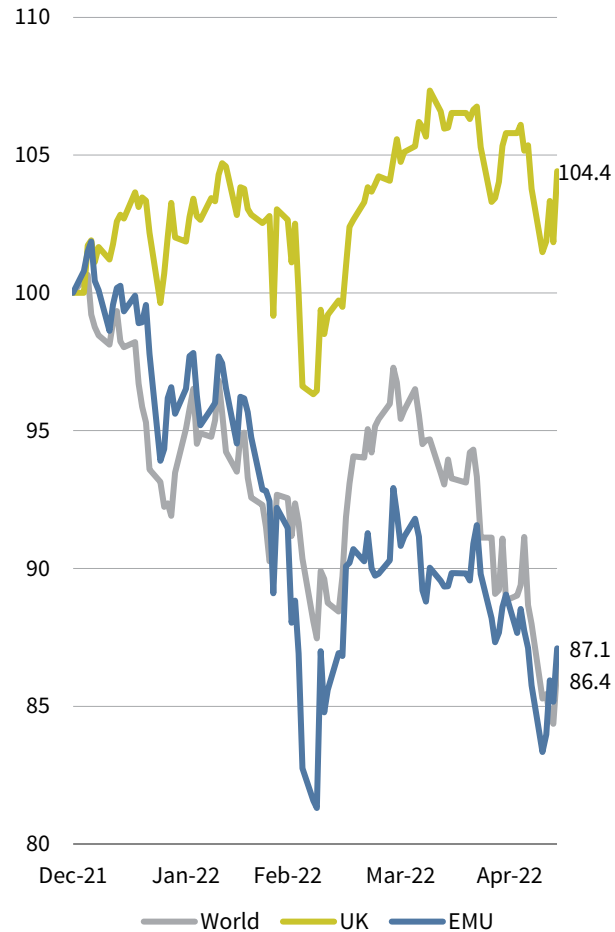
G4 GLOBAL POLICY RATES

December 31, 2016 – May 31, 2023 • Percent (%)



YTD PERFORMANCE OF MSCI WORLD, MSCI UK, AND MSCI EMU

December 31, 2021 – May 13, 2022 • December 31, 2021 = 100 • Local Currency

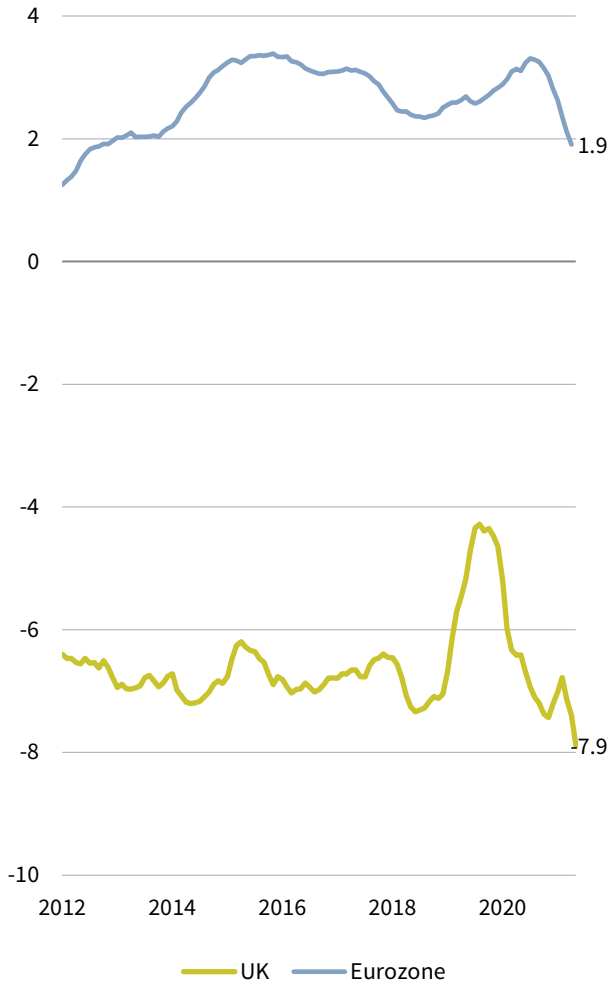


Financial conditions have been tightening across Europe. Rising prices have forced central banks to dial back their accommodative stances. The BOE has already started raising rates and the market expects them to reach approximately 2.5%. While the ECB has not yet raised rates, it is expected to commence in Q3, with a peak rate of c. 1.5% priced. The impact of elevated energy prices and inflation generally—in addition to rising rates expectations—has weighed on equity markets. Both factors are influencing expectations of future economic activity. The UK equity market has outperformed due to composition effects. Value stocks—to which it has an overweight—tend to outperform as rates rise, while its energy overweight specifically has been a tailwind.

The rising cost of energy imports has pressured Europe's balance of trade, hurting its currencies

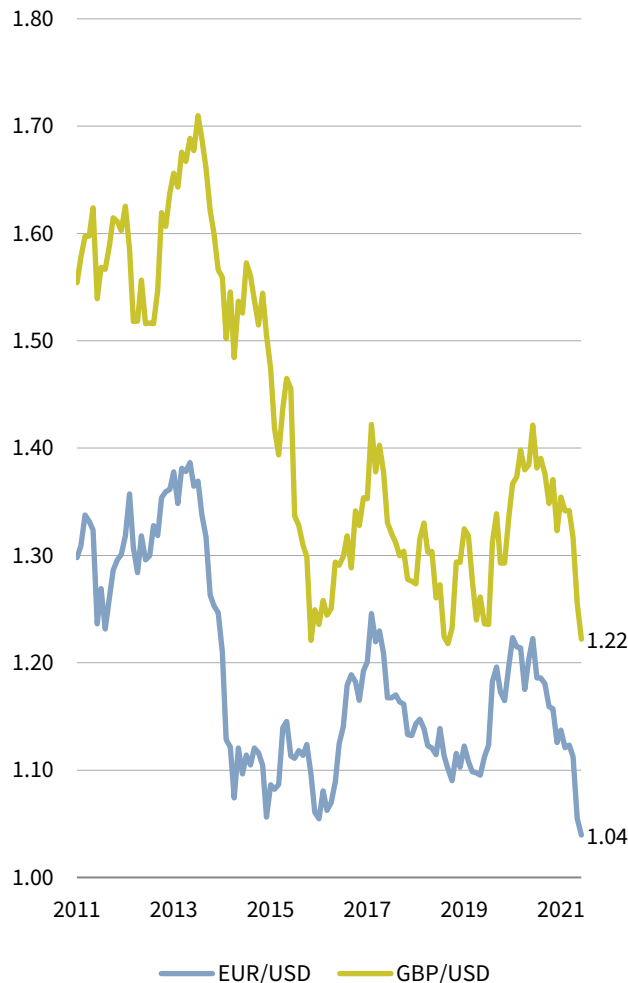
GOODS TRADE BALANCE: PERCENT (%) OF GDP

November 31, 2012 – March 31, 2022 • Percent (%)



CURRENCY EXCHANGE RATES

December 31, 2011 – May 13, 2022

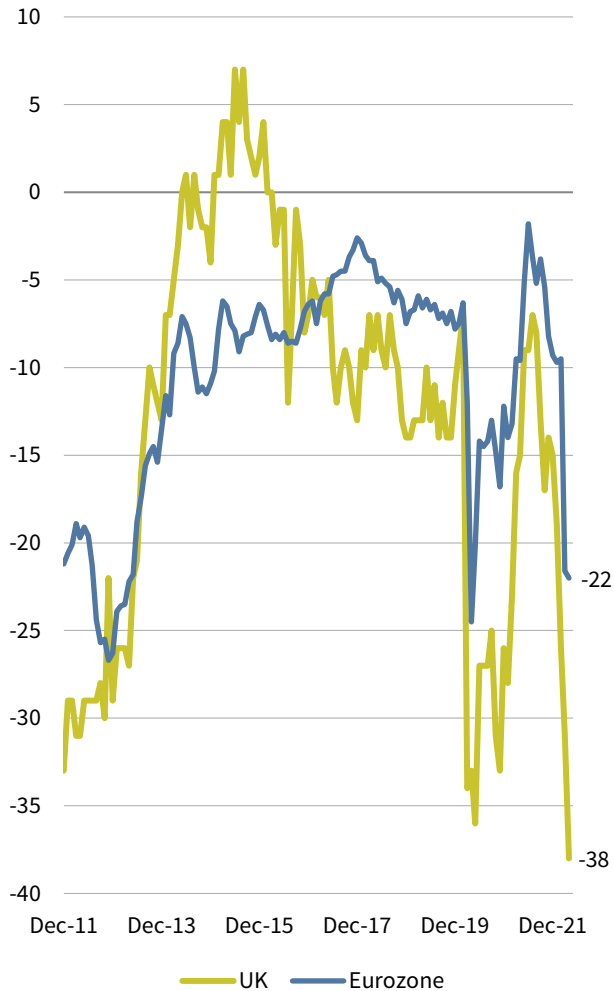


Both the euro and Pound Sterling have depreciated this year, especially since the outbreak of war. A lot of the weakness has come specifically against the dollar, as interest rate differentials between the US and the UK/Eurozone have widened. Precautionary safe-haven-seeking flows of capital toward the US have also weighed on European currencies. The rising cost of oil & gas has caused the trade balances of energy importing regions, which include the UK and Eurozone, to deteriorate. This has been a fundamental headwind to those regions' currencies. The appreciation of the dollar has also contributed to tightening global financial conditions, via the increased cost of accessing dollar funding for international borrowers.

The rising cost of food and energy undermined consumer confidence

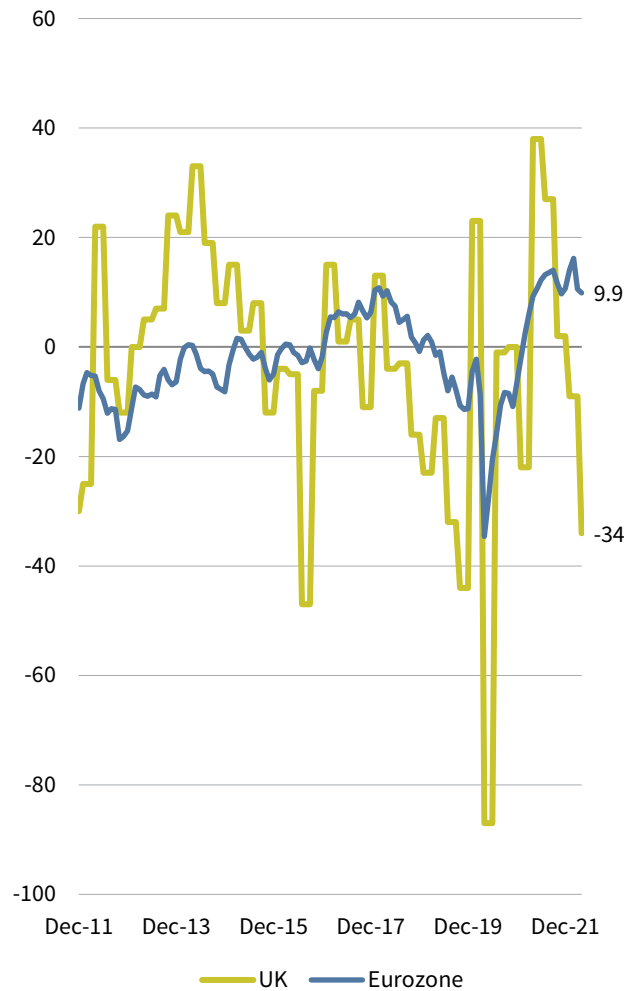
CONSUMER CONFIDENCE

December 31, 2011 – April 30, 2022



BUSINESS CONFIDENCE

December 31, 2011 – April 30, 2022

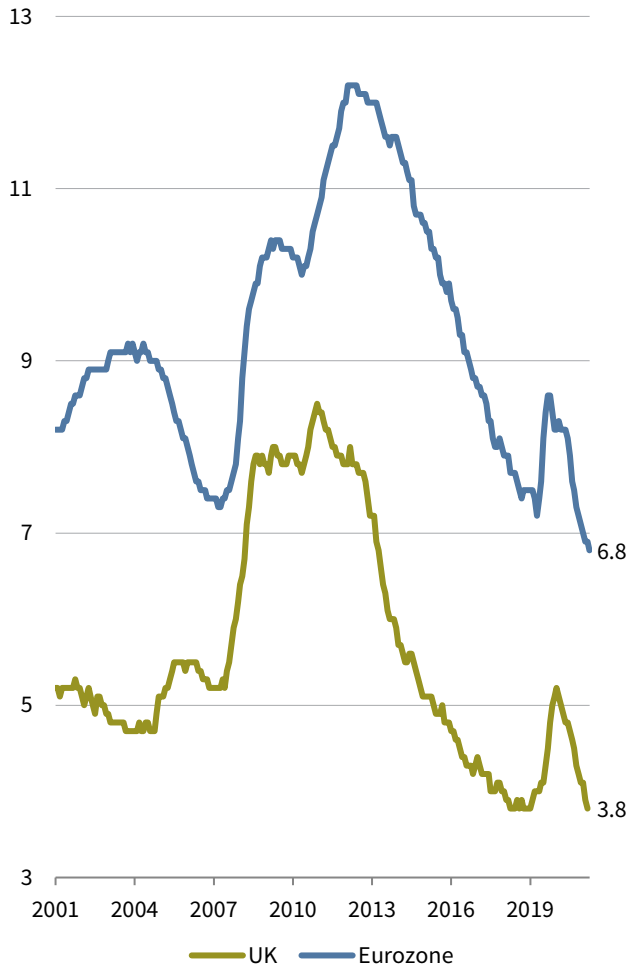


The impact of materially higher prices affects the consumer in particular. As these price rises are centered in food and energy (i.e., necessities), there is little scope for substitution, hence purchasing power is reduced with retail sales stagnating. Measures of consumer confidence nosedived in recent months as a result, in some cases declining to levels below those recorded during the worst of COVID-19. Business confidence has been impacted, but not as severely. The lack of non-energy trade linkages; and the backlog of orders that many businesses had may be behind some of this resilience. However, the prospect of a total ban on Russian energy imports, with a requirement for fuel rationing, hangs over the sector.

Negative real wage growth will be a material headwind for growth in 2022

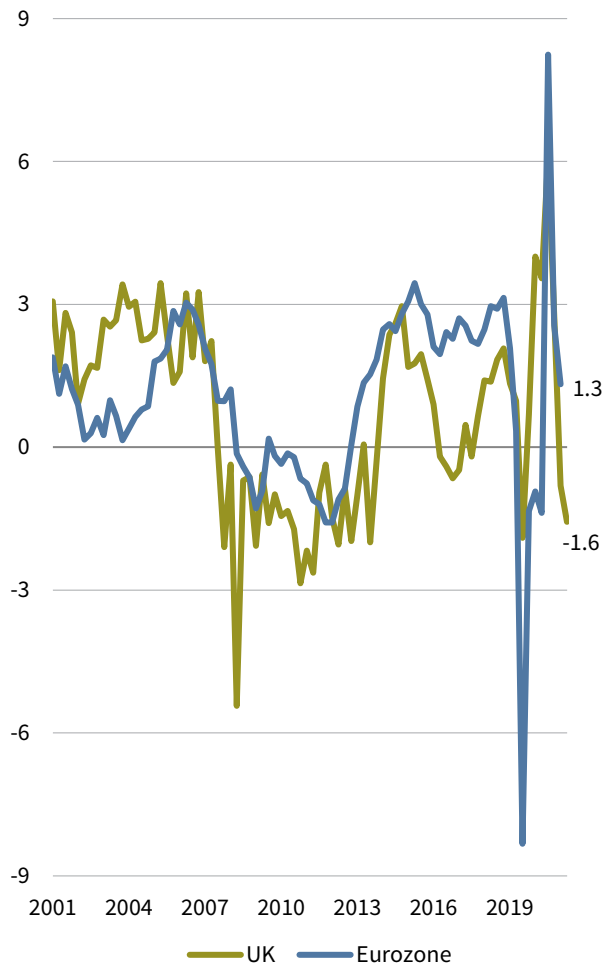
UNEMPLOYMENT RATES

December 31, 2001 – March 31, 2022 • Percent (%)



REAL WAGE GROWTH

December 31, 2001 – February 28, 2022 • YOY Percent Change (%)

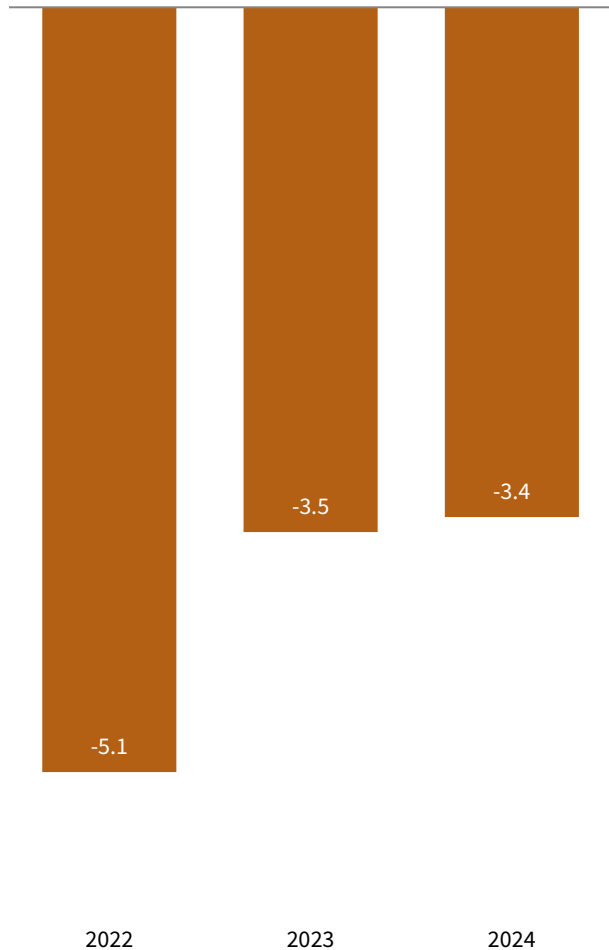


The healing of labour markets in the post-COVID environment has been rapid. Unemployment in the UK is at its pre-COVID low. In the Eurozone, unemployment has fallen to a fresh low, but it remains elevated in comparison to the US or UK. Namely, the tightness of the UK labour market has led to solid gains in nominal wages over the past year or so. However, this has been insufficient to offset the rise in inflation in recent months, meaning that real wage growth has turned negative. Eurozone real wage growth has also turned negative in recent months. With purchasing power reduced as a result, the consumer is likely to be a headwind for economic growth in the coming months.

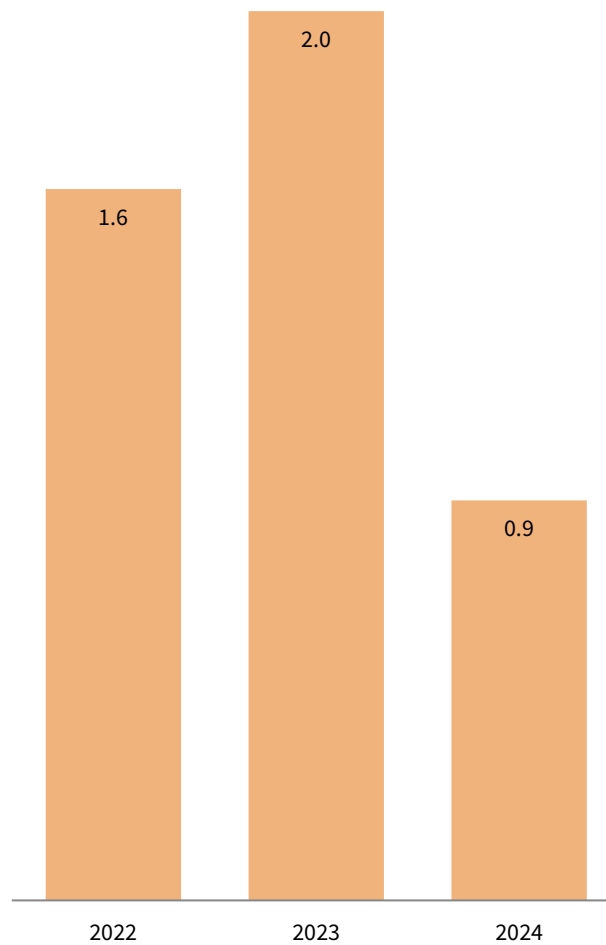
A total embargo on imports of energy from Russia would likely cause a substantial growth impact

SCENARIO ANALYSIS: IMPACT ON GERMANY OF FULL RUSSIAN OIL & GAS EMBARGO

German GDP Percent Change from Baseline



German HICP Inflation Percent Impact

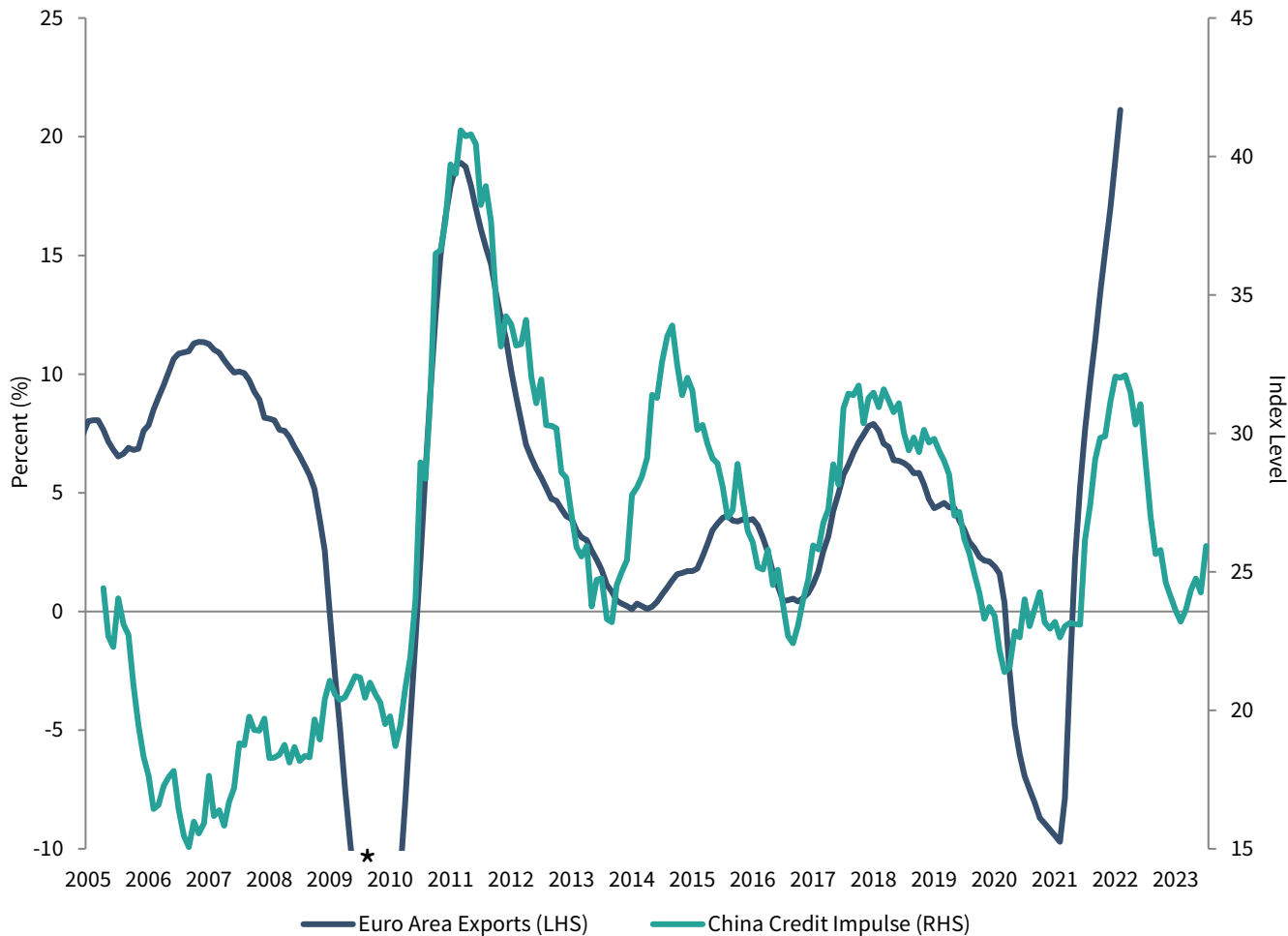


Short of other European nations becoming militarily involved in the war in Ukraine, the one potential development that would cause the most economic disruption would be a complete stoppage of Russian energy exports to Europe. An embargo imposed by the EU seems the most likely path to this destination, with ongoing efforts to implement this with regards to oil. Difficulty in acquiring sufficient alternative supplies makes this a more difficult proposition for gas, at least until new liquefied natural gas infrastructure has been established. It is also conceivable that Russia could unilaterally impose such a stoppage. There is a wide range of estimates for the impact of this development. A recent Bundesbank study shows a 5% hit to German GDP with inflation pushed up materially.

Chinese economic activity remains an important driver of growth in Europe

EURO AREA EXPORTS AND CHINA CREDIT IMPULSE

January 31, 2005 – March 31, 2022



* Axis is capped for scaling purposes. Euro exports hit a low of -18.5 on November 30, 2009.

While the public health environment in most advanced economies is increasingly returning to something approaching 'normal', China continues to wrestle with implementing a zero-COVID policy, currently imposing strict lockdowns in major cities. How China responds economically to this challenge, as well as their commitment to their economic reform policies, such as 'common prosperity', will have a large bearing on the health of the global economy. Europe remains tethered to the fortunes of China via the continent's export market. Post-Global Financial Crisis, Eurozone exports have proven sensitive to changes in the level of credit being extended in China, known as the credit impulse.

Fiscal policy is tightening, but the war looks set to generate fresh expenditure in the euro area

FISCAL BALANCE: PERCENT OF GDP
2019–23



Fiscal policy is projected to become less supportive as the blowout deficits of the COVID-19 era are reined in. The war changes the calculus for European nations somewhat, though the direction of travel remains the same. European nations now seem likely to beef up defence spending. The rise in energy prices has also seen additional spending to offset the end-cost for consumers. The REPowerEU initiative to reduce dependence on Russian fuel may also entail further spending. The IMF revised up its forecast for the Eurozone budget deficit by nearly 1% as a result. Higher-than-expected tax receipts and a rise in national insurance has seen the UK deficit projection revised down.



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