# Global Economic Outlook

## November 2023

Czech National Bank —— Global Economic Outlook —— November 2023

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**Cut-off date for data**
16 November 2023

**CF survey date**
13 November 2023

**GEO publication date**
24 November 2023


**Notes to charts**

ECB, Fed, BoE and BoJ: midpoint of the range of forecasts.
The arrows in the GDP and inflation outlooks indicate the direction of revisions compared to the last GEO. If no arrow is shown, no new forecast is available. Asterisks indicate first published forecasts for given year. Historical data are taken from CF, with exception of MT and LU, for which they come from OE.
Leading indicators are taken from Bloomberg and Refinitiv Datastream.
Forecasts for EURIBOR and LIBOR rates are based on implied rates from interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizons). Forecasts for German and US government bond yields (10Y Bund and 10Y Treasury) are taken from CF.


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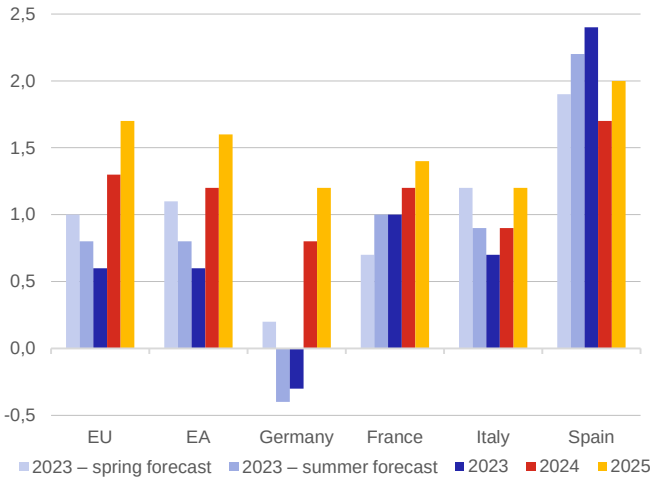
# I. Introduction

**November 2023 will see another step forward in the historical calendar of the European integration process.** The European Commission has officially recommended the opening of accession negotiations with Bosnia and Herzegovina, Moldova and Ukraine. Another country, Georgia, which also wants to join the family of EU Member States, was recommended by the European Commission to be granted candidate status. Before joining the EU, each country must first meet the Copenhagen criteria, i.e., political (institutional stability, functioning democracy and the rule of law, respect for human rights and respect for minorities), economic (functioning market economy) and legislative (alignment of national and European legal frameworks) criteria.

**Price developments in Europe are visibly shifting towards central bank targets**, and the inflationary tsunami is now behind us. The European Commission still expects 6.5% inflation in EU Member States this year, falling to 3.5% next year and then to just above 2% in 2025. Inflation has been curbed not only in Europe, but also elsewhere in the world. However, in Japan, for example, rates still remain negative, while price growth is below the supposed 2% ideal in China.

**The key central banks are already at the peak of their interest rate cycle.** The next meetings of the Fed and the ECB will not take place until the first half of December. Monetary conditions can be expected to ease in mid-2024. Some central banks, especially of small open economies, have already implemented this easing, while others have announced it. The question remains how the high balance sheets of key central banks in particular will be reflected in the future conduct of their monetary policy and, by extension, in the global monetary conditions they affect.

**GDP outlook in selected regions, %**




Source: European Commission
Note: The Commission publishes outlooks for all EU Member States in the spring and autumn, but only for selected ones in the summer and winter.

The **chart of the current issue** shows the European Commission's view of economic growth in Europe. Although economic growth is expected to pick up over the next two years, this year's situation has been a rather negative surprise. The growth expected in the years ahead is not significant either. Growth estimates for 2023 have been falling since the spring, while the European Commission did not expect the strongest European economy to contract in the spring at all. By contrast, Spain is surprisingly positive, growing much faster than the other large European economies. The situation on the local labour market is also contributing to this (we will take a closer look at this topic in the next GEO issue).

**The current issue also contains an analysis:** "Is international trade fragmenting? Case study for EU Member States". The article examines how the concentration of international trade in goods has evolved, in terms of its territorial breakdown, for EU Member States over the last quarter of a century. Using a concentration index, the article shows that EU Member States are concentrating their trade in countries with similar geopolitical positions, which may be indicative of a creeping fragmentation of international trade.

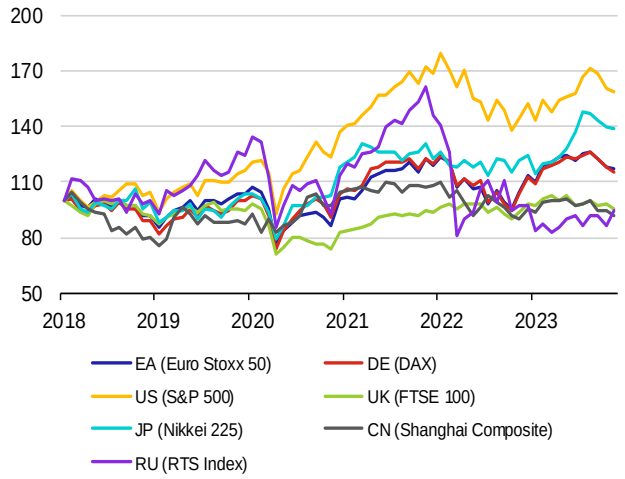
## GEO barometer for selected countries

| | | EA | DE | US | UK | JP | CN | RU |
|---|---|---|---|---|---|---|---|---|
| **GDP** | **2023** | 0.5 | -0.4 | 2.4 | 0.4 | 1.9 | 5.2 | 1.7 |
| (%) | **2024** | 0.6 | 0.5 | 1.1 | 0.2 | 1.0 | 4.5 | 1.4 |
| **Inflation** | **2023** | 5.5 | 6.0 | 4.2 | 7.4 | 3.2 | 0.5 | 6.2 |
| (%) | **2024** | 2.6 | 2.7 | 2.7 | 3.1 | 2.2 | 1.6 | 4.9 |
| **Unemployment** | **2023** | 6.5 | 5.6 | 3.7 | 4.2 | 2.6 | 3.5 | 3.3 |
| (%) | **2024** | 6.7 | 5.7 | 4.3 | 4.2 | 2.5 | 3.4 | 3.3 |
| **Exchange rate** | **2023** | 1.09 | 1.09 | | 1.25 | 137.4 | 7.31 | 94.6 |
| (against USD) | **2024** | 1.13 | 1.13 | | 1.29 | 128.1 | 7.08 | 97.9 |

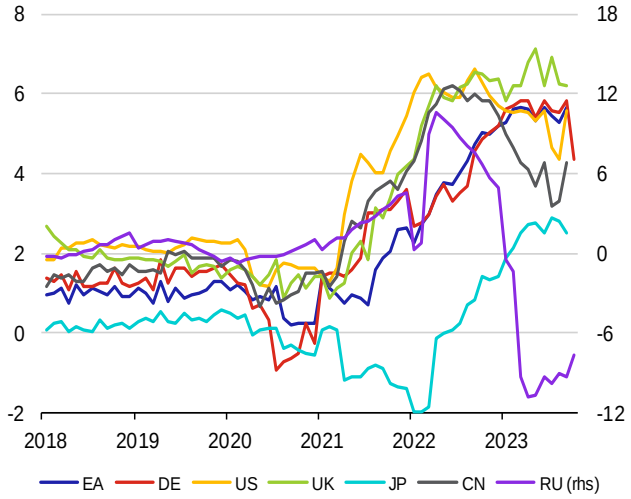
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

# II. Macroeconomic barometer

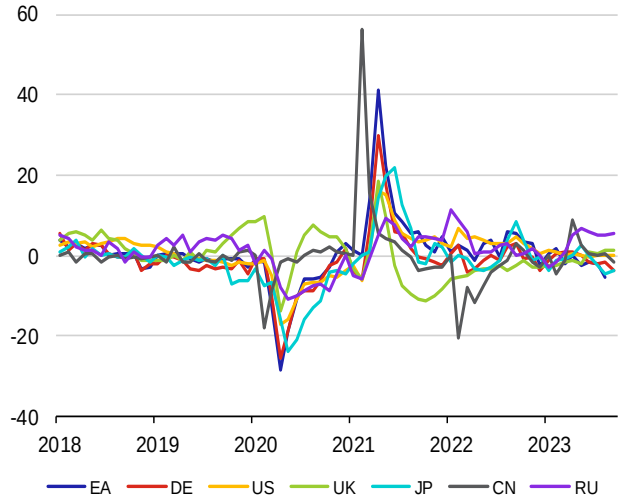
**Equity markets development, index 100 = January 2018**



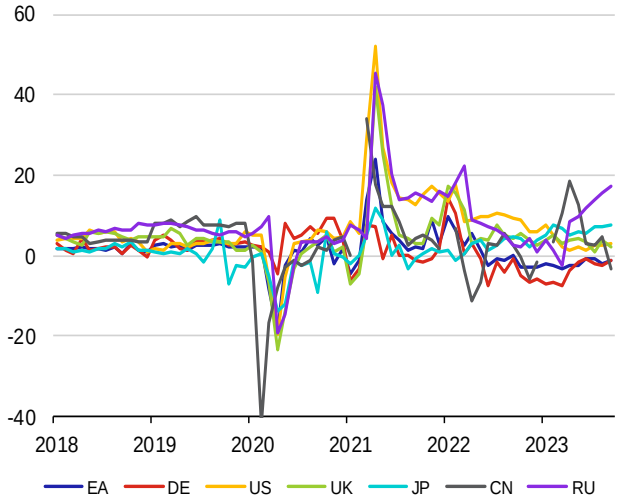

**Core inflation, %**



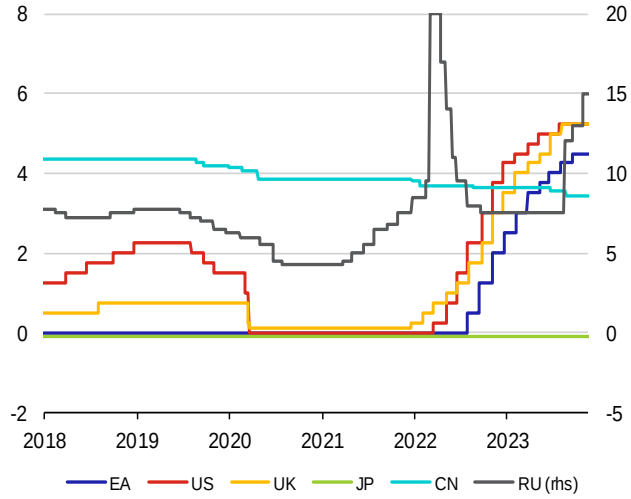

**Manufacturing production, yoy %**



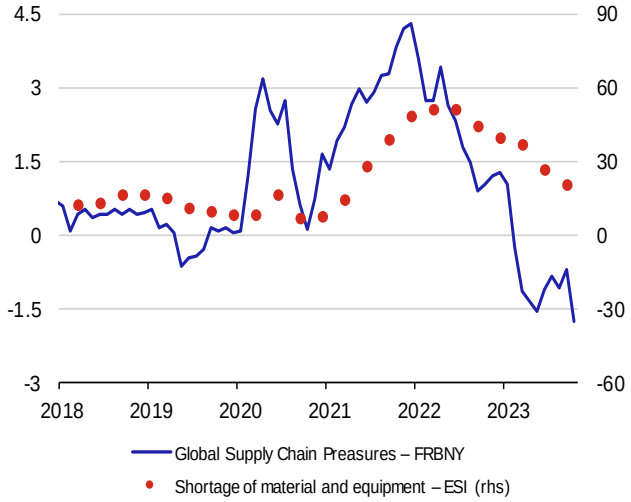

**Retail sales, yoy %**




**Monetary policy rates, %**




**Supply chains development**



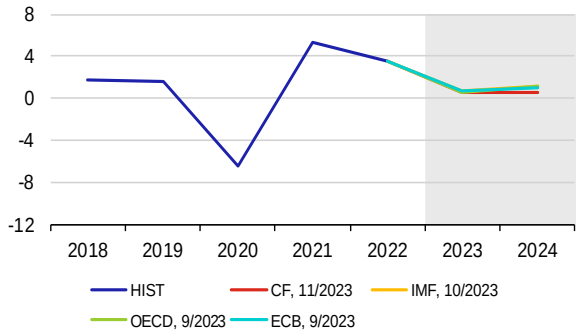

Source: Refinitiv Datastream, European Commision.

## III.1 Euro area

**The economic output of the euro area declined slightly in the previous quarter, but the economy is still expected to return to moderate growth.** The GDP fell slightly in Q3 (by 0.1%), while the outcome for Q2 was revised upwards (to 0.2%). As regards the large economies, Germany recorded a fall in output (by 0.1%). The Italian economy was flat, while the French and Spanish economies showed modest growth (of 0.1% and 0.3% respectively). The latest published data indicate that the cause is weak foreign and domestic demand. Industrial production fell in September, more than eliminating August's growth. Real retail sales also fell for the third consecutive month. By contrast, the labour market remains resilient. Employment growth accelerated in Q3 (to 0.3%) while the unemployment rate (6.5%) remains very close to its historical low. The Purchasing Managers' Index does not currently signal an early return of the economy to growth. The composite indicator fell in October to its lowest level in three years (46.5), following a deterioration in reported output in all the sectors under review. According to the ESI, economic sentiment continues to deteriorate, with the exception of the services sector, which recorded an improvement in expectations regarding future demand. On the other hand, the result of the ZEW index in November came as a pleasant surprise. The proportion of respondents expecting an improvement markedly exceeded that of pessimists (by 13.8 pp). Although annual GDP growth slowed to 0.1% in Q3, the CF analysts' outlooks remained unchanged. They thus still expect output to increase by 0.5% for this year as a whole, and to grow by 0.6% next year.

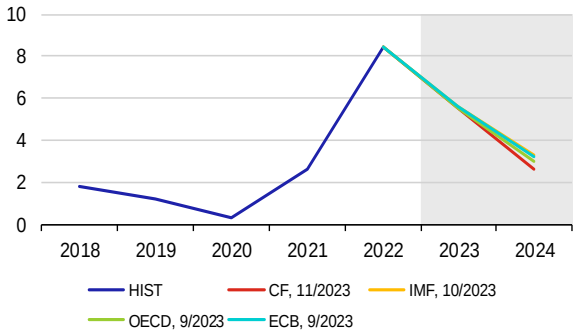
**The average inflation outlook for this year has been slightly lowered due to the latest data, while the opposite is true for next year.** The Governing Council of the ECB decided to leave the key interest rates unchanged at its October meeting. It thus interrupted the continuous series of increases since last July. This was made possible by the observed easing of inflationary pressures. This was subsequently confirmed by the flash estimate of October inflation. HICP growth slowed to 2.9% year-on-year as a result of a slump in energy prices. Core inflation eased to 4.2%. However, according to the forecasts, it will increase temporarily in December.

**GDP growth, %**



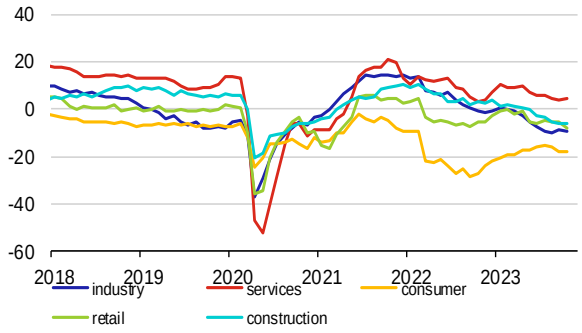

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.5 | 0.7 | 0.6 | 0.7 |
| **2024** | 0.6 | 1.2 | 1.1 | 1.0 |

**Inflation, %**



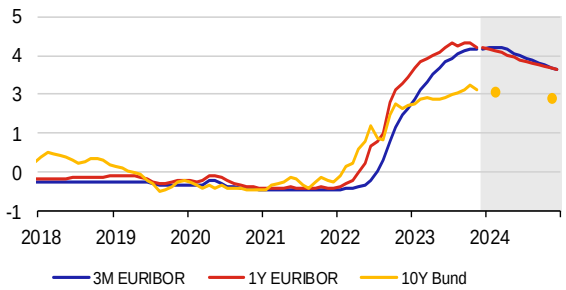

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 5.5 | 5.6 | 5.5 | 5.6 |
| **2024** | 2.6 | 3.3 | 3.0 | 3.2 |

**ESI leading indicators**




| | industry | services | consum. | retail | constr. |
|---|---|---|---|---|---|
| **8/23** | -9.9 | 4.4 | -16.0 | -5.1 | -5.3 |
| **9/23** | -8.9 | 4.1 | -17.8 | -5.7 | -6 |
| **10/23** | -9.3 | 4.5 | -17.9 | -7.8 | -5.9 |

**Interest Rates, %**



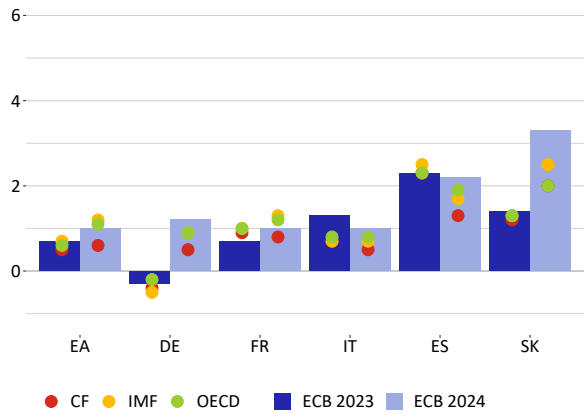

| | 10/23 | 11/23 | 2/24 | 11/24 |
|---|---|---|---|---|
| **3M EURIBOR** | 3.97 | 3.97 | 3.99 | 3.36 |
| **1Y EURIBOR** | 4.16 | 4.03 | 3.88 | 3.33 |
| **10Y Bund** | 2.81 | 2.67 | 2.60 | 2.40 |

## III.2 Germany

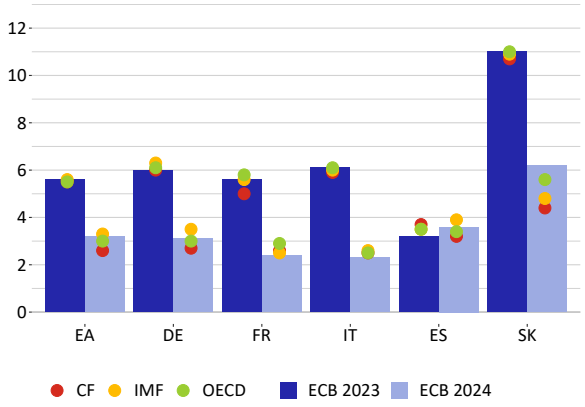
**Initial data suggest that the German economy contracted by 0.1% quarter-on-quarter in Q3.** This poor result, ranking Germany among the weakest large economies in the world, is due mainly to lower household consumption, whereas the contribution of investment was positive. The key manufacturing sector, which continues to be severely affected, is also a problem. The decline is primarily in the automotive industry, which in the European market is facing a transformation towards electromobility and competition from China. The decline in exports due to cooling global demand is also a drag on the economy, however a revision of previously published data revealed that Germany's economy has avoided a winter recession. The new CF forecast expects the economy to contract by up to 0.5% this year, and return to modest growth next year. Despite the challenging economic situation, German business sentiment is improving according to the ZEW and Ifo indices. Expectations for the coming months reflect an improved mood, while the current conditions are assessed inconsistently. According to GfK, a recovery in consumer sentiment is far away and will not happen this year, as households are struggling with high food prices in particular. In October, the composite PMI indicator pointed to a further, even fourth, contraction in private sector activity, when it fell to 45.9 points. Activity in the services sector returned to decline (48.2), while manufacturing activity has long been declining (40.8). In general, the economic situation has contributed to the rise in the number of unemployed, as more and more companies are cutting jobs. The labour market is thus showing signs of cooling.

**Harmonised consumer price inflation slowed further in October, reaching its lowest level since June 2021.** In year-on-year terms, prices increased by 3.0%, lower than expected. Inflation continues to be driven by food prices, while the year-on-year decline in energy prices had the main dampening effect. Core inflation, excluding food and energy prices, also slowed somewhat, reaching 4.3% (compared to 4.6% in September). The CF now predicts that inflation will reach 6% this year and fall below 3% next year. Industrial producer prices fell sharply again year-on-year in September, by a historic 14.7%. They are falling at a record pace, mainly due to energy prices, although the base effect also played a role.

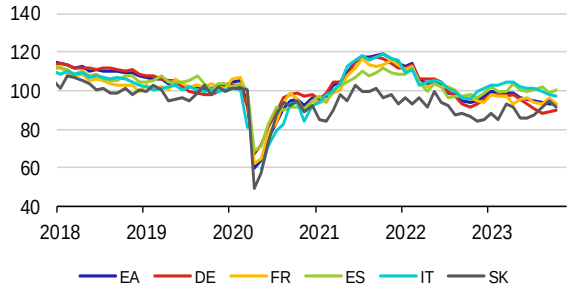
**GDP growth in selected euro area countries in 2023 and 2024, %**



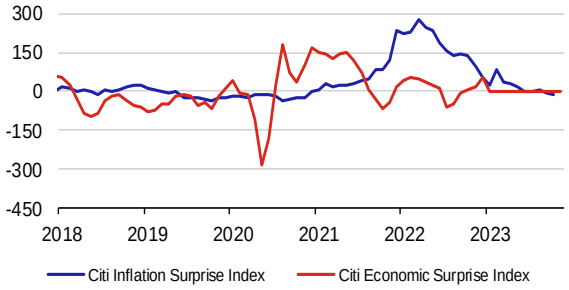

**Inflation in selected euro area countries in 2023 and 2024, %**




**ESI leading indicators**




**Economic and inflation surprises in the euro area, %**




| | EA | DE | FR | ES | IT | SK |
|---|---|---|---|---|---|---|
| **8/23** | 93.7 | 88.7 | 93.1 | 102.2 | 100.0 | 91.8 |
| **9/23** | 93.4 | 89.1 | 96.4 | 99.1 | 97.8 | 95.0 |
| **10/23** | 93.3 | 89.6 | 93.5 | 100.3 | 96.9 | 91.3 |

**Inflation expectations based on 5year inflation swap and SPF**

| | 5y5y | SPF |
|---|---|---|
| **9/23** | 2.60 | 2.14 |
| **10/23** | 2.51 | 2.14 |
| **11/23** | 2.45 | 2.14 |

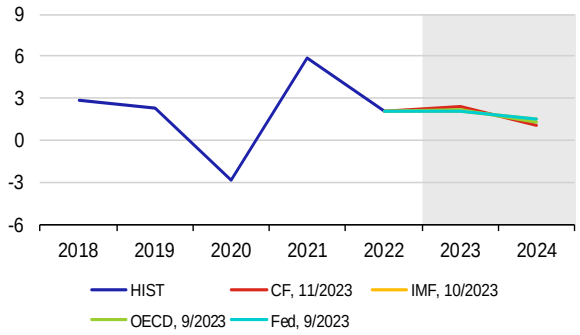
## III.3 United States

**President Biden held talks with China's Xi Jinping, among other things about the production and trade of fentanyl.** Fentanyl is a deadly opiate, and according to the agreement, the Chinese authorities should crack down on its producers and also cut off access to the raw materials they need. In return, some sanctions will be lifted by the US authorities. This is an important topic for the US voters, while for President Biden this is a significant achievement one year ahead of the elections. The meeting took place in San Francisco at the occasion of the Asia-Pacific Economic Cooperation summit.

**The US economy is continuing to grow and it seems that the central bank will truly succeed in a "soft landing" after its monetary policy tightening.** The new GDP growth estimate for Q3 was 4.9% quarter-on-quarter in annualised terms, well above the market consensus, while analyst estimates for Q4 are also rising. The new CF outlook thus expects growth of 2.4% this year and 1.1% next year. Oxford Economics sees it very similarly, while Bloomberg analysts are still more cautious about this year's figure. GDP is growing on the back of growth in inventories, private consumption and record-high government expenditure. The number of jobs created in the non-agricultural sector was slightly disappointing in October, namely 150,000 compared to the expected 180,000. Retail sales fell by 0.1% month-on-month for the first time in six months, but this was not a decline across product ranges, as the consumption of food and electronics, and spending in restaurants and bars, continue to rise. Data from the business environment suggest a rather negative atmosphere, with industrial activity falling by 1.7% year-on-year in October, while the PMI only moved from the contraction band in October.

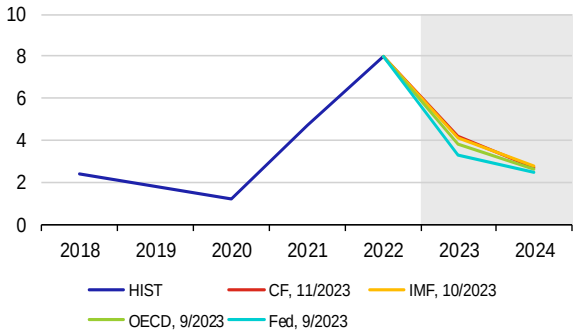
**The US central bank left interest rates unchanged at its November monetary policy meeting.** The central bank is still communicating further possible tightening this year, but the markets hardly believe it any more. The first rate cut is expected at the start of the second half of next year. Inflation fell more than markets expected, to 3.2% year-on-year in October, and prices were even flat month-on-month. Core inflation was 4% year-on-year in October (0.2% month-on-month).

**GDP growth, %**



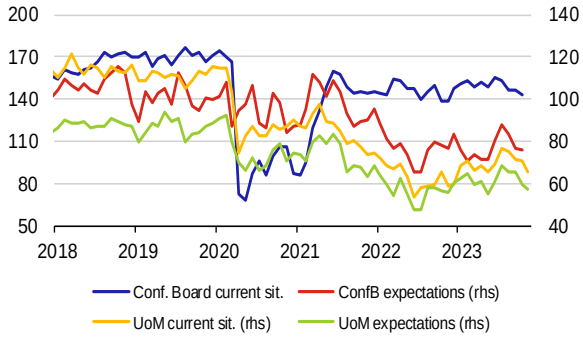

| | CF | IMF | OECD | Fed |
|---|---|---|---|---|
| **2023** | 2.4 | 2.1 | 2.2 | 2.1 |
| **2024** | 1.1 | 1.5 | 1.3 | 1.5 |

**Inflation, %**



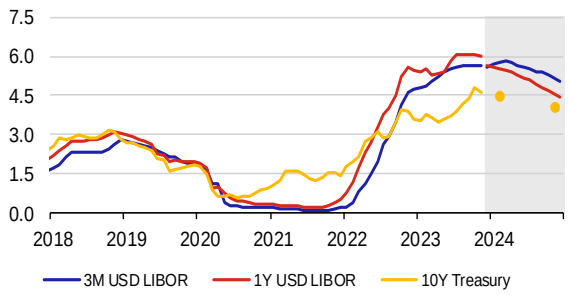

| | CF | IMF | OECD | Fed |
|---|---|---|---|---|
| **2023** | 4.2 | 4.1 | 3.8 | 3.3 |
| **2024** | 2.7 | 2.8 | 2.6 | 2.5 |

**Leading indicators**




| | ConfB curr. | ConfB exp. | UoM curr. | UoM exp. |
|---|---|---|---|---|
| **9/23** | 146.2 | 76.4 | 71.1 | 65.8 |
| **10/23** | 143.1 | 75.6 | 70.6 | 59.3 |
| **11/23** | | | 65.7 | 56.9 |

**Interest Rates, %**




| | 10/23 | 11/23 | 2/24 | 11/24 |
|---|---|---|---|---|
| **USD LIBOR 3M** | 5.66 | 5.64 | 5.76 | 5.17 |
| **USD LIBOR 1R** | 6.04 | 6.04 | 5.52 | 4.54 |
| **Treasury 10R** | 4.79 | 4.63 | 4.50 | 4.10 |

## III.4 China

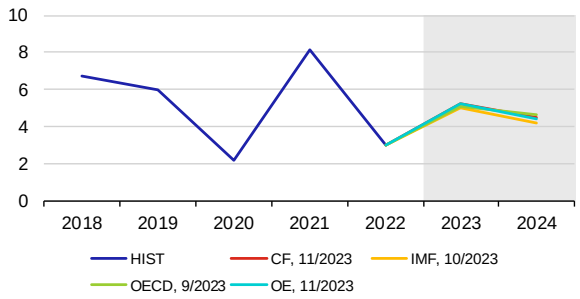
**Chinese GDP growth accelerated to 4.9% in Q3, or about half a percentage point above the majority of analyst expectations.** This acceleration reflected the impact of government stimulus measures to support investment and private consumption, while the real estate sector and foreign demand remained subdued. Industrial production continued to grow in both month-on-month and year-on-year terms (by 0.4% and 4.5% respectively), while growth in manufacturing was even slightly higher. Unemployment in urban areas has fallen closer to the 5% mark, according to official figures.

**According to the Caixin General Manufacturing PMI index, business confidence in industry fell below 50 points (49.5 points compared to 50.6 in September) after two months of growth.** Expectations regarding contracts from abroad are particularly pessimistic. By contrast, the PMI in services edged up from 50.2 points to 50.4 points in October, linked to an overall cautious recovery on domestic markets.

**Consumer price inflation was negative in October (-0.2%) in year-on-year terms.** The consumer price index also fell month-on-month (by 0.1%), mainly because of cheaper food. Core inflation slowed further (from 0.8% in September to 0.6% a month later). Producer prices continued to fall year-on-year (by 2.6%), and were flat in month-on-month terms following a rise in September. Only prices of final consumption production (clothing, footwear) showed positive growth.

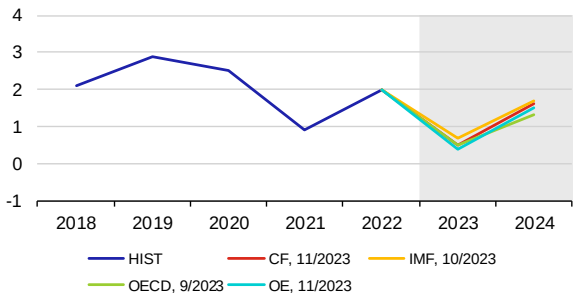
**Owing to falling external demand, especially in major industrialised countries, Chinese exports fell by 6.4% year-on-year in October.** This is now the sixth consecutive decrease since May. Items deviating from this trend are mainly steel products, refinery products and rare-earth elements. By contrast, imports to China rose by 3% year-on-year following seven months of decline. This is mostly due to private consumption currently being supported by government stimulus measures, and also to frontloading by retailers before the winter holidays, which, unlike those before, will no longer be affected by anti-pandemic policies. The trade balance thus naturally dropped to its lowest level since February, although it remains positive (USD 56.5 billion).

**GDP growth, %**



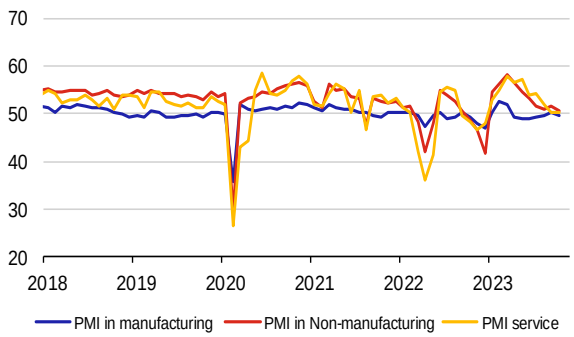

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 5.2 | 5.0 | 5.1 | 5.2 |
| **2024** | 4.5 | 4.2 | 4.6 | 4.4 |

**Inflation, %**



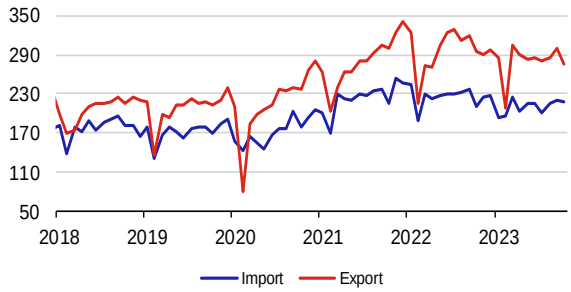

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 0.5 | 0.7 | 0.5 | 0.4 |
| **2024** | 1.6 | 1.7 | 1.3 | 1.5 |

**Leading indicators**




| | PMI manuf. | PMI in Non-manufacturing | PMI service |
|---|---|---|---|
| **8/23** | 49.7 | 51.0 | 51.8 |
| **9/23** | 50.2 | 51.7 | 50.2 |
| **10/23** | 49.5 | 50.6 | 50.4 |

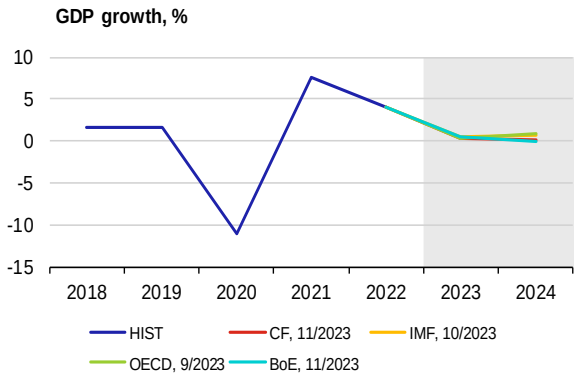
**Development of China foreign trade, bil. USD**

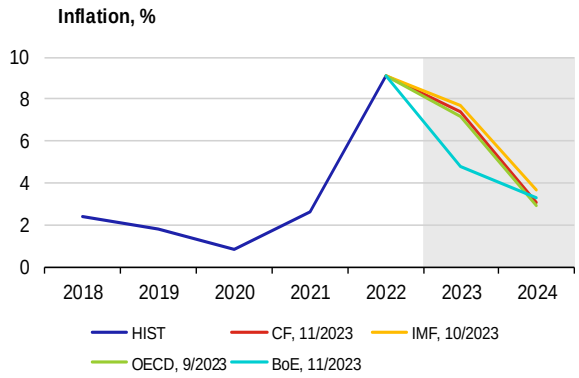



Source: Bloomberg

## III.5 United Kingdom

**The UK economy stagnated in Q3, with inflation slowing significantly in October.** GDP growth halted after rising by 0.2% in the previous quarter. High borrowing costs and the ongoing cost-of-living crisis are to blame. According to the new BoE forecast, the UK economy will record zero growth next year, but the CF is slightly more optimistic, predicting GDP growth of 0.2%. Inflation fell to 4.6% following a previous flat growth rate due to a further retreat in energy prices, while core inflation also slowed slightly (5.7%). In November, the BoE decided to keep its key interest rate at a 15-year high (5.25%), with a new BOE forecast, that inflation should return to its 2% target by the end of 2025. According to the composite PMI, private sector activity declined for the third month in a row (48.7), confirming that high interest rates and prices continue to weigh on the economy. Activity in the manufacturing sector (44.8) and the services sector (49.5) continues to decline. Consumer confidence is also generally falling.



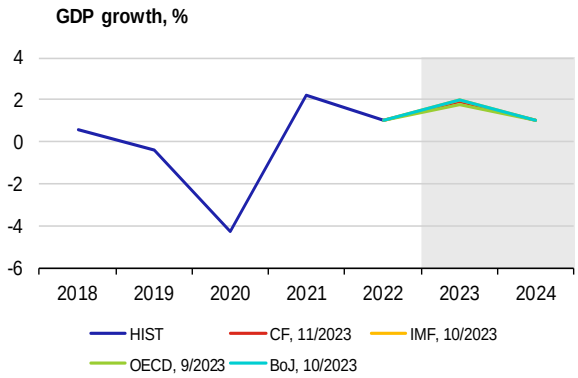



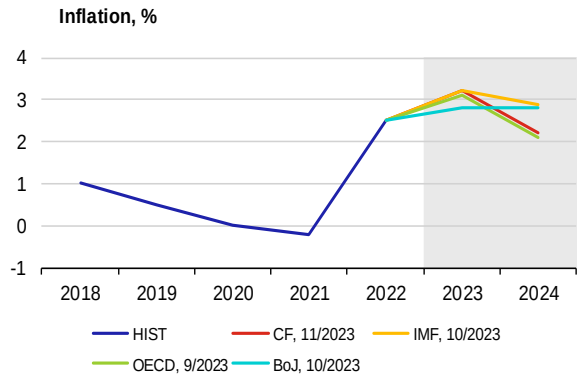

| | CF | IMF | OECD | BoE |
|---|---|---|---|---|
| **2023** | 0.4 | 0.5 | 0.3 | 0.5 |
| **2024** | 0.2 | 0.6 | 0.8 | 0.0 |

| | CF | IMF | OECD | BoE |
|---|---|---|---|---|
| **2023** | 7.4 | 7.7 | 7.2 | 4.8 |
| **2024** | 3.1 | 3.7 | 2.9 | 3.3 |

## III.6 Japan

**The BoJ expects significantly higher inflation in its new forecast, and tightened slightly monetary policy.** The central bank took a further step at the end of October, gradually allowing for growth in the 10-year government bond yield. The 1% yield is now referred to only as a 'reference' target, but no longer as a hard ceiling supported by unlimited interventions. The short-term monetary policy rate remained negative. Its growth may become a further step in the normalisation of monetary policy in a country that has struggled with overly low inflation for most of the past 30 years. September inflation fell to 2.7% (from 3.1% in August) due to energy prices, but price-setting indicators in Japan point to an anchoring of inflation across the economy. The proportion of items with rising prices (87%), median inflation (2%) and inflation in services (2%) are reaching new highs. A weak yen and extensive fiscal spending packages for households are also contributing to inflation. The opposite signal is coming from the real economy, which contracted in Q3. Wage growth also continued to be tepid.



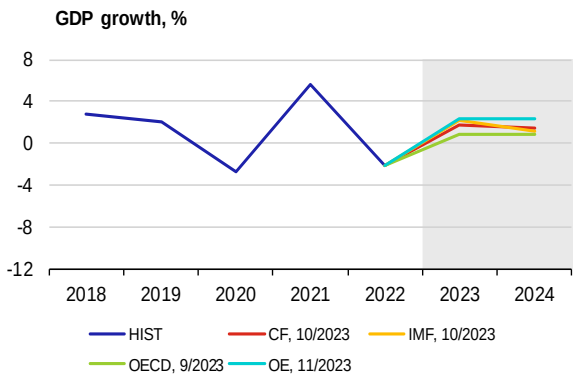



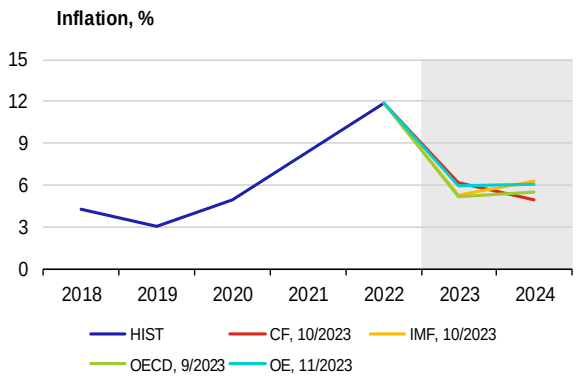

| | CF | IMF | OECD | BoJ |
|---|---|---|---|---|
| **2023** | 1.9 | 2.0 | 1.8 | 2.0 |
| **2024** | 1.0 | 1.0 | 1.0 | 1.0 |

| | CF | IMF | OECD | BoJ |
|---|---|---|---|---|
| **2023** | 3.2 | 3.2 | 3.1 | 2.8 |
| **2024** | 2.2 | 2.9 | 2.1 | 2.8 |

## III.7 Russia

**The rouble appreciated markedly in the last month for the first time since last summer.** This was mainly due to the re-introduction of strict capital controls requiring exporters to sell most of their foreign exchange income on the domestic market. Similar measures helped the Kremlin fight depreciation in the spring of last year. However, the strengthening of the rouble is also associated with negative impacts on state budget revenues, more than a quarter of which are traditionally made up of taxes on trade in oil and petroleum products. For the fourth meeting in a row, Russia's central bank decided to raise interest rates, this time by 2 percentage points to 15%. In month-on-month terms, consumer basket prices rose in September and October at almost three times the rate consistent with the 4% inflation target. Inflation is being amplified by current structural labour shortages, reflected in record-low unemployment. The overheated labour market is due, among other things, to long-term unfavourable demographic developments, this year's mobilisation and emigration following the invasion of Ukraine.



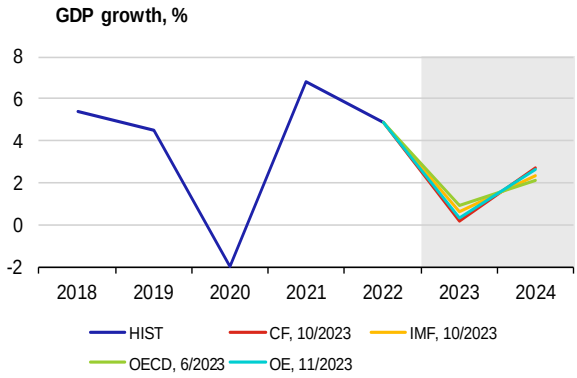



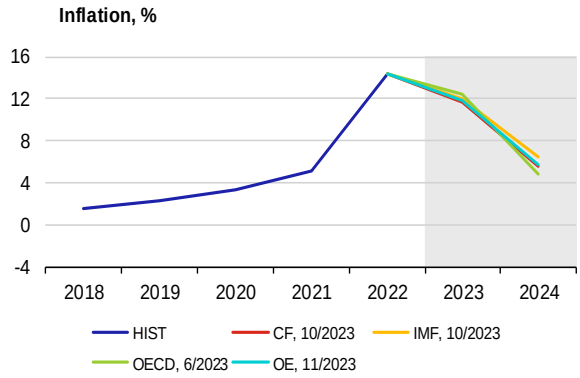

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 1.7 | 2.2 | 0.8 | 2.4 |
| **2024** | 1.4 | 1.1 | 0.9 | 2.4 |

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 6.2 | 5.3 | 5.2 | 5.9 |
| **2024** | 4.9 | 6.3 | 5.5 | 6.1 |

## III.8 Poland

**The NBP is worried about possible changes in fiscal policy and surprised markets in November when it interrupted its monetary policy easing cycle.** After two rounds of cuts (75 bps in September and 25 bps in October), the NBP left the key interest rate unchanged at its November meeting (5.75%), while markets were expecting a further 25bp cut. Year-on-year consumer price inflation continued to slow markedly to 6.5% in October (8.2% in September). According to Governor Adam Glapinski, the uncertainty surrounding budgetary policy in the environment of the newly formed government is threatening the future path of inflation. This applies in particular to the regulated prices of energy and food introduced by the previous government. Glapinski also cited the revival of domestic demand as another factor for rate stability. Annual GDP growth was 0.4% in Q3, above the Q2 figure (a fall of 0.6%) and market expectations. Foreign trade also performed well in an environment of a weaker exchange rate, so the current account turned positive in September.



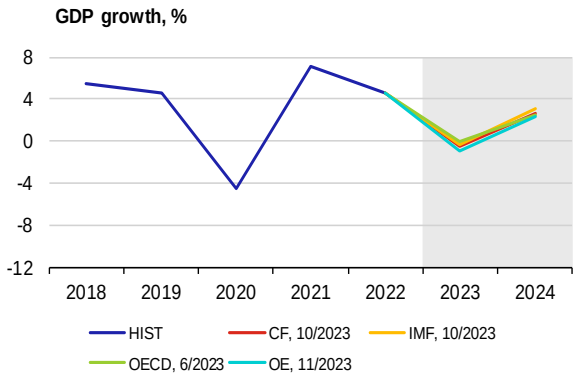




| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 0.2 | 0.6 | 0.9 | 0.3 |
| **2024** | 2.7 | 2.3 | 2.1 | 2.6 |

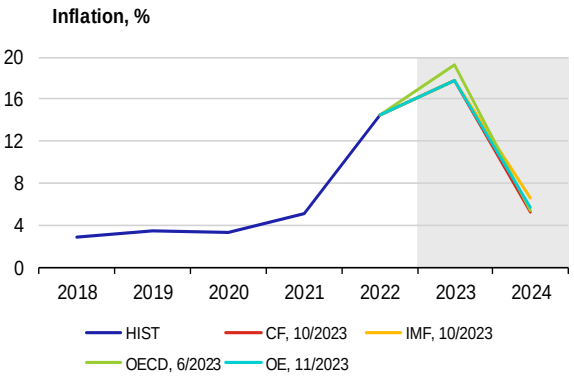
| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 11.7 | 12.0 | 12.4 | 11.8 |
| **2024** | 5.6 | 6.4 | 4.8 | 5.7 |

## III.9 Hungary

**Consumer price inflation in Hungary continues to gradually slow, while GDP outlooks for this year have deteriorated.** Annual consumer price inflation fell just below double-digit levels in October to 9.9% (12.2% in September). This decline was mostly due to prices of food and services. The preliminary GDP estimates for Q3 indicate a year-on-year decline (by 0.4%), which was more moderate than in the previous quarter (a 2.4% decrease) but deeper than analyst expectations (0.2%). Positive news for the last quarter of this year comes from the manufacturing PMI, which moved into the expansion zone in October after five months. This was mainly due to a rise in the number of new orders (by 9.8%), while purchases and production also increased. The decline in client interest rates is further fostering a recovery in demand. Banks recorded growth in both mortgages and consumer credit in Q3. However, both CF and OE analysts revised GDP growth for this year downwards.



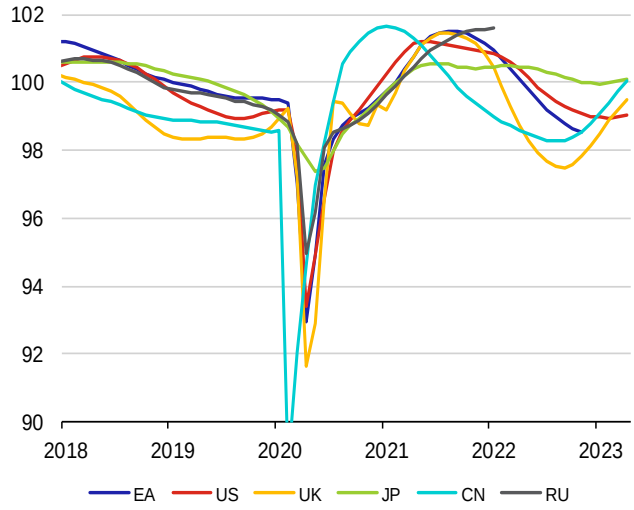

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | -0.5 | -0.3 | 0.0 | -0.9 |
| **2024** | 2.7 | 3.1 | 2.5 | 2.4 |



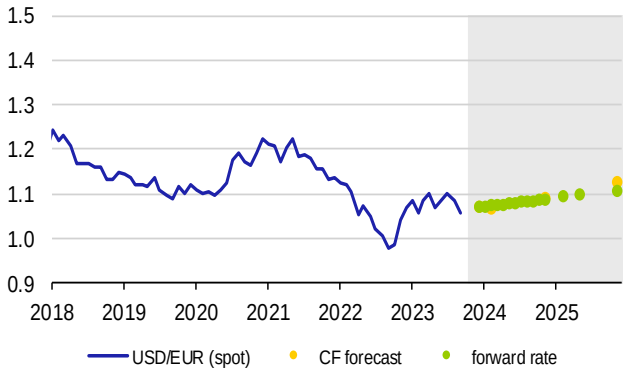

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 17.8 | 17.7 | 19.2 | 17.8 |
| **2024** | 5.3 | 6.6 | 5.4 | 5.7 |

# IV. Leading indicators and exchange rate outlooks

**OECD Composite Leading Indicator**

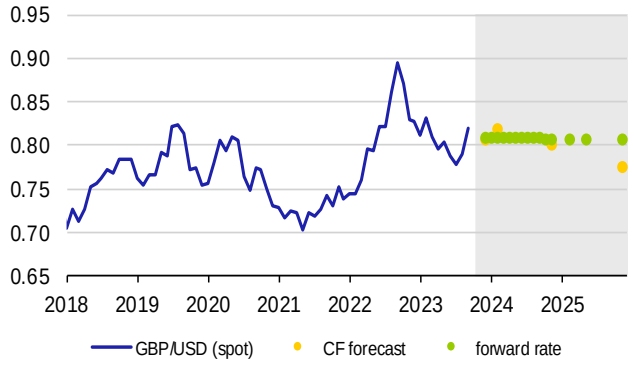



**The US dollar (USD/EUR)**



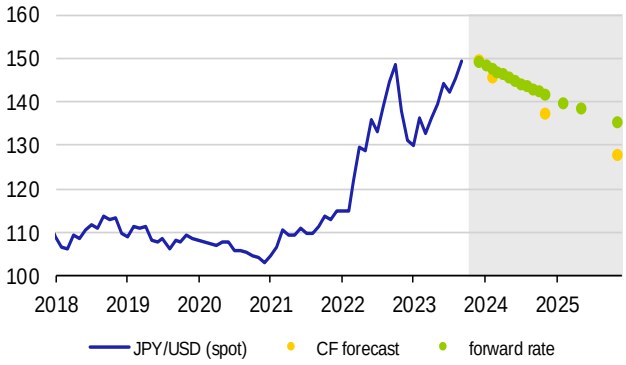

| | 6/11/23 | 12/23 | 2/24 | 11/24 | 11/25 |
|---|---|---|---|---|---|
| **spot rate** | 1.074 | | | | |
| **CF forecast** | | 1.074 | 1.068 | 1.094 | 1.129 |
| **forward rate** | | 1.073 | 1.076 | 1.090 | 1.108 |

**The British pound (GBP/USD)**



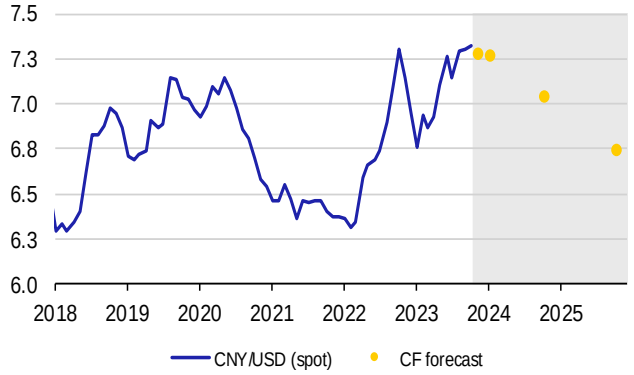

| | 6/11/23 | 12/23 | 2/24 | 11/24 | 11/25 |
|---|---|---|---|---|---|
| **spot rate** | 0.807 | | | | |
| **CF forecast** | | 0.807 | 0.819 | 0.803 | 0.776 |
| **forward rate** | | 0.810 | 0.810 | 0.809 | 0.809 |

**The Japanese yen (JPY/USD)**



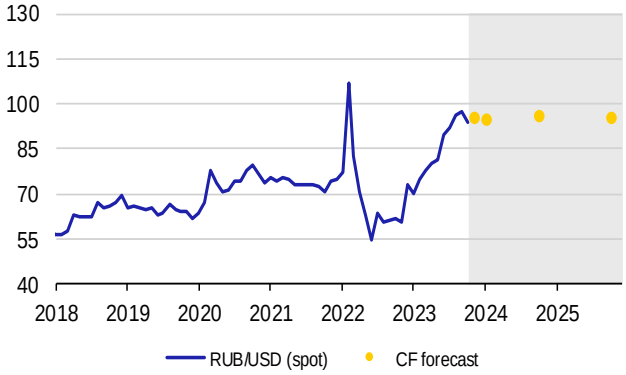

| | 6/11/23 | 12/23 | 2/24 | 11/24 | 11/25 |
|---|---|---|---|---|---|
| **spot rate** | 149.7 | | | | |
| **CF forecast** | | 149.7 | 145.7 | 137.4 | 128.1 |
| **forward rate** | | 149.4 | 147.8 | 141.8 | 135.6 |

**The Chinese renminbi (CNY/USD)**




| | 6/11/23 | 12/23 | 2/24 | 11/24 | 11/25 |
|---|---|---|---|---|---|
| **spot rate** | 7.297 | | | | |
| **CF forecast** | | 7.282 | 7.272 | 7.041 | 6.753 |

**The Russian rouble (RUB/USD)**




| | 6/11/23 | 12/23 | 2/24 | 11/24 | 11/25 |
|---|---|---|---|---|---|
| **spot rate** | 100.30 | | | | |
| **CF forecast** | | 95.84 | 94.79 | 96.29 | 95.60 |

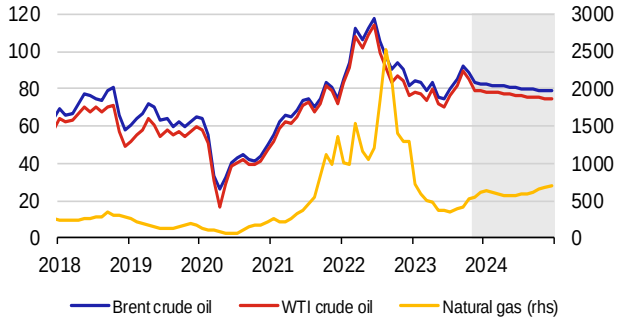
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

## V.1 Oil

**Since October, the price of oil has been under pressure due to fears of a deterioration in the global economy.** In early October, news from the Chinese and US economies strongly worsened sentiment on the oil market. Hedge funds significantly reduced their net long positions in October, with sell-offs driven mainly by news of a sizeable decline in petrol consumption in the USA and growth in US oil stocks in early October. The drop in oil prices was also fostered by a strict monetary policy strengthening the USD. The decline in oil prices was temporarily interrupted by the outbreak of the conflict in Israel, so the price of oil in the second 10-day period of October quickly compensated for most of the previous losses. Later, fears of a wider conflict began to fade, as there has been no extraction outage in this context so far. Thus, the oil price continued to fall sharply, fluctuating only a bit above USD 80/barrel in mid-November. According to OPEC, the price of oil is mainly being pushed down by strong negative investor sentiment on futures markets, while the physical market situation remains tense, with global oil demand still above expectations. Despite the problems of the local economy, oil imports to China are strong, due to the petrochemical industry. The US economy is also resilient to high interest rates so far. Healthy physical demand is also shown, among other things, by refinery margins, which continued to fall from record high levels (especially for petrol) in October, yet remain above their long-term averages. The effect of the reduction in oil production by Saudi Arabia and Russia is being partly reduced by stronger-than-expected growth in extraction in non-OPEC+ countries (especially the USA and Brazil). According to the IEA, however, oil stocks should continue to decline for the rest of the year, albeit at a slower pace.

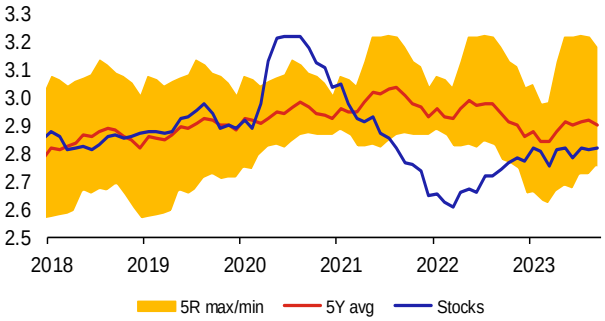
The market curve for futures prices shifted downwards in mid-November, while its downward slope abated. Its path signals a Brent crude oil price of USD 82.8 and USD 78.6/barrel at the end of this year and the next, respectively. By contrast, the EIA forecast expects the price to rise from USD 90/barrel at the end of this year to USD 95/barrel at the end of 2024 Q1. The price should then fall to USD 92/barrel at the end of 2023. The November CF estimates a price of USD 86/barrel at the end of 2024.

**Outlook for prices of oil (USD/barrel) and natural gas (USD / 1000 m³)**

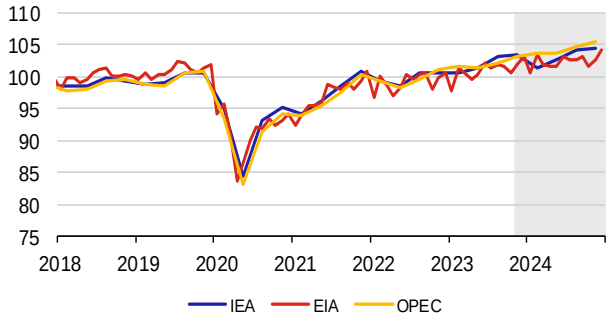



| | Brent | WTI | Natural gas |
|---|---|---|---|
| **2023** | 82.77 | 78.29 | 489.78 |
| **2024** | 80.50 | 76.40 | 616.79 |

**Industrial stocks of oil and oil products in OECD (bil. barrel)**

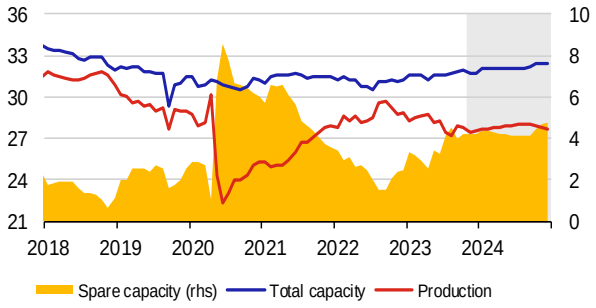



**Global consumption of oil and oil products (mil. barrel / day)**




| | IEA | EIA | OPEC |
|---|---|---|---|
| **2023** | 102.07 | 101.05 | 102.11 |
| **2024** | 103.22 | 102.44 | 104.35 |

**Production, total and spare capacity in OPEC countries (mil. barrel / day)**




| | Production | Total capacity | Spare capacity |
|---|---|---|---|
| **2023** | 27.98 | 31.63 | 3.65 |
| **2024** | 27.83 | 32.14 | 4.31 |

Source: Bloomberg, IEA, EIA, OPEC, CNB calculation
Note: Oil price at ICE, average natural gas price in Europe – World Bank data. Future oil and gas prices (grey area) are derived from futures. Industrial oil stocks in OECD countries – IEA estimate. Production and extraction capacity of OPEC – EIA estimate.

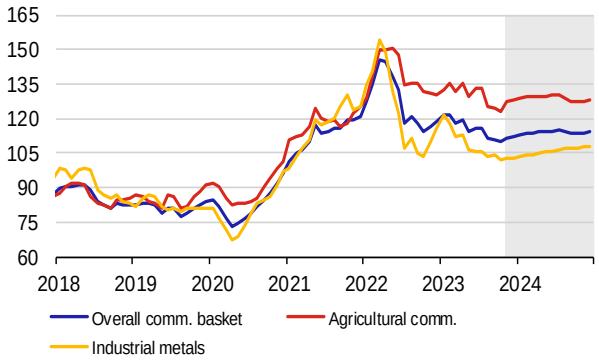
## V.2 Other commodities

**Since the outbreak of the conflict in Israel, the price of gas in Europe has remained elevated at just below EUR 50/MWh, while showing a slight downward trend.** The unusually warm weather and related high filling of storage facilities continue to act against further price growth. Israel partly resumed gas exports to Egypt, and a trade union agreement with Chevron's leadership in Australia on working conditions for employees at local LNG export terminals also contributed to a slight decline in prices. The price of coal for the European market rose quite sharply in early October together with the price of natural gas due to strong demand from Asia, then fell equally rapidly at the end of the month in response to high stocks in China and other countries.

**Following four months of decline, the food commodity price index rose in the first half of November and a further modest rise is expected until the next harvest.** The index was mainly driven by the prices of soy (due to high demand from China), rice (due to restrictions on exports from India), coffee (due to concerns of a bad harvest in Brazil) and cocoa, which recorded another historical high (due to poor harvests and low global stocks). The price of sugar is at its highest in 12 years (due to inclement weather in India). Despite falling slightly, the price of beef also remains close to its historical high. By contrast, wheat and corn prices remain at their lowest levels since the end of 2020, although they are expected to rise.

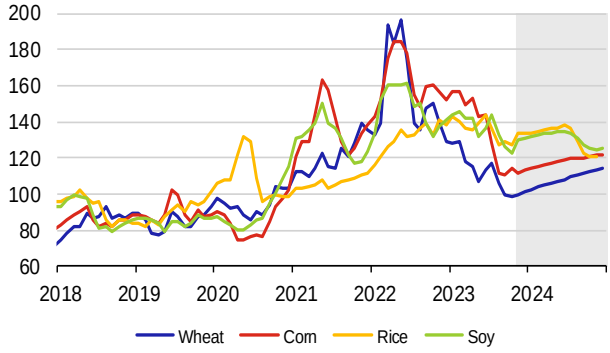
**The industrial metals price index reached its lowest level since the start of 2021 in October, yet erased part of its decline in the first half of November.** The prices of most metals fell in October due to weak manufacturing activity in China and the rest of the world. Only the price of aluminium continued to increase moderately due to a targeted reduction in output in China and falling stocks at the LME. The decline in metal prices halted in the first half of November, with only nickel continuing to fall. By contrast, the prices of iron ore and steel rose sharply, with the Chinese government channelling significant resources into developing steel-intensive infrastructure. Thus investment in infrastructure and manufacturing should offset the persisting problems in the construction and real estate sectors in the region.

**Non-energy commodities price indicies**



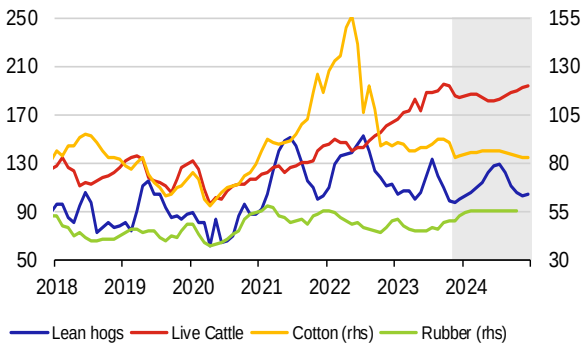

| | Overall | Agricultural | Industrial |
|---|---|---|---|
| **2023** | 115.3 | 130.0 | 108.1 |
| **2024** | 114.0 | 128.9 | 106.0 |

**Food commodities**



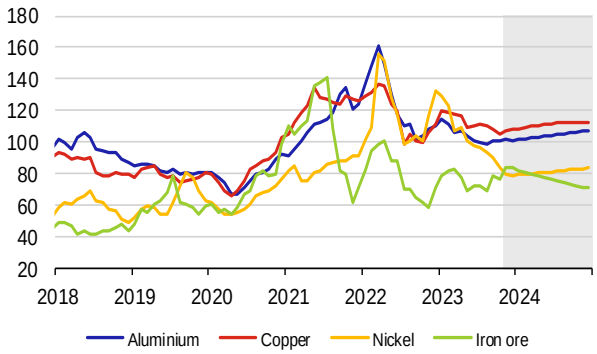

| | Wheat | Corn | Rice | Soy |
|---|---|---|---|---|
| **2023** | 111.0 | 132.7 | 135.4 | 135.8 |
| **2024** | 108.8 | 118.7 | 131.4 | 130.6 |

**Meat, non-food agricultural commodities**




| | Lean hogs | Live Cattle | Cotton | Rubber |
|---|---|---|---|---|
| **2023** | 108.2 | 182.3 | 88.3 | 47.6 |
| **2024** | 112.8 | 186.4 | 84.8 | 55.1 |

**Basic metals and iron ore**




| | Aluminium | Copper | Nickel | Iron ore |
|---|---|---|---|---|
| **2023** | 104.0 | 112.1 | 99.2 | 77.5 |
| **2024** | 104.8 | 111.6 | 81.7 | 76.3 |

Source: Bloomberg, CNB calculations.
Note: Structure of non-energy commodity price indices corresponds to composition of The Economist commodity indices. Prices of individual commodities are expressed as indices 2010 = 100.

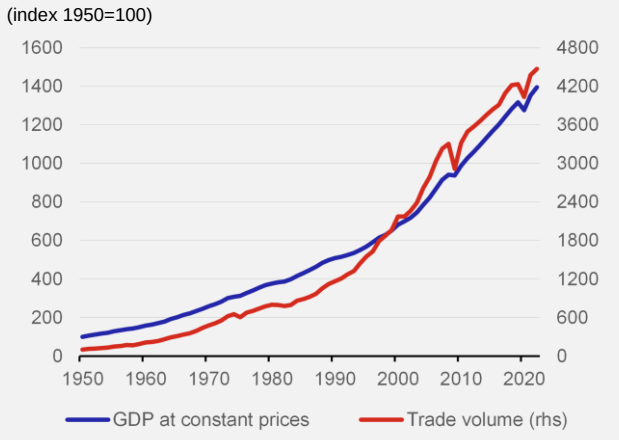
# Is international trade fragmenting? Case study for EU Member States[1]

*This article examines how the concentration of international trade in goods has evolved for EU Member States over the last quarter of a century in terms of its territorial breakdown. Using the Herfindahl-Hirschman Index, we show that the trade concentration in most EU Member States fell slightly or stagnated in the previous period. In the group of new Member States, the decline in concentration was significant and continued until 2010. This outcome would suggest that global trade is not fragmenting. However, the dynamics of the Herfindahl-Hirschman Index mask a significant compositional effect – the decrease in the concentration index was due only to trade with countries with a similar geopolitical orientation. We divide countries into three geopolitical blocs based on voting data from the United Nations (UN) General Assembly. If we recalculate the Herfindahl-Hirschman Index for such broadly defined blocs, we find that for most EU Member States the concentration index started to rise slowly around 2015. This means that EU Member States are concentrating their trade in countries with similar geopolitical positions, which may be indicative of a creeping fragmentation of international trade.*

## Introduction and motivation

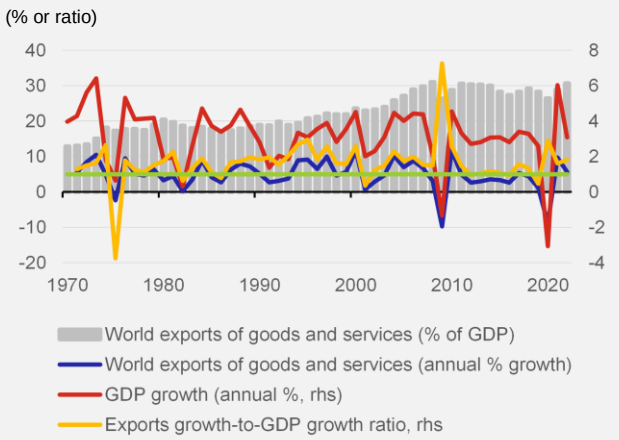
**The growth in international trade can be seen as beneficial to people's well-being around the world in many ways.** Global international trade has grown by more than 4,300% since the end of World War II, while GDP growth has reached almost 1,300% (Chart 1).[2] Although the elasticity of global exports to GDP in real terms has fluctuated over time, it has mostly stayed above 1 (Chart 2) over the last 50 years, and has been close to 1.6–1.8 in recent years. Globalisation has enabled developing countries to participate in the international division of labour, thereby contributing to poverty reduction on a global scale (Bhagwati and Srinivasan, 2002, Aiyar et al., 2023) and at the same time bringing an influx of cheap products for developed countries (Fajgelbaum et al., 2020). Involvement in international trade has made it possible to free up the capacity of production factors for more productive activities (Rocha and Winkler, 2019). Supply chain disruptions would not only be costly for the real economy, but would also increase price growth (Attinasi et al., 2023).

**Chart 1 – World trade and GDP at constant prices in 1950–2022**




Source: WTO, Our World in Data, World Bank WDI, authors' calculation

**Chart 2 – Growth in world trade and GDP at constant prices in 1970–2022**




Source: World Bank WDI, authors' calculation
Note: The green denotes value one on the right-hand-side axis.

**Recently, international trade has been severely tested by newly created barriers and restrictions of a non-economic nature.** First of all, the COVID-19 pandemic showed that disruptions to sophisticated production and supply chains cause economic problems not only for individual firms, but throughout entire sectors. Having recovered from the economic consequences of the pandemic, global growth and international trade subsequently began to face new risks and challenges, this time in the context of geopolitical frictions (Goldberg and Reed, 2023). Military conflicts have been taking place almost continuously throughout the history of mankind. According to the NY Times (2003), out of 3,400 years there

[1] Written by Oxana Babecká Kucharčuková and Jan Brůha. The views expressed in this article are those of the authors and do not necessarily reflect the official position of the Czech National Bank.

[2] The volume of international trade is calculated as the average of exports and imports, excluding significant re-exports or imports for re-exports. Data from the World Trade Organisation (WTO). Global GDP is at 2011 prices, is adjusted for inflation and also takes into account differences in living standards across countries. The source is Our World In Data based on data from the World Bank and Maddison Project: Database of Historical Development 1870–2015. The source of the data for 2016–2022 is the GDP growth rate at constant 2015 prices from the World Bank WDI. However, data from different sources need to be compared very cautiously due to substantial methodological differences.

have only been 268 completely without war, or only 8% of human history in this time period.[3] Geopolitical tensions have recently increasingly been perceived as a risk to global trade, and the possibility that they could lead to a reduction in international trade between countries with different positions cannot be ruled out. It is therefore important to examine whether international trade is fragmenting and the extent to which it is reflected in the data. Fragmentation would be reflected in an increase in the territorial concentration of international trade. In this article, we focus on EU Member States and examine whether the concentration of international trade in goods is increasing.

**The standard measure of concentration is the Herfindahl-Hirschman Index**, defined as the sum of the squares of the shares of groups of goods or trading partners, and can be summarized using the following formula:

$$H = \sum_{n=1}^{N} s_n^2,$$

where $N$ is – for the purpose of this article – the number of trading partners and $s_n$ is the share of trading partner $n$ in the total trade of the country under review. The index as such can range from $0/N^2$ to 1, where $0/N^2$ corresponds to perfect diversity (all the trading partners have equal shares) and 1 is complete concentration (the country trades with only one partner).

**Despite its widespread use, the Herfindahl-Hirschman Index can mask important tendencies in concentration that may go unnoticed.** This is because the dynamics of the index can be dominated by a group of trading partners. This can be shown formally as follows: let $H$ be the index value for the set of indices $I$ = {1, 2, . . . N}. Now suppose we have a rougher subdivision given by the set J = {J1, J2, . . . $J_K$}, where $J_k$ is the set of indices $I$ such that $J$ is a distribution of $I$ (in our case, if the set $I$ contains individual countries, the set $J$ contains blocs of these countries). It is easy to verify that the Herfindahl–Hirschman Index $H$ for the finer set $I$ is related to the Herfindahl–Hirschman Indices $H_k$ over the sets $J_k$ as follows:

$$H = \sum_{k=1}^{K} \left( \sum_{l \in J_k} s_l^2 \right) H_K$$

where $s_l^2$ is the share of the $l$-th partner in total trade. Thus, the Herfindahl–Hirschman Index $H$ over the finer set $I$ is the weighted sum of the Herfindahl–Hirschman Indices $H_k$ over the sets $J_k$, where the weights are given by the sum of the squares of the share of the individual blocs. If a country mainly trades with countries in a particular bloc – let's say $J_k$ – the weight of that bloc $\left(\sum_{l \in J_k} s_l^2\right)$ is much greater than the weights of the other blocs.

**From this decomposition, it is clear that the dynamics of the overall index *H* can easily be dominated by the value of the index *$H_k$* for the most important bloc of trading partners.** Explained intuitively, if a developed country trades mostly with other developed countries, the overall Herfindahl–Hirschman Index may have very similar dynamics to the Herfindahl–Hirschman Index calculated only over a subset of developed countries. If the index calculated over a subset of developed countries falls, the overall index calculated for all countries may also fall, even potentially in a situation where trade is concentrated between developed countries. In other words, the dynamics of the index may mask trade concentration in selected blocs.

**To see whether this actually happens, we also calculate the Herfindahl-Hirschman Index for a rougher set of trading partners divided into three geopolitical blocs.** This division is based on the countries' voting at the United Nations General Assembly. Subsequently, we compare the Herfindahl–Hirschman Index for a fine classification (all trading partners) with the index for a rough classification (individual geopolitical blocs). The Herfindahl-Hirschman Index for trade in goods has been stable (or slightly falling) for most countries since 2012 due to stability or a fall in the concentration of trade with other developed countries. Despite this, EU Member States' trade has been concentrated on a specific set of countries. In other words, international trade has been regionalised.

**This result distinguishes our article from other studies that have not found significant fragmentation of global trade in the data and have so far understood it** rather **in terms of risks.** Such a conclusion is reached by Goldberg and Reed (2023), and Gaál et al. (2023), who see signs of fragmentation but still rather at the level of auxiliary indicators than "hard" data. Similarly, Sano et al. (2023) based on the division of countries by continent (Europe, Asia, America, Africa, Australia and Oceania), there are no signs of a rise in trade concentration. The concentration index for such geographically defined blocs is rather stable over time and fragmentation is also perceived as a risk for the time being. We, on the contrary, argue that fragmentation is already visible in the data if the right data view is used, i.e., through geopolitical blocs rather than through a purely geographical breakdown.

## Data

**Eurostat is the source of trade data for cross-border trade in goods.** Annual data are available for 1999–2022. The analysis focuses on trade inside and outside the current EU27, where the EU Member States are considered to be the statistical territory of each Member State, which is predominantly the customs territory. EU Member States trade with around 250 countries and territories for which at least one year's worth of data is available. This number also reflects

[3] The author defines war as active conflict that has claimed more than 1,000 lives. A similar figure is provided by Lichtenstein (1976). The author cites a work by the Swiss Federal Statistical Office, according to which there have been only 292 war-free years in 5,000 years of documented human history. In the other years, 15,513 large or small wars took place, costing the lives of 3.64 billion people!

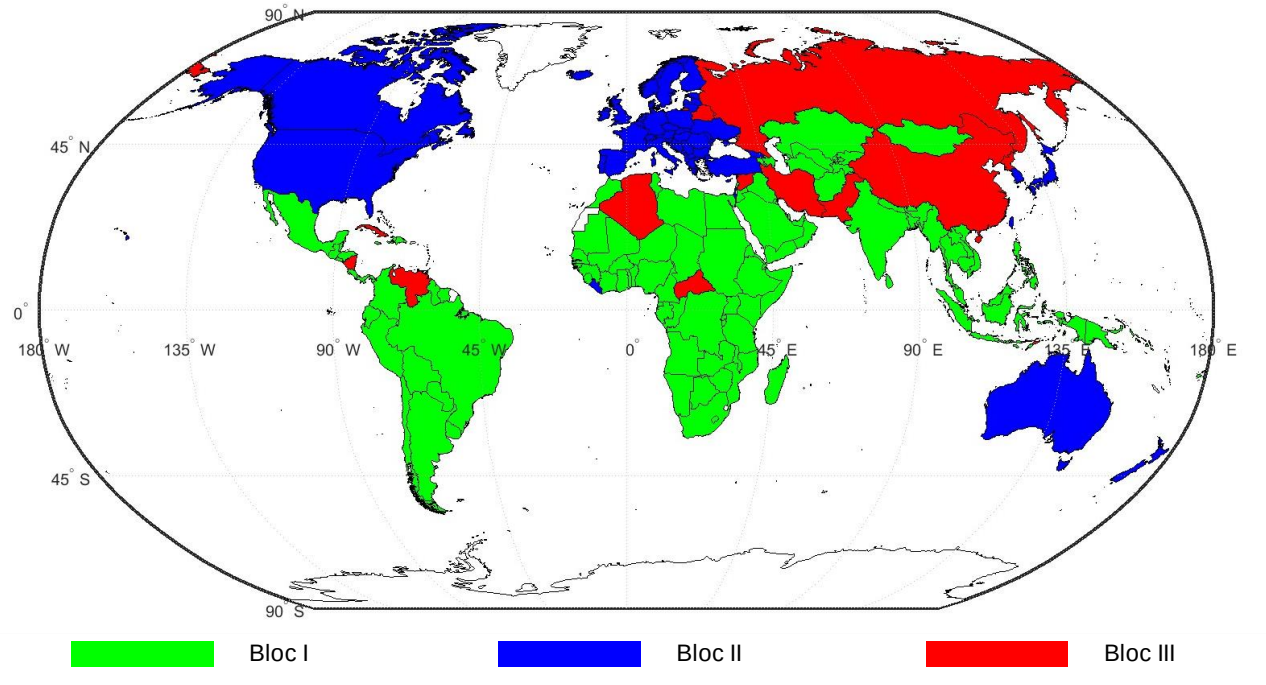
geopolitical changes over time, such as the break-up of some countries (e.g., Serbia and Montenegro), the emergence of new independent states (South Sudan, East Timor) and political entities with questionable international status (Taiwan, Kosovo, the Palestinian territories, etc.). For the purposes of this article, we look not only at the aggregate, but also at the individual categories of goods aggregated according to the BEC (Broad Economic Categories) classification, which classifies goods by the degree of processing. There are more entities included in international trade statistics than countries in the United Nations. The text below sets out the manner in which we match these two sets.

**To divide countries into geopolitical blocs, we use voting records from the United Nations General Assembly.** We have acquired data on voting on UN resolutions from January 2022 to August 2023. The overall dataset contains information on 96 votes. A country can vote for a resolution, against it, abstain or not vote.[4]

**We use an archetypal analysis to classify countries.** Archetypal analysis was first introduced by Cutler and Breiman (1994) and is an unsupervised machine learning algorithm. Its goal is to find "archetypes" representing "pure" patterns in the data. At the same time, each observation can be expressed as a combination of archetypes – one can say how close a particular observation is to any archetype.[5] The observations can then be divided into groups according to their proximity to the individual archetypes. Each group includes the countries that are closest to a specific archetype.

**Our analysis of the voting in the United Nations General Assembly reveals four major archetypes, which indicate the similarities or differences in voting by individual countries.[6]** So we can divide countries into four groups on the basis of their voting. What are these groups? The first group of countries consists of 118 primarily developing countries. The second group consists primarily of developed countries (except the USA and Israel), as well as countries aspiring to join Western political structures (e.g. the EU or NATO) and their geopolitical allies. The third group is a small group of 12 countries concentrated around Russia, China and Iran. The smallest fourth group consists of the USA, Israel and several small countries. One feature of this fourth group is the voting on Middle East issues, which distinguishes this group from the

**Chart 3 – Dividing countries into groups by archetypes**




Source: Authors' calculation according to the OSN data

[4] Geopolitical coalitions can change over time. For the purposes of this article, we use the voting data for a very recent period to obtain an up-to-date picture relevant to the present.

[5] There are similarities and differences between archetypal analysis and other unsupervised classification algorithms, such as cluster analysis. The common thing is that these methods can be used to classify units into different groups. The main difference is that cluster centres are usually in local data centres. Archetypes, on the other hand, are placed at the edges of the data, as they represent "pure" types. This is why each unit can be represented as a convex combination of archetypes. This is impossible in a cluster analysis, precisely because cluster centres are located in the middle of local averages. We used the R package by Eugster and Leisch (2009) to calculate the archetypes. A cluster analysis was used by us in Brůha and Babecká Kucharčuková (2017), and focused on examining the resilience of EU Member States to the economic and financial crisis of 2008–2009.

[6] The usual criterion is the residual sum of squares, i.e. the remainder that is not explained by archetypes. The number of archetypes is usually taken as the highest value after which there is no significant decrease in the residual sum of squares. There are four archetypes for our voting data.

others. The USA and Israel usually vote on resolutions related to Israeli-Palestinian issues or the Israeli-Syrian conflict in the opposite way to other developed countries. On other resolutions, the USA and Israel tend to vote in a similar way as other developed countries.[7] Therefore, for the purposes of this article, we have grouped the fourth and second groups of countries together. This results in the following three geopolitical blocs of countries,[8] see Chart 3.

## Results of the analysis

**Chart 4 shows the Herfindahl-Hirschman Index indicating the concentration of foreign trade for individual trading partners.** On each sub-chart, we present the median for all EU Member States, the median for the old Member States (i.e. those that joined the EU before 2004) and the median for the new Member States (i.e. those that joined the EU after 2004). The interquartile range is also presented, plus the index value for the Czech Republic (as a representative of the new Member States) and the index value for Germany (as a representative of the old Member States and also the largest European economy).

**The concentration of international trade, as measured by the Herfindahl-Hirschman Index, is stable or decreasing for EU Member States for both total exports and imports.** In terms of total exports, the value for the old Member States shows no significant trend, as evidenced by both the stable value of the index for Germany and the median value for the old Member States. For the new Member States, the index is falling in most cases, with the bulk of the fall taking place in the first half of the period under review, i.e. before 2010. The concentration of Czech exports shows a trend typical for other new Member States, although the index is above the median level, indicating an increased concentration for Czech total exports. A qualitatively similar conclusion applies to total imports, while the fall in the concentration of imports is more gradual for the new Member States than in the case of exports. Trade in consumer goods gives a similar conclusion regarding the dynamics of the index's concentration. In the case of trade in capital goods, the concentration over time is stable (old Member States) or falling (new Member States). Without a clear concentration trend, the Czech Republic is an exception.

**As regards trade in intermediate goods, there is a downward tendency in concentration for both exports and imports in both the new and old Member States.** This fall in concentration is more pronounced in the new Member States and for exports, yet applies to both sides of trade and also to the majority of EU Member States. At the turn of the millennium, the index for trade in intermediate goods was significantly higher for the typical EU Member State than for total trade, but moved closer to the levels for total trade over time. At the same time, the index dynamics are more volatile,[9] with larger differences across countries at the index level than in the case of total trade. For Member States where there has been no visible fall in concentration (e.g. Germany), the index remains stable.

**Do these conclusions apply even if we look at foreign trade concentration via more broadly defined groups, i.e. geopolitical blocs? No, this is not the case.** Chart 5 shows the Herfindahl-Hirschman Index for foreign trade concentration defined via geopolitical blocs reflecting the analysis in the previous section of the text. Chart 5 is organised in the same way as Chart 4 in all other aspects.

**Exports saw a decline in concentration defined via geopolitical blocs until 2010, but the trend has been reversing since 2012.** This applies to both old and new Member States, and for both total exports and individual groups. The most significant trend can be seen in capital goods exports. Intermediate goods exports are highly concentrated: EU Member States export these goods to a large extent only to bloc II countries (i.e. to friends from the same geopolitical bloc). In some countries (among them the new Member States, including the Czech Republic), this concentration is high and close to 1, which in other words means that these countries export intermediate goods almost exclusively to bloc II countries.[10]

**In terms of imports, the trade concentration situation is more complex for geopolitical blocs.** The concentration of capital goods imports is falling over time, making capital imports more diversified over time. Imports of intermediate goods have a U-shape for the typical EU Member State: concentration fell until 2010 and then slowly increased. As a result, intermediate goods are now imported into most EU Member States from the friendly geopolitical bloc II to a greater extent than 10 years ago. The index values for imports of goods for consumption are either stable (which typically applies to the new Member States) or are falling over time. Thus, in the case of imports of consumer goods, we do not see a reversal in the concentration of imports, unlike with intermediate goods. The concentration index for total imports via geopolitical blocs thus reflects these opposing tendencies and shows a slightly downward trend for most countries over time.

---

[7] What is surprising is the relatively high number of resolutions on Middle Eastern issues. In our sample (January 2022 to August 2023) there were 16 – many more than, for example, the number of resolutions relating to the Russian Federation's aggression against Ukraine, of which there were six in this period. Due to the high number of votes on Middle Eastern issues, the algorithm has allocated the USA and Israel to a special group.

[8] Annex A discusses further details of the links between international trade data and the division of countries into geopolitical blocs.

[9] The high index volatility probably reflects the much higher sensitivity of trade in intermediate goods to domestic and foreign economic activity compared to trade in other types of goods, see Babecká Kucharčuková and Brůha (2020).

[10] However, the high concentration values for exports of intermediate goods do not necessarily reflect geopolitical considerations: they may result from the fact that exports of these goods are naturally oriented to developed countries that also belong to the friendly bloc II. This explanation cannot be used for other types of goods.

## Conclusion

**In this article we document the falling concentration of international trade for EU Member States.** We show that the concentration of international trade has been either stable or even falling over time since the end of the last millennium. This result could be reassuring: global trade fragmentation is not yet under way, and both rich and developing countries can thus reap the benefits of the international division of labour.

**However, the falling concentration of international trade masks important compositional effects.** Based on voting by countries in the UN General Assembly, we defined three geopolitical blocs and analysed the concentration of trade for each bloc. It appears that over the last 10 years, EU exports have been concentrating on a friendly geopolitical bloc. In the case of imports, this situation is not so obvious, yet – at least in the case of intermediate goods – the share of imports from the same geopolitical bloc is also increasing.

**From the geopolitical perspective, there are thus slight and creeping signs of fragmentation of foreign trade.** If these trends continue, it could mean a fall in the benefits of global trade, including a decline in productivity and output growth. This would put an end to the trends that have brought about gains in well-being for many people around the world. Empirical studies (Attinasi et al., 2023) show that the fragmentation of world trade would likely lead to an increase in the prices of certain inputs, which could foster inflationary pressures in the short term (not in the long term, as this would "only" be a change in relative prices in the long term). It is therefore desirable to continuously monitor and assess the international trade situation.

**On the other hand, it is worth noting that trade concentration in countries with similar geopolitical positions may have indirect benefits.** These may consist in the fact that trade and production chains would be less exposed to risk and the possibility of blackmail from other countries in the event of adverse geopolitical events.[11] Thus, beyond a purely economic perspective, the fragmentation of trade is not a clear cost.

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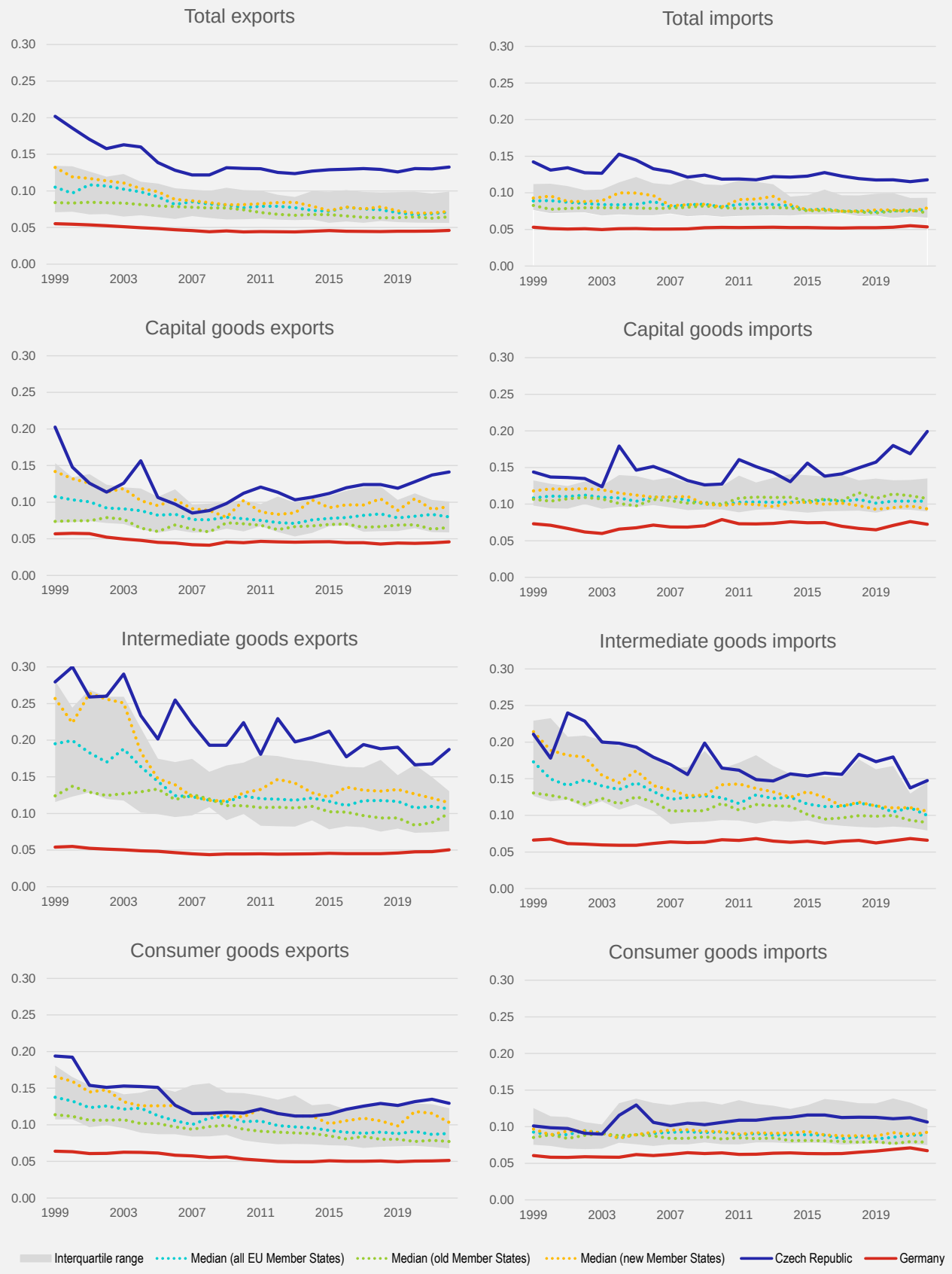
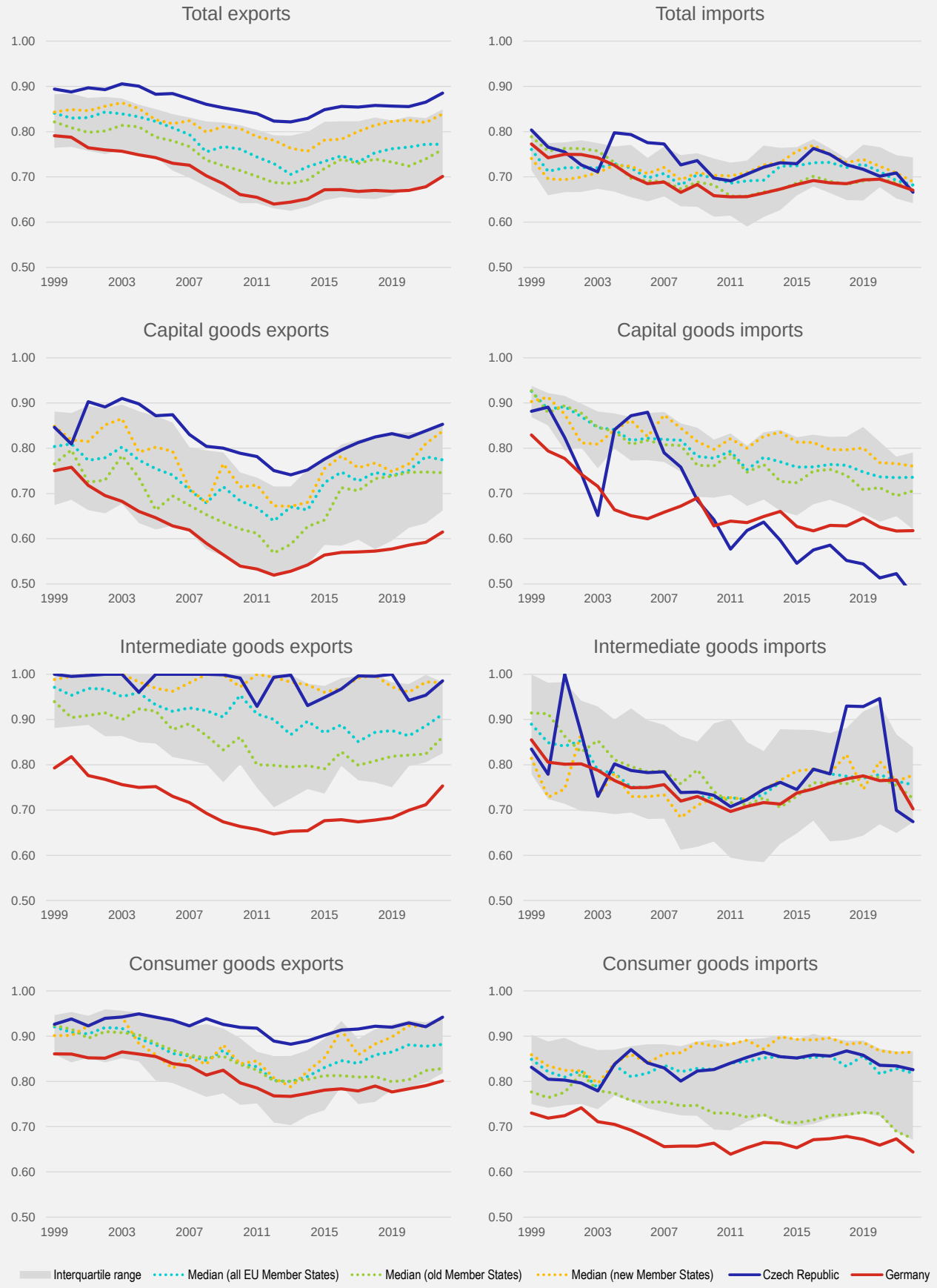
[11] One spectacular case might be the diplomatic and economic pressure applied by China to Lithuania after the opening of the Taiwanese embassy in Vilnius. This pressure was also exerted indirectly through pressure on German companies exporting to China not to use components made in Lithuania.

**Chart 4 – Herfindahl-Hirschman Index calculated for individual trading partners**




Source: Authors' calculation

**Chart 5 – Herfindahl-Hirschman Index calculated for geopolitical blocs**




Source: Authors' calculation

### Annex A: Trade and geopolitical data correspondence

**The analysis in our paper is based on the classification of countries into several groups based on their voting in the UN General Assembly.** The non-trivial problem we had to address was that the set of countries with trade data and the set of countries with voting data did not correspond accurately. There are two main reasons for this: (i) the trade data include the dependent territories of some countries (mainly the United Kingdom, France and the Netherlands) and (ii) the trade data contain data on political entities with questionable status that are not represented in the UN.

**The case of dependent territories can be easily solved**: we assign them to the geopolitical bloc of their mother country. We deal with political entities in a disputed position as follows: if the entity is under the military or political control of another state, we consider trade with this entity to be part of trade with the controlling state. We thus consider trade with Western Sahara as part of trade with Morocco and trade with the Palestinian territories as part of trade with Israel.

**This leaves three political entities that cannot be classified on the basis of voting:** Taiwan, Kosovo and Venezuela. The first two cannot vote in the UN, so we are unable to include them in geopolitical blocs on the basis of archetypal analysis. We address this as follows: Taiwan – due to its economic and military ties with the USA – is included in a group of which the USA is also a member. Kosovo is included in a group comprising Albania on the basis of linguistic foundations. We have no voting record for Venezuela in our data, so it cannot be included in any bloc on the basis of archetypal analysis. Given its political links, we decided to include Venezuela in the bloc with the Russian Federation. In any event, trade with these territories is not significant enough for this choice to significantly influence the conclusions of our article.

## Keywords

Globalisation, international trade, concentration of international trade, fragmentation of international trade

## JEL Classification

C46, F14, F15

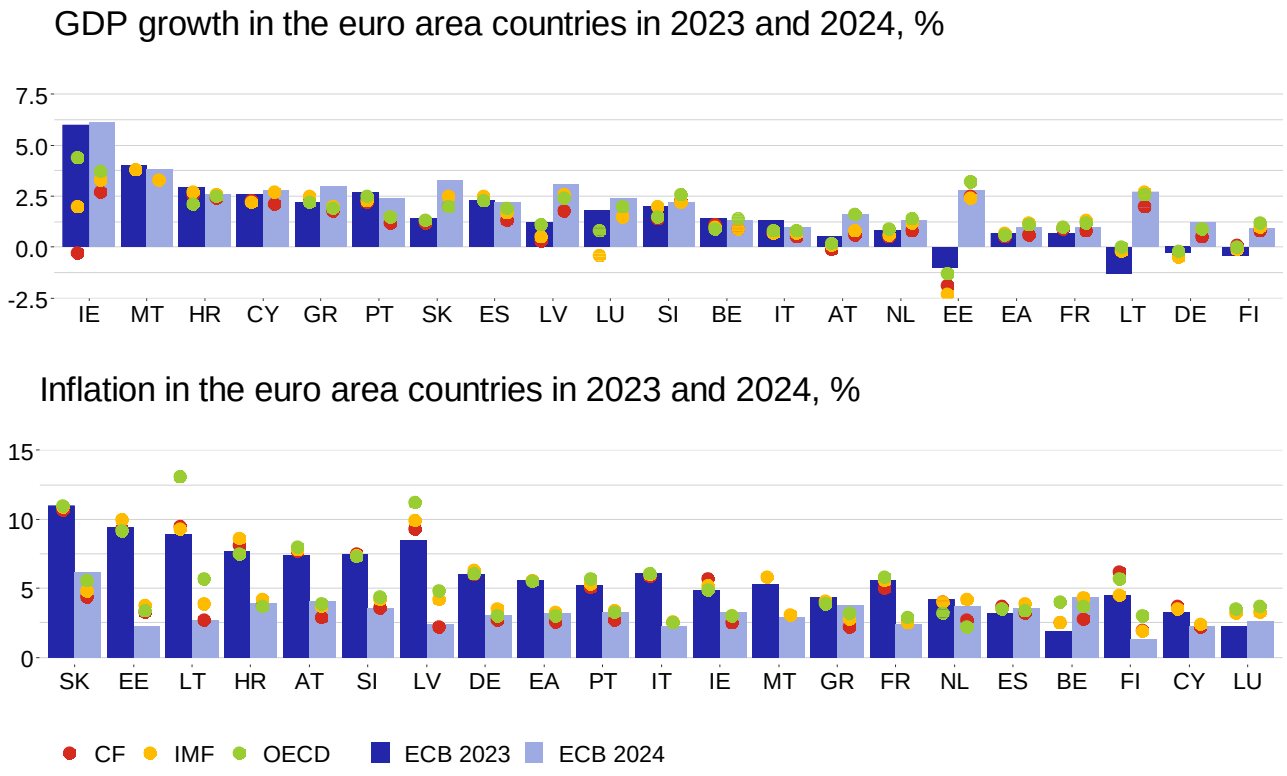
## A1. Change in predictions for 2023

| | GDP growth, % | | | | | | | | Inflation, % | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CF | | IMF | | OECD | | CB / OE | | CF | | IMF | | OECD | | CB / OE | |
| EA | 0 | 2023/11<br>2023/10 | -0.2 | 2023/10<br>2023/7 | -0.3 | 2023/9<br>2023/6 | -0.2 | 2023/9<br>2023/6 | -0.1 | 2023/11<br>2023/10 | +0.3 | 2023/10<br>2023/4 | -0.3 | 2023/9<br>2023/6 | +0.2 | 2023/9<br>2023/6 |
| US | +0.2 | 2023/11<br>2023/10 | +0.3 | 2023/10<br>2023/7 | +0.6 | 2023/9<br>2023/6 | +1.1 | 2023/9<br>2023/6 | +0.1 | 2023/11<br>2023/10 | -0.4 | 2023/10<br>2023/4 | -0.4 | 2023/9<br>2023/6 | +0.1 | 2023/9<br>2023/6 |
| UK | 0 | 2023/11<br>2023/10 | +0.1 | 2023/10<br>2023/7 | 0 | 2023/9<br>2023/6 | 0 | 2023/11<br>2023/8 | 0 | 2023/11<br>2023/10 | +0.9 | 2023/10<br>2023/4 | +0.3 | 2023/9<br>2023/6 | -0.2 | 2023/11<br>2023/8 |
| JP | 0 | 2023/11<br>2023/10 | +0.6 | 2023/10<br>2023/7 | +0.5 | 2023/9<br>2023/6 | +0.7 | 2023/10<br>2023/7 | 0 | 2023/11<br>2023/10 | +0.5 | 2023/10<br>2023/4 | +0.3 | 2023/9<br>2023/6 | +0.3 | 2023/10<br>2023/7 |
| CN | +0.2 | 2023/11<br>2023/10 | -0.2 | 2023/10<br>2023/7 | -0.3 | 2023/9<br>2023/6 | +0.1 | 2023/11<br>2023/10 | -0.1 | 2023/11<br>2023/10 | -1.3 | 2023/10<br>2023/4 | -1.6 | 2023/9<br>2023/6 | -0.1 | 2023/11<br>2023/10 |
| RU | +0.3 | 2023/10<br>2023/9 | +0.7 | 2023/10<br>2023/7 | +2.3 | 2023/9<br>2023/6 | +0.2 | 2023/11<br>2023/10 | +0.5 | 2023/10<br>2023/9 | -1.7 | 2023/10<br>2023/4 | -0.2 | 2023/9<br>2023/6 | +0.1 | 2023/11<br>2023/10 |

## A2. Change in predictions for 2024

| | GDP growth, % | | | | | | | | Inflation, % | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CF | | IMF | | OECD | | CB / OE | | CF | | IMF | | OECD | | CB / OE | |
| EA | 0 | 2023/11<br>2023/10 | -0.3 | 2023/10<br>2023/7 | -0.4 | 2023/9<br>2023/6 | -0.5 | 2023/9<br>2023/6 | +0.1 | 2023/11<br>2023/10 | +0.4 | 2023/10<br>2023/4 | -0.2 | 2023/9<br>2023/6 | +0.2 | 2023/9<br>2023/6 |
| US | +0.2 | 2023/11<br>2023/10 | +0.5 | 2023/10<br>2023/7 | +0.3 | 2023/9<br>2023/6 | +0.4 | 2023/9<br>2023/6 | +0.1 | 2023/11<br>2023/10 | +0.5 | 2023/10<br>2023/4 | 0 | 2023/9<br>2023/6 | 0 | 2023/9<br>2023/6 |
| UK | -0.1 | 2023/11<br>2023/10 | -0.4 | 2023/10<br>2023/7 | -0.2 | 2023/9<br>2023/6 | -0.5 | 2023/11<br>2023/8 | 0 | 2023/11<br>2023/10 | +0.7 | 2023/10<br>2023/4 | +0.1 | 2023/9<br>2023/6 | +1.0 | 2023/11<br>2023/8 |
| JP | +0.1 | 2023/11<br>2023/10 | 0 | 2023/10<br>2023/7 | -0.1 | 2023/9<br>2023/6 | -0.2 | 2023/10<br>2023/7 | 0 | 2023/11<br>2023/10 | +0.7 | 2023/10<br>2023/4 | +0.1 | 2023/9<br>2023/6 | +0.9 | 2023/10<br>2023/7 |
| CN | +0.1 | 2023/11<br>2023/10 | -0.3 | 2023/10<br>2023/7 | -0.5 | 2023/9<br>2023/6 | 0 | 2023/11<br>2023/10 | -0.1 | 2023/11<br>2023/10 | -0.5 | 2023/10<br>2023/4 | -0.7 | 2023/9<br>2023/6 | -0.2 | 2023/11<br>2023/10 |
| RU | +0.1 | 2023/10<br>2023/9 | -0.2 | 2023/10<br>2023/7 | +1.3 | 2023/9<br>2023/6 | +1.3 | 2023/11<br>2023/10 | +0.3 | 2023/10<br>2023/9 | +1.7 | 2023/10<br>2023/4 | +0.3 | 2023/9<br>2023/6 | -0.3 | 2023/11<br>2023/10 |

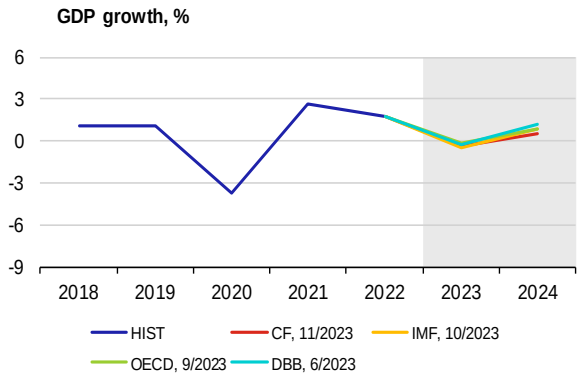
## A3. GDP growth and inflation outlooks in the euro area countries



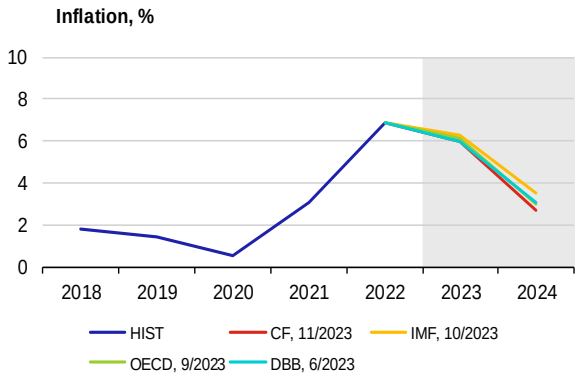

Note: Charts show institutions' latest available outlooks of for the given country.

## A4. GDP growth and inflation in the individual euro area countries

### Germany

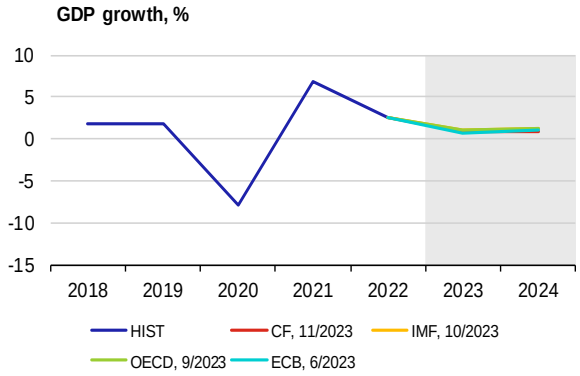



| | CF | IMF | OECD | DBB |
|---|---|---|---|---|
| **2023** | -0.4 | -0.5 | -0.2 | -0.3 |
| **2024** | 0.5 | 0.9 | 0.9 | 1.2 |

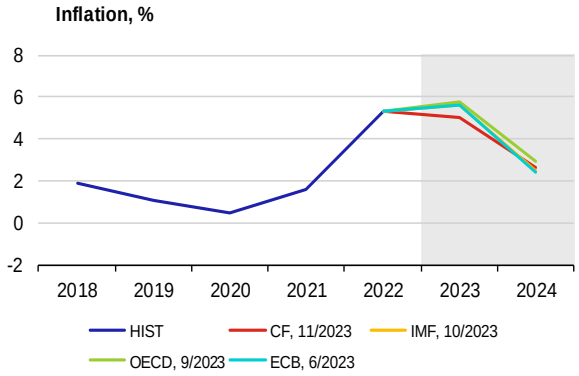



| | CF | IMF | OECD | DBB |
|---|---|---|---|---|
| **2023** | 6.0 | 6.3 | 6.1 | 6.0 |
| **2024** | 2.7 | 3.5 | 3.0 | 3.1 |

## France

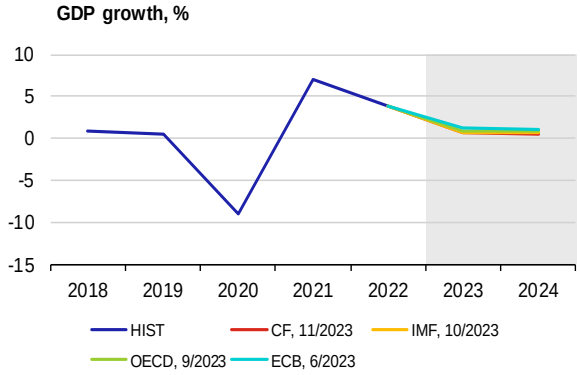



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.9 | 1.0 | 1.0 | 0.7 |
| **2024** | 0.8 | 1.3 | 1.2 | 1.0 |

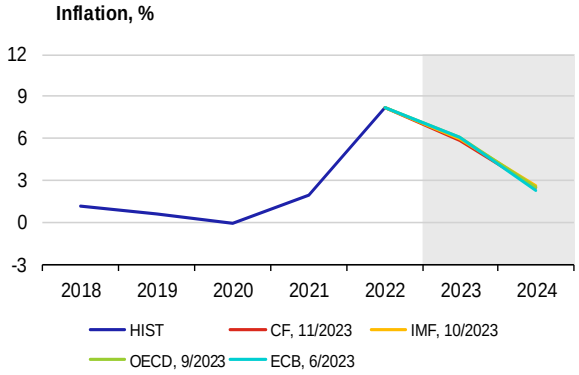



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 5.0 | 5.6 | 5.8 | 5.6 |
| **2024** | 2.6 | 2.5 | 2.9 | 2.4 |

## Italy

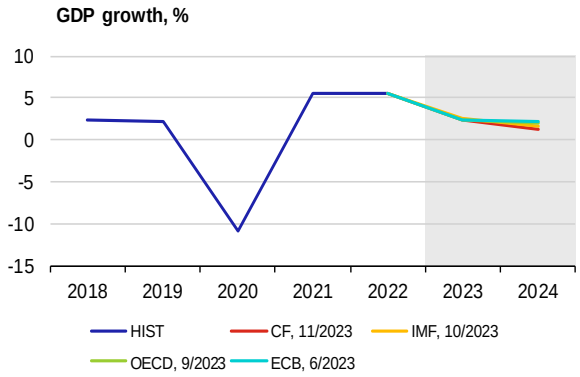



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.7 | 0.7 | 0.8 | 1.3 |
| **2024** | 0.5 | 0.7 | 0.8 | 1.0 |

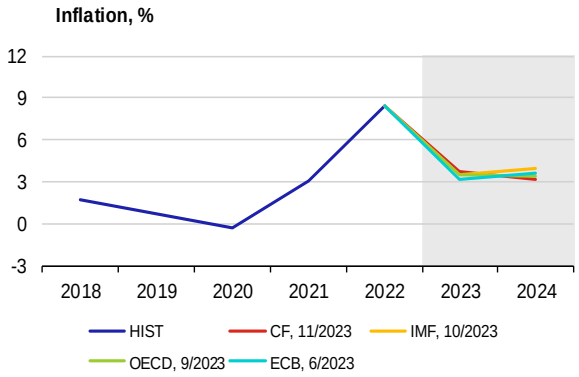



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 5.9 | 6.0 | 6.1 | 6.1 |
| **2024** | 2.5 | 2.6 | 2.5 | 2.3 |

## Spain

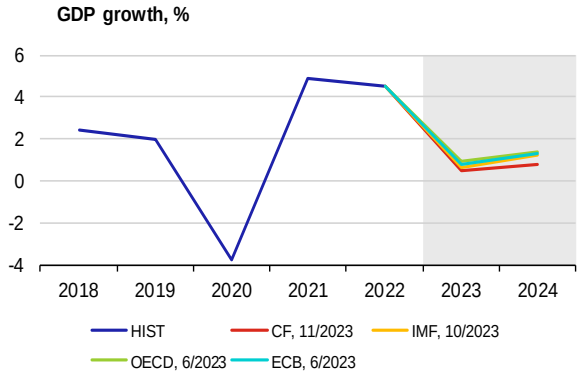



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.3 | 2.5 | 2.3 | 2.3 |
| **2024** | 1.3 | 1.7 | 1.9 | 2.2 |

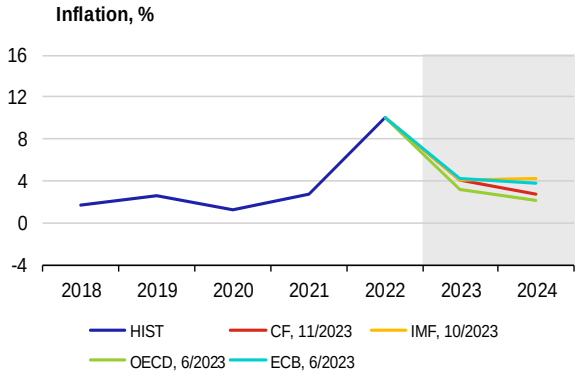



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 3.7 | 3.5 | 3.5 | 3.2 |
| **2024** | 3.2 | 3.9 | 3.4 | 3.6 |

## Netherlands

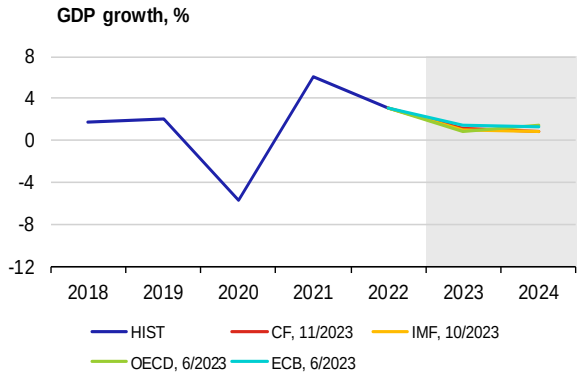



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.5 | 0.6 | 0.9 | 0.8 |
| **2024** | 0.8 | 1.2 | 1.4 | 1.3 |

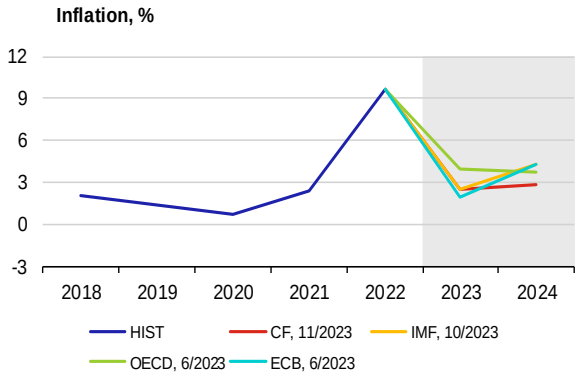



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 4.0 | 4.0 | 3.2 | 4.2 |
| **2024** | 2.7 | 4.2 | 2.2 | 3.7 |

## Belgium

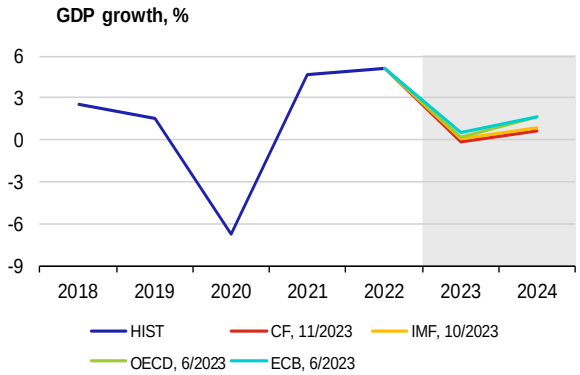



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 1.1 | 1.0 | 0.9 | 1.4 |
| **2024** | 0.9 | 0.9 | 1.4 | 1.3 |

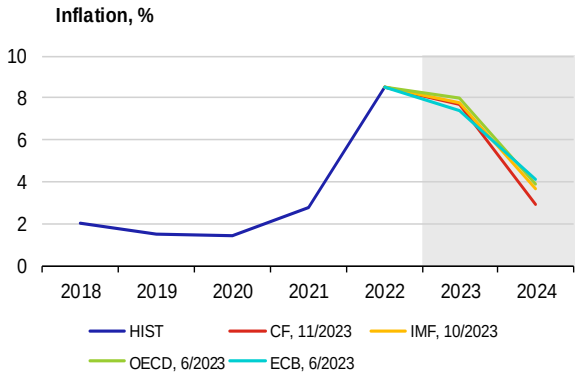



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.5 | 2.5 | 4.0 | 1.9 |
| **2024** | 2.8 | 4.3 | 3.7 | 4.3 |

## Austria

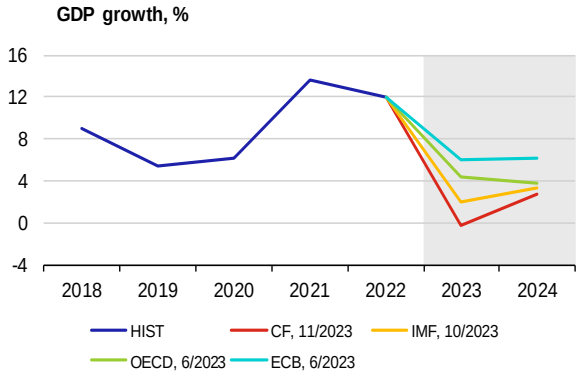



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | -0.1 | 0.1 | 0.2 | 0.5 |
| **2024** | 0.6 | 0.8 | 1.6 | 1.6 |

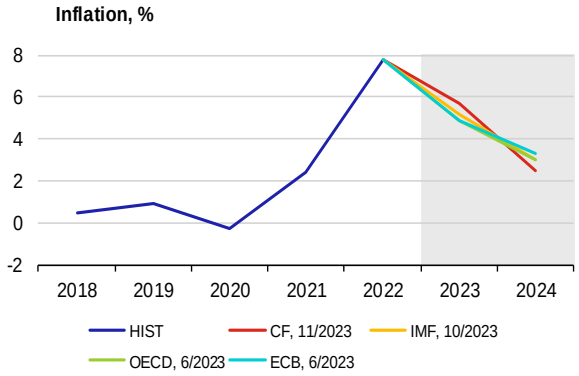



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 7.7 | 7.8 | 8.0 | 7.4 |
| **2024** | 2.9 | 3.7 | 3.9 | 4.1 |

## Ireland

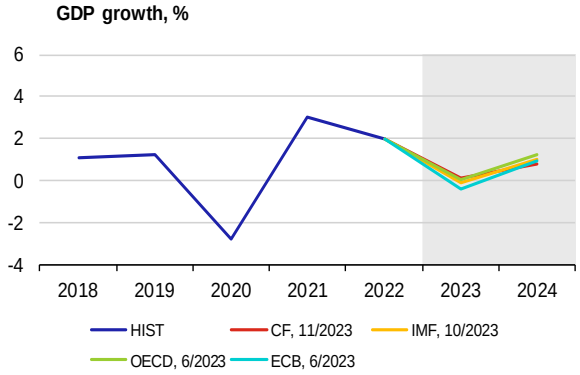



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | -0.3 | 2.0 | 4.4 | 6.0 |
| **2024** | 2.7 | 3.3 | 3.7 | 6.1 |

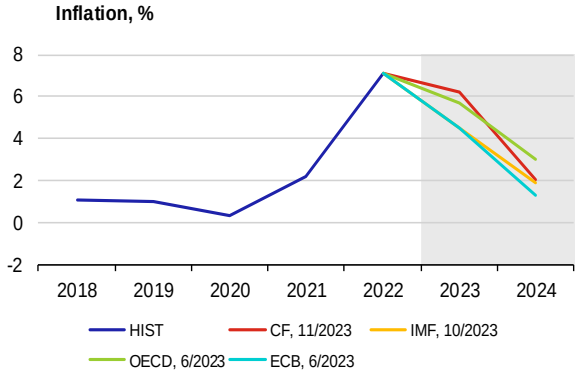



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 5.7 | 5.2 | 4.9 | 4.9 |
| **2024** | 2.5 | 3.0 | 3.0 | 3.3 |

## Finland

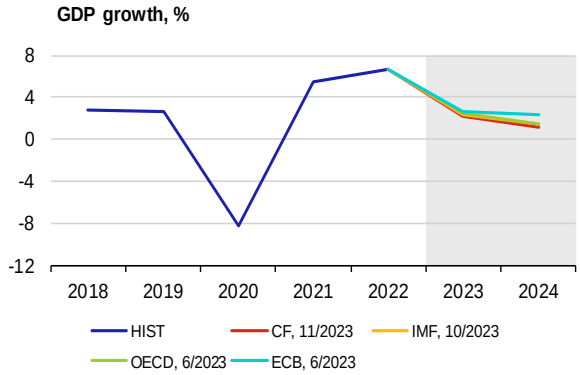



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.1 | -0.1 | 0.0 | -0.4 |
| **2024** | 0.8 | 1.0 | 1.2 | 0.9 |

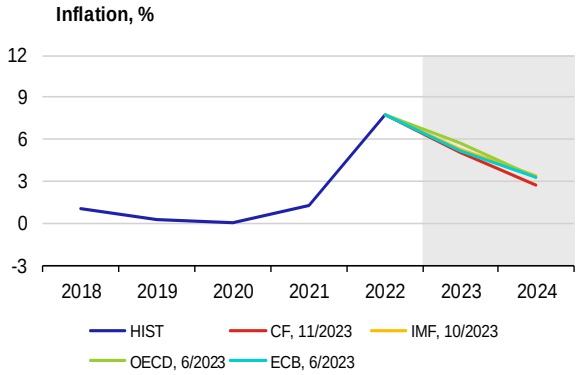



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 6.2 | 4.5 | 5.7 | 4.5 |
| **2024** | 2.0 | 1.9 | 3.0 | 1.3 |

## Portugal

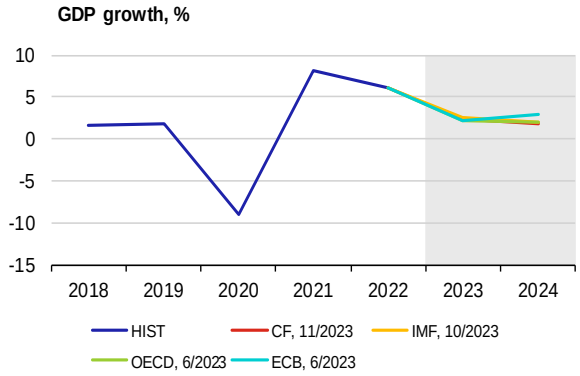



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.2 | 2.3 | 2.5 | 2.7 |
| **2024** | 1.2 | 1.5 | 1.5 | 2.4 |

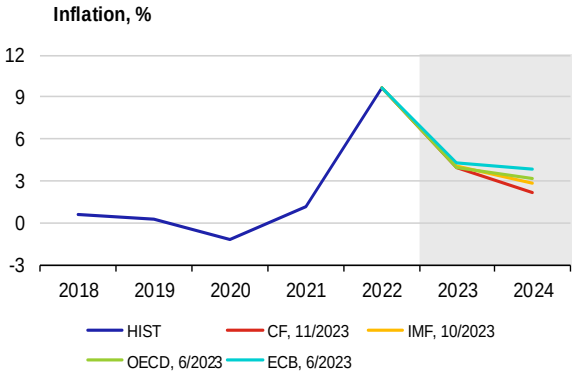



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 5.1 | 5.3 | 5.7 | 5.2 |
| **2024** | 2.7 | 3.4 | 3.3 | 3.3 |

## Greece

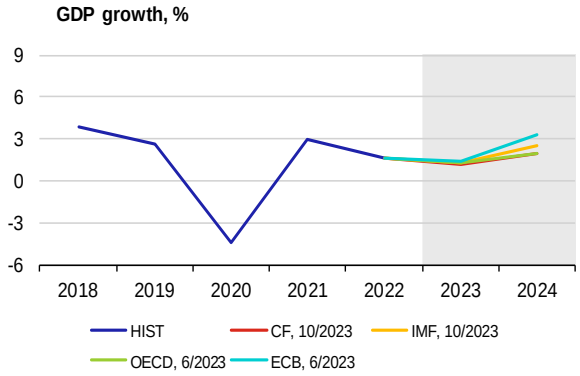



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.3 | 2.5 | 2.2 | 2.2 |
| **2024** | 1.8 | 2.0 | 1.9 | 3.0 |

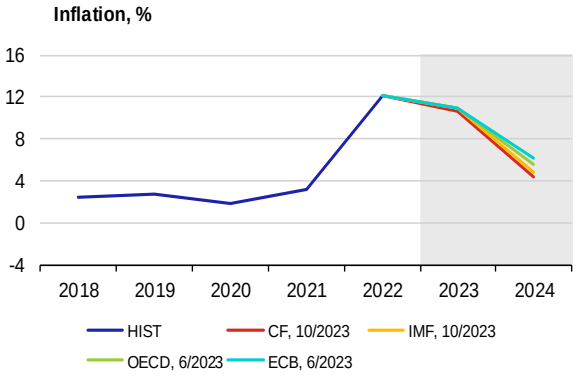



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 4.0 | 4.1 | 3.9 | 4.3 |
| **2024** | 2.2 | 2.8 | 3.2 | 3.8 |

## Slovakia

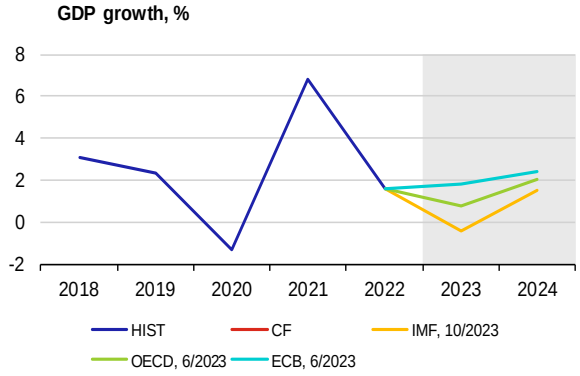



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 1.2 | 1.3 | 1.3 | 1.4 |
| **2024** | 2.0 | 2.5 | 2.0 | 3.3 |

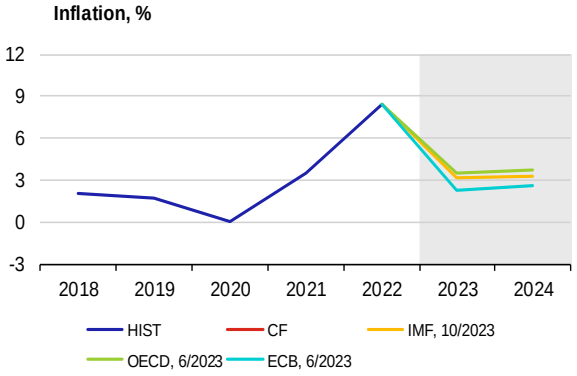



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 10.7 | 10.9 | 11.0 | 11.0 |
| **2024** | 4.4 | 4.8 | 5.6 | 6.2 |

## Luxembourg

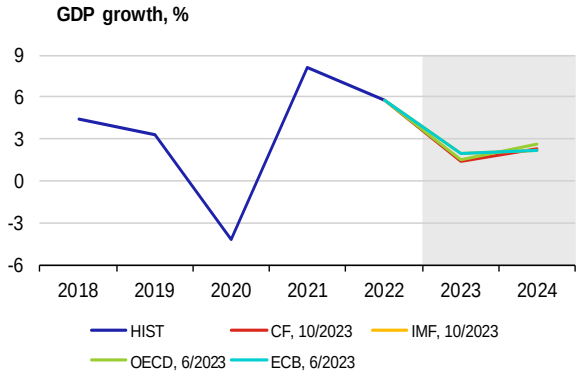


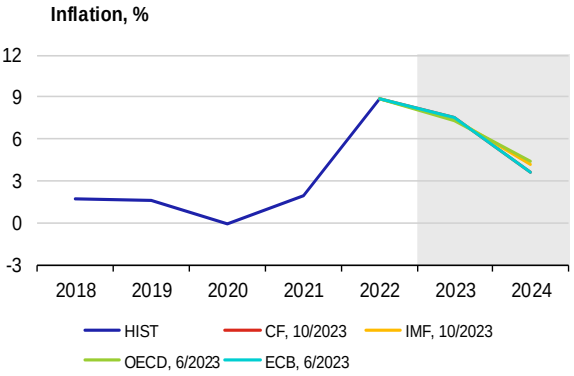

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | n. a. | -0.4 | 0.8 | 1.8 |
| **2024** | n. a. | 1.5 | 2.0 | 2.4 |




| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | n. a. | 3.2 | 3.5 | 2.3 |
| **2024** | n. a. | 3.3 | 3.7 | 2.6 |

## Slovenia

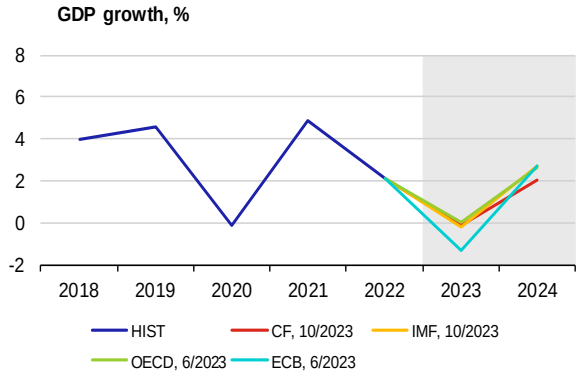


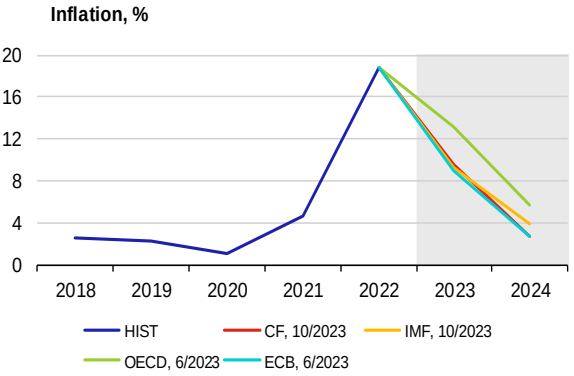




| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 1.4 | 2.0 | 1.5 | 2.0 |
| **2024** | 2.3 | 2.2 | 2.6 | 2.2 |

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 7.5 | 7.4 | 7.3 | 7.5 |
| **2024** | 3.6 | 4.2 | 4.4 | 3.6 |

## Lithuania

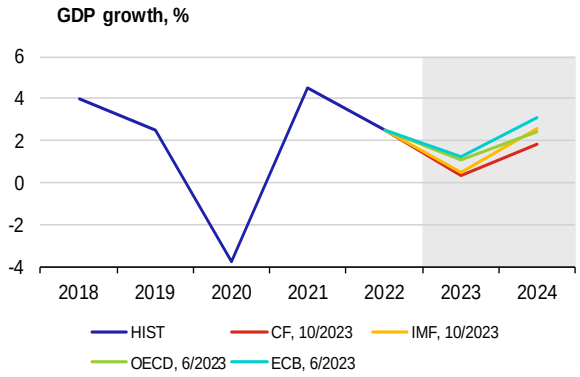


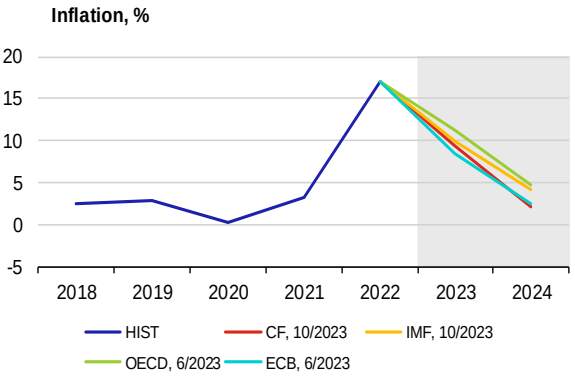




| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | -0.1 | -0.2 | 0.0 | -1.3 |
| **2024** | 2.0 | 2.7 | 2.6 | 2.7 |

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 9.5 | 9.3 | 13.1 | 8.9 |
| **2024** | 2.7 | 3.9 | 5.7 | 2.7 |

## Latvia

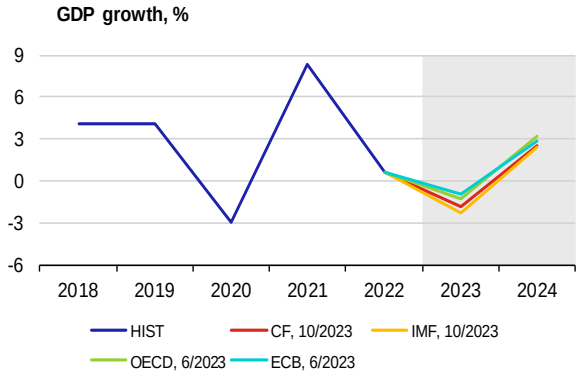


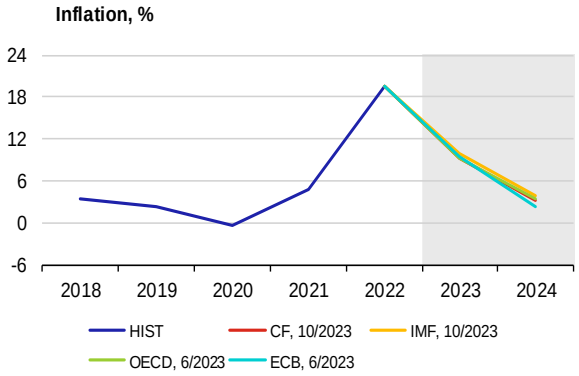

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 0.3 | 0.5 | 1.1 | 1.2 |
| **2024** | 1.8 | 2.6 | 2.4 | 3.1 |

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 9.3 | 9.9 | 11.2 | 8.5 |
| **2024** | 2.2 | 4.2 | 4.8 | 2.4 |

## Estonia

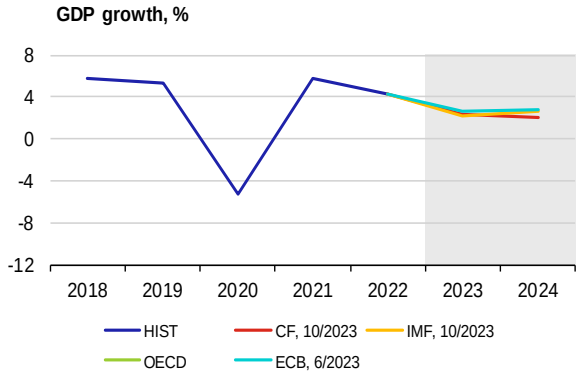



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | -1.9 | -2.3 | -1.3 | -1.0 |
| **2024** | 2.5 | 2.4 | 3.2 | 2.8 |

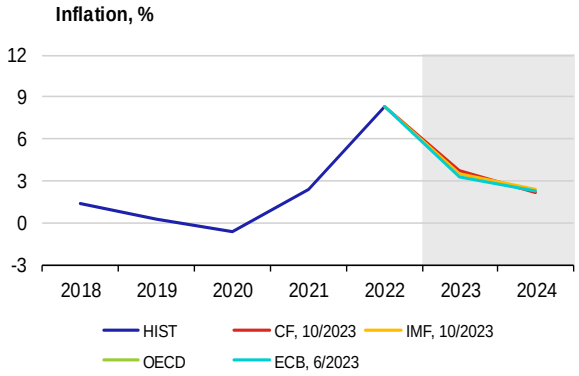



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 9.3 | 10.0 | 9.2 | 9.4 |
| **2024** | 3.3 | 3.8 | 3.4 | 2.3 |

## Cyprus

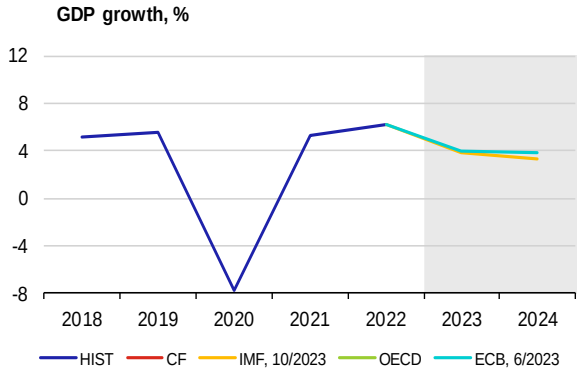



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.3 | 2.2 | n. a. | 2.6 |
| **2024** | 2.1 | 2.7 | n. a. | 2.8 |

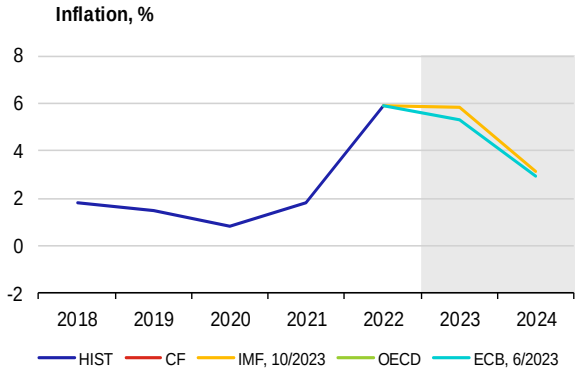



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 3.7 | 3.5 | n. a. | 3.3 |
| **2024** | 2.2 | 2.4 | n. a. | 2.3 |

## Malta



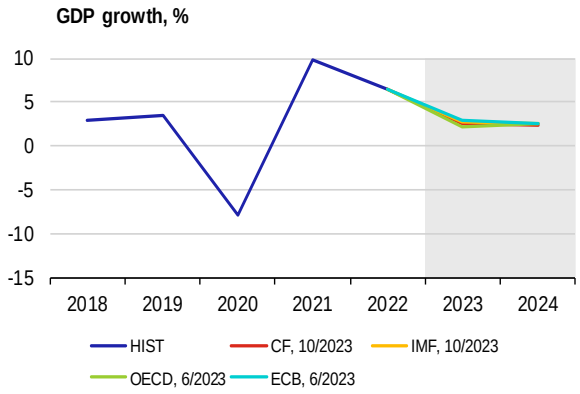

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | n. a. | 3.8 | n. a. | 4.0 |
| **2024** | n. a. | 3.3 | n. a. | 3.8 |

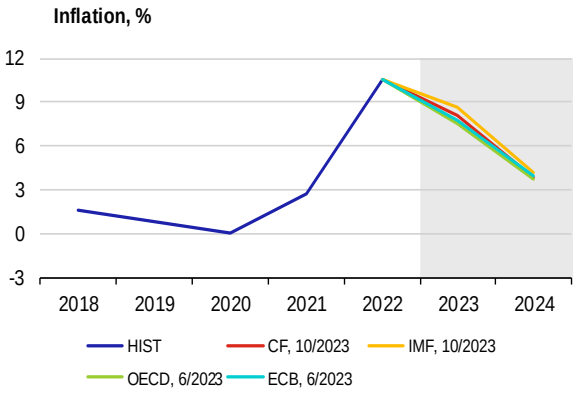



| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | n. a. | 5.8 | n. a. | 5.3 |
| **2024** | n. a. | 3.1 | n. a. | 2.9 |

Ddd

## Croatia



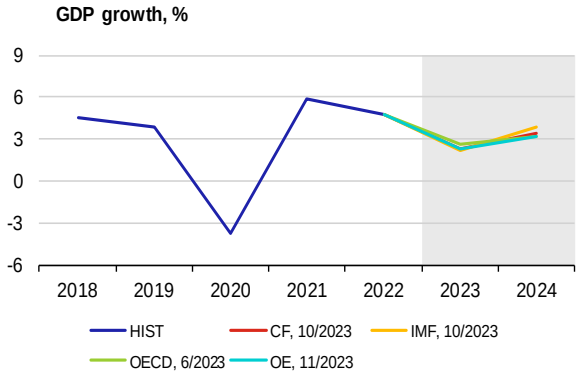



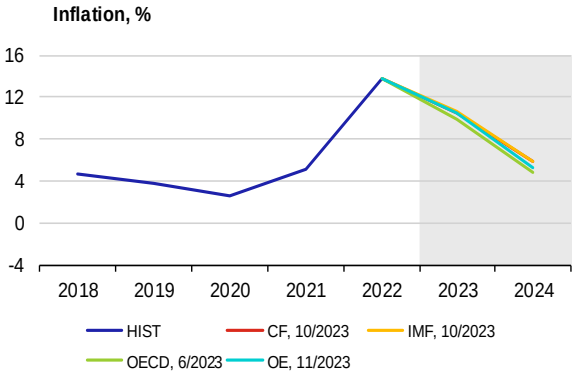

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 2.6 | 2.7 | 2.1 | 2.9 |
| **2024** | 2.4 | 2.6 | 2.5 | 2.6 |

| | CF | IMF | OECD | ECB |
|---|---|---|---|---|
| **2023** | 8.1 | 8.6 | 7.5 | 7.7 |
| **2024** | 3.8 | 4.2 | 3.7 | 3.9 |

## A5. GDP growth and inflation in other selected countries

## Romania




| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 2.3 | 2.2 | 2.6 | 2.3 |
| **2024** | 3.4 | 3.8 | 3.2 | 3.2 |

| | CF | IMF | OECD | OE |
|---|---|---|---|---|
| **2023** | 10.5 | 10.7 | 9.9 | 10.5 |
| **2024** | 5.8 | 5.8 | 4.8 | 5.3 |

## A6. List of abbreviations

| | |
|---|---|
| **AT** | Austria |
| **bbl** | barrel |
| **BE** | Belgium |
| **BoE** | Bank of England (the UK central bank) |
| **BoJ** | Bank of Japan (the central bank of Japan) |
| **bp** | basis point (one hundredth of a percentage point) |
| **CB** | central bank |
| **CBR** | Central Bank of Russia |
| **CF** | Consensus Forecasts |
| **CN** | China |
| **CNB** | Czech National Bank |
| **CNY** | Chinese renminbi |
| **ConfB** | Conference Board Consumer Confidence Index |
| **CXN** | Caixin |
| **CY** | Cyprus |
| **DBB** | Deutsche Bundesbank (the central bank of Germany) |
| **DE** | Germany |
| **EA** | euro area |
| **ECB** | European Central Bank |
| **EE** | Estonia |
| **EIA** | Energy Information Administration |
| **ES** | Spain |
| **ESI** | Economic Sentiment Indicator of the European Commission |
| **EU** | European Union |
| **EUR** | euro |
| **EURIBOR** | Euro Interbank Offered Rate |
| **Fed** | Federal Reserve System (the US central bank) |
| **FI** | Finland |
| **FOMC** | Federal Open Market Committee |
| **FR** | France |
| **FRA** | forward rate agreement |
| **FY** | fiscal year |
| **GBP** | pound sterling |
| **GDP** | gross domestic product |
| **GR** | Greece |
| **HICP** | Harmonised Index of Consumer Prices |
| **HR** | Croatia |
| **ICE** | Intercontinental Exchange |
| **IE** | Ireland |
| **IEA** | International Energy Agency |
| **IFO** | Leibniz Institute for Economic Research at the University of Munich |
| **IMF** | International Monetary Fund |
| **IRS** | Interest Rate swap |
| **ISM** | Institute for Supply Management |
| **IT** | Italy |
| **JP** | Japan |
| **JPY** | Japanese yen |
| **LIBOR** | London Interbank Offered Rate |
| **LME** | London Metal Exchange |
| **LT** | Lithuania |
| **LU** | Luxembourg |
| **LV** | Latvia |
| **MKT** | Markit |
| **MNB** | Magyar Nemzeti Bank (the central bank of Hungary) |
| **MT** | Malta |
| **NBP** | Narodowy Bank Polski (the central bank of Poland) |
| **NIESR** | National Institute of Economic and Social Research (UK) |
| **NKI** | Nikkei |
| **NL** | Netherlands |
| **OE** | Oxford Economics |
| **OECD** | Organisation for Economic Co-operation and Development |
| **OECD-CLI** | OECD Composite Leading Indicator |
| **OPEC+** | member countries of OPEC oil cartel and 10 other oil-exporting countries (the most important of which are Russia, Mexico and Kazakhstan) |
| **PMI** | Purchasing Managers' Index |
| **pp** | percentage point |
| **PT** | Portugal |
| **RU** | Russia |
| **RUB** | Russian rouble |
| **SI** | Slovenia |
| **SK** | Slovakia |
| **SPF** | Survey of Professional Forecasters |
| **TTF** | Title Transfer Facility (virtual trading point for natural gas in the Netherlands) |
| **UK** | United Kingdom |
| **UoM** | University of Michigan Consumer Sentiment Index - present situation |
| **US** | United States |
| **USD** | US dollar |
| **WEO** | World Economic Outlook |
| **WTI** | West Texas Intermediate (crude oil used as a benchmark in oil pricing) |
| **ZEW** | Centre for European Economic Research |

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