Global Economic Outlook

February 2024

CNB CZECH NATIONAL BANK

Cut-off date for data
16 February 2024

CF survey date
12 February 2024

GEO publication date
23 February 2024

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.

Contact
gev@cnb.cz

Authors

Luboš Komárek	Editor-in-chief, I. Introduction, VI. Focus
Petr Polák	Editor, III.3 United States
Pavla Růžičková	III.1 Euro area
Michaela Ryšavá	III.2 Germany, III.5 United Kingdom
Alexis Derviz	III.4 China
Martin Kábrt	III.6 Japan, VI. Focus
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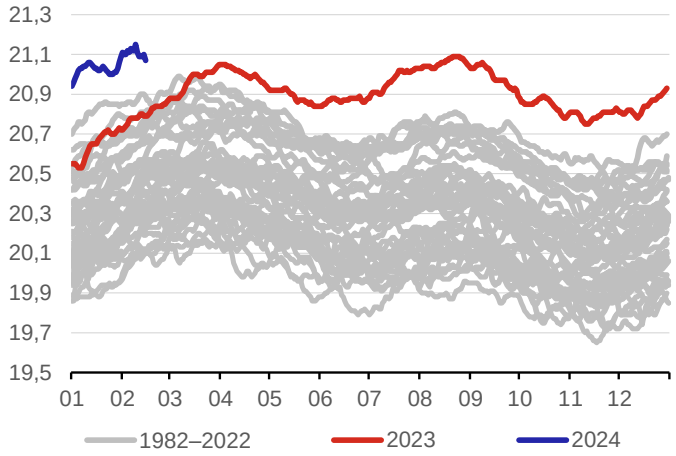
I. Introduction

The war in Europe has sadly been going on for two years now. The Ukrainian army – with material and moral support from the West – is fighting the Russian aggressor for every yard of its territory. Needless casualties continue to mount on both sides of the front. All eyes are on the current Munich Security Conference. At this event, US Vice President Kamala Harris gave a clear assurance of the USA's commitment to the NATO principle of collective defence. Many European nations are aware of the danger of Russian aggression and are lifting their defence spending above the required 2% of GDP. The notional NATO ranking is headed by Poland (3.9%), followed by the USA (3.5%) and Greece (3.0%).

The EU economy will grow this year, though more slowly than expected in the autumn. The European Commission's winter forecast revises growth down to 0.9% in the EU and 0.8% in the euro area in 2024. GDP growth of 1.7% in the EU and 1.5% in the euro area is expected in 2025. The Commission's inflation forecast is also lower than in the autumn. Inflation in the EU is set to fall to 3.0% in 2024 and 2.5% in 2025 on average. In the euro area, it is expected to drop to 2.7% in 2024 and 2.2% in 2025. The steeper drop in inflation is due to lower energy commodity prices, weaker economic momentum and lower-than-expected inflation outturns.

World sea surface temperature, 1982–2024, °C



Source: Climatereanalyzer.org, Climate Change Institute, University of Maine
Note: Daily temperature for the region between 60°S and 60°N.

Increased uncertainty is currently weighing on the economy. It stems mainly from protracted geopolitical tensions and the risk of a further broadening of the conflict in the Middle East. The increase in shipping costs in the wake of the Red Sea trade disruptions is expected to have only a marginal impact on inflation. Further price shocks could, however, result in renewed supply bottlenecks that could choke production and push up prices. The March meetings of key central banks (in particular the Fed and the ECB) are highly unlikely to produce any changes in rates. Markets expect no cuts until the second quarter.

The chart in the current issue shows how climate change is affecting ocean temperatures. The sea temperature started to rise sharply in the 21st century. Last year was particularly extreme, and records continue to fall this year. The warm winter may be positive as regards heating costs, but climate change is also having negative impacts. The IMF says that climate change is driving up fossil fuel consumption to record levels. Fossil fuel subsidies meanwhile surged to USD 7 trillion in 2022.

The current issue also contains an analysis: "Central banks' macroeconomic forecasts: When two do the same thing, it is not the same thing". The article compares the forecasting and analytical tools and processes applied by 22 inflation-targeting central banks when making monetary policy. The data is based on a questionnaire survey prepared by the Czech National Bank in the second half of 2023.

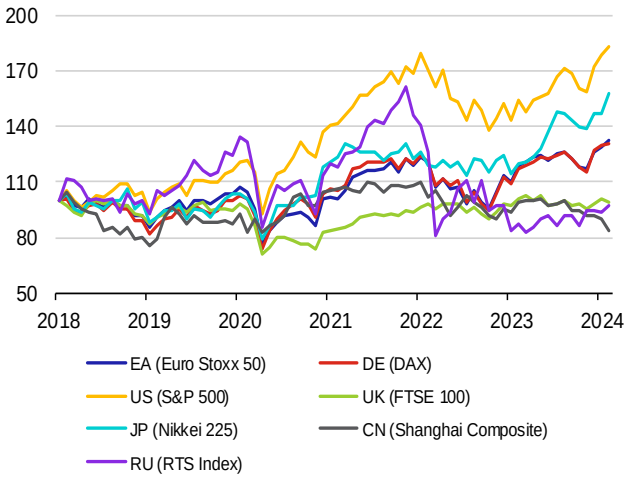
GEO barometer for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP	**2024**	0.5 →	0.3 →	2.1 ↗	0.3 ↗	0.7 ↘	4.6 →	1.7 →
(%)	**2025**	1.3 →	1.1 ↘	1.7 →	1.1 ↗	1.0 →	4.3 →	1.1 ↘
Inflation	**2024**	2.3 ↗	2.5 →	2.6 →	2.6 ↘	2.3 ↗	0.9 ↘	5.3 ↗
(%)	**2025**	2.0 →	2.1 →	2.2 ↘	2.1 ↘	1.6 ↗	1.6 ↘	4.4 ↘
Unemployment	**2024**	6.7 ↘	5.9 →	4.0 ↘	4.6 ↘	2.5 →	3.4 →	2.5 ↘
(%)	**2025**	6.7 ↘	5.7 →	4.1 ↘	4.6 ↘	2.4 →	3.4 →	2.3 ↘
Exchange rate	**2024**	1.11 ↗	1.11 ↗		1.27 →	135.9 ↗	7.04 ↘	95.8 ↗
(against USD)	**2025**	1.15 ↗	1.15 ↗		1.30 ↘	127.5 ↗	6.80 ↘	97.3 ↗

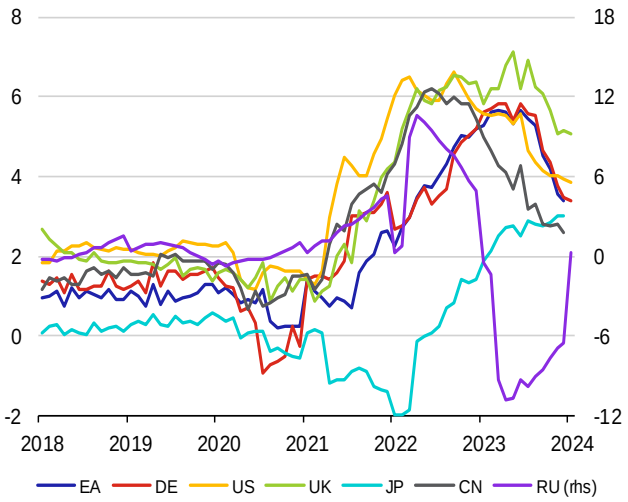
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

II. Macroeconomic barometer

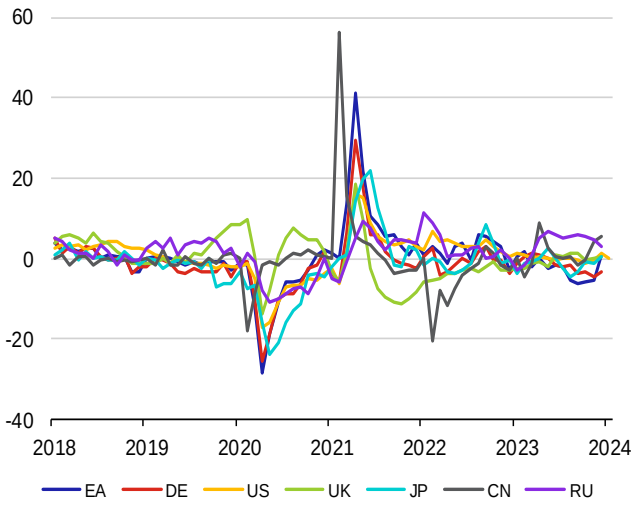
Equity markets development, index 100 = January 2018



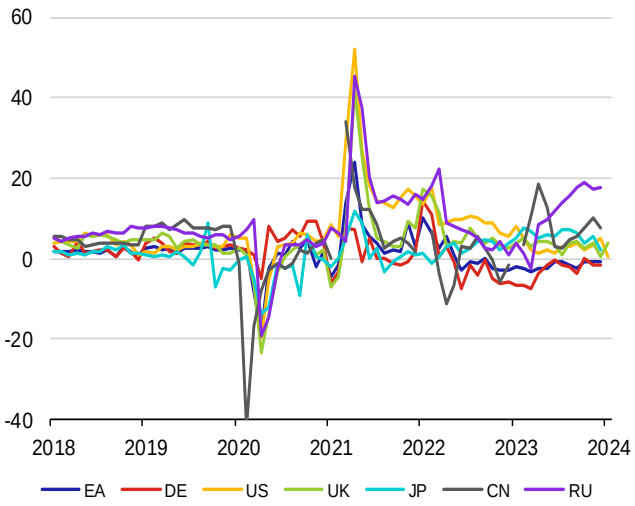
Core inflation, %



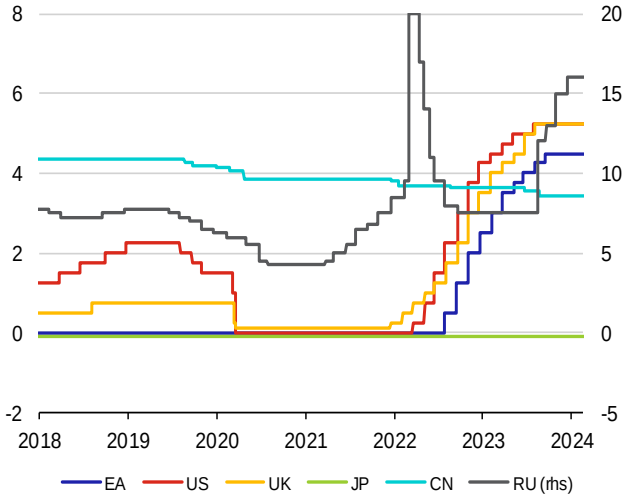
Manufacturing production, yoy %



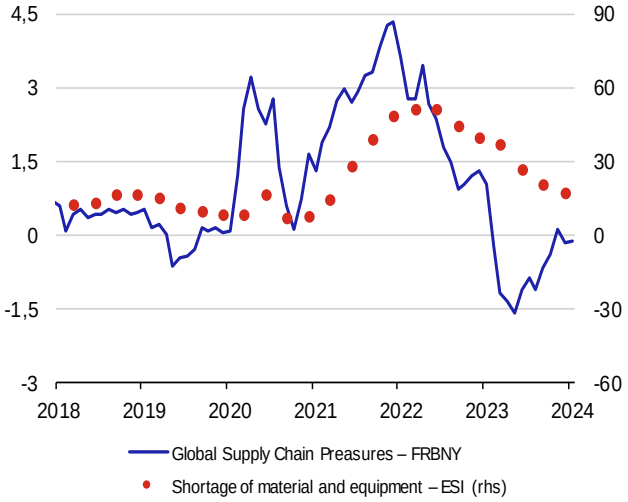
Retail sales, yoy %



Monetary policy rates, %



Supply chains development



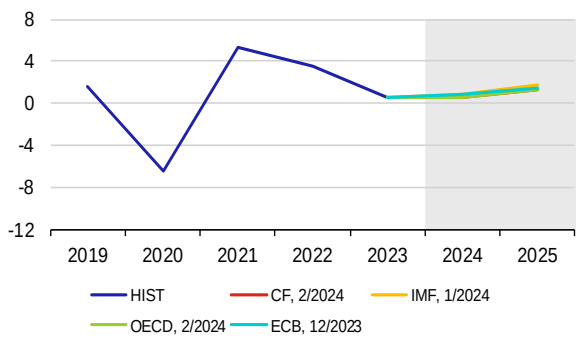
Source: Refinitiv Datastream, European Commision.

III.1 Euro area

The euro area economy was stagnant at the end of last year. The most disappointing of the large economies was Germany, whose economy contracted in 2023 Q4. The southern countries, however, performed well. As for the latest data, industrial production growth surprised strongly to the upside in December (2.6% month on month). It was driven primarily by capital goods production. By contrast, retail sales fell sharply in real terms (-1.1%). Demand remains subdued despite a tight labour market. The unemployment rate stayed at a record low in December and employment growth went up in 2023 Q4. Real income started to rise again last summer, but consumers remain cautious for now, as confirmed by the European Commission's ESI index in January. Sentiment in industry and services conversely improved. The manufacturing PMI also increased substantially on the back of new orders. They are still falling, but at the lowest rate in nine months. The European construction sector is in a difficult situation due to elevated interest rates. Newly published outlooks confirm that the pace of growth of the economy will remain subdued this year and not improve until next year. The IMF's updated GDP growth projection for this year is 0.9%, while the interim OECD report forecasts 0.6%. The CF analysts remain more conservative on average. The rate of growth is predicted to pick up to 1.3–1.7% next year.

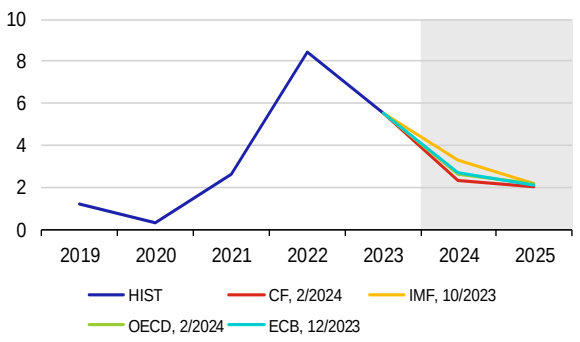
The ECB kept its policy rates unchanged in January. Despite the gradually weakening inflation pressures and lingering concerns of a recession in Europe, the central bank's tone remains hawkish. This is because of persistent core inflationary pressures and concerns about the heightened geopolitical tensions. According to preliminary data, consumer price inflation slowed slightly (to 2.8% in annual terms) and core inflation fell to 3.3% in January. The OECD expects inflation to average 2.6% this year. The January CF lifted the outlook to 2.3%. Average HICP inflation will not reach the target until 2025.

GDP growth, %



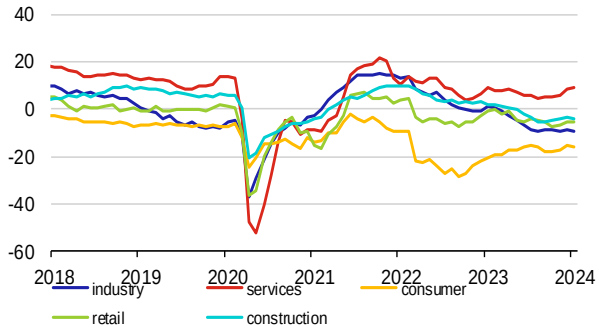
	CF	IMF	OECD	ECB
2024	0.5	0.9	0.6	0.8
2025	1.3	1.7	1.3	1.5

Inflation, %



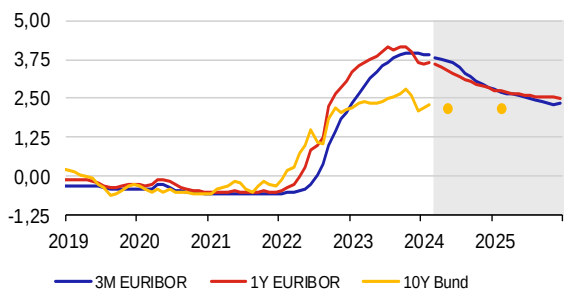
	CF	IMF	OECD	ECB
2024	2.3	3.3	2.6	2.7
2025	2.0	2.2	2.2	2.1

ESI leading indicators



	industry	services	consum.	retail	constr.
11/23	-9.2	5.6	-17.0	-6.9	-4.1
12/23	-9.0	8.4	-15.1	-5.4	-3.4
1/24	-9.3	8.8	-16.1	-5.6	-4.3

Interest Rates, %



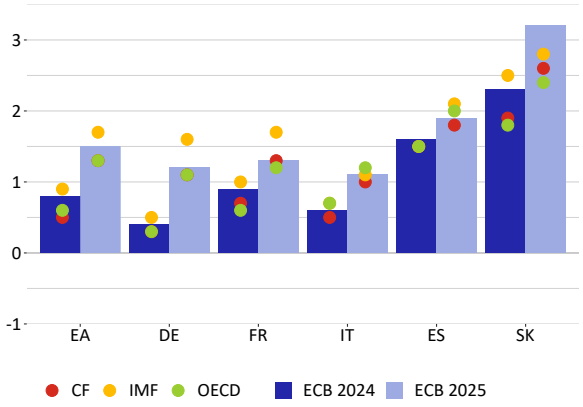
	1/24	2/24	5/24	2/25
3M EURIBOR	3.92	3.91	3.70	2.70
1Y EURIBOR	3.61	3.63	3.39	2.73
10Y Bund	2.20	2.30	2.20	2.20

III.2 Germany

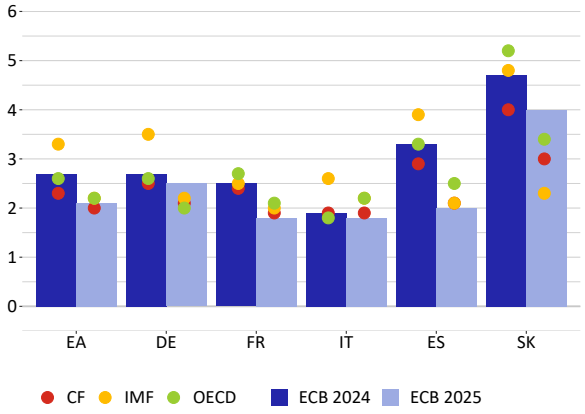
The German economy contracted at the end of last year after more or less stagnating in the first three quarters. The GDP contraction of 0.3% (quarter on quarter) in 2023 Q4 was caused primarily by a drop in investment in construction, machinery and equipment. Although Germany ultimately avoided a technical recession last year, it was one of the weakest large economies in the world. The economy shrank by 0.3% in 2023 as a whole and the post-pandemic recovery thus halted. Retail sales, exports and industrial production all fell, and households were hit by growth in the cost of living, while the country's huge manufacturing sector floundered due to high energy costs and weak global demand. According to the IMF's new forecast, the economy should grow by 0.5% this year and by 1.6% next year. CF is rather more pessimistic, predicting growth of 0.3% and 1.1% respectively. The composite PMI decreased slightly in January, staying in the contraction band (47.0) for the seventh month in a row and thus pointing to weakness in the economy. Business activity fell at the fastest rate since last October – services declined more quickly, while the drop in manufacturing was the smallest in several months. Business sentiment worsened according to the Ifo index, with both the assessment of the current situation and expectations for the coming months being more pessimistic. The ZEW index indicated better expectations, but its assessment of the current situation still suggests that the recovery will be slow. Consumer sentiment is sinking again as the year begins. Nationwide strikes are exacerbating the gloom at the start of the new year.

Annual consumer inflation slowed slightly at the beginning of 2024. After surging to 4% in December, harmonised prices rose by 3.1% in January. Energy prices went down even though price caps were ended, and food price inflation continued to slow, although it remained higher than the overall inflation rate. Core inflation excluding energy and food prices decreased slightly again to 3.4%. The new CF forecast still sees prices rising by 2.5% this year and by 2.1% next year. Industrial producer prices fell again by a full 8.6% in year-on-year terms in December.

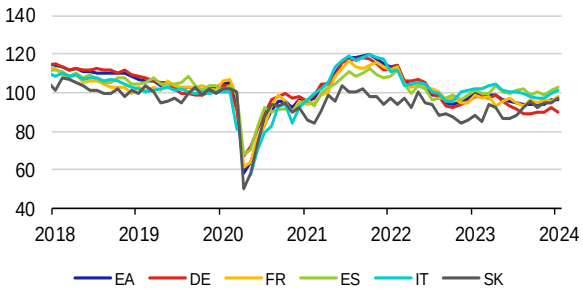
GDP growth in selected euro area countries in 2024 and 2025, %



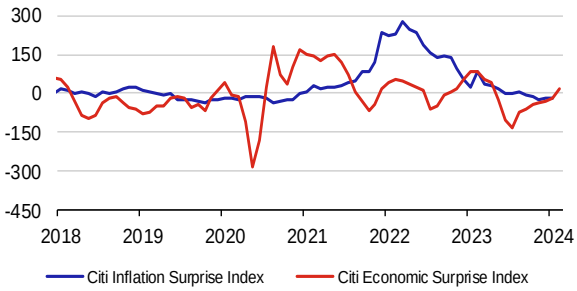
Inflation in selected euro area countries in 2024 and 2025, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
11/23	94.3	89.7	96.2	99.0	97.5	94.4
12/23	96.5	92.0	95.6	101.2	99.3	95.1
1/24	96.2	89.8	98.0	102.6	100.9	97.0

Inflation expectations based on 5year inflation swap and SPF

	5y5y	SPF
12/23	2.29	2.14
1/24	2.26	2.05
2/24	2.27	2.05

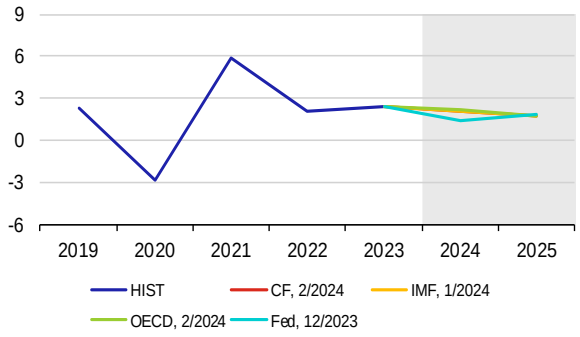
III.3 United States

US voters are probably facing the same choice of candidates as they did four years ago: Joe Biden versus Donald Trump. The entire world, however, is following the US presidential elections, because a change of president would very likely mean an about-face in international policy as well. One of the biggest concerns is another flare-up in trade tensions, as Donald Trump plans to impose a 10% tariff on all imports to boost US government revenues and support the American market.

Real GDP growth stood at 3.1% in 2023, exceeding expectations. The US economy grew at a pace of 3.3% in Q4, supported mainly by high household consumption and also by government consumption. Household consumption was particularly strong in December. The labour market also started the year on strong note – non-farm payrolls expanded by 353,000 in January and the December job count was also revised up. The revisions indicate that the labour market is tighter than it first seemed. This could maintain the upward pressure on wages, which rose by 4.5% year on year in January. CF and the IMF have revised their GDP growth outlooks for 2024 upwards, with both forecasting 2.1% for this year and 1.7% for next year.

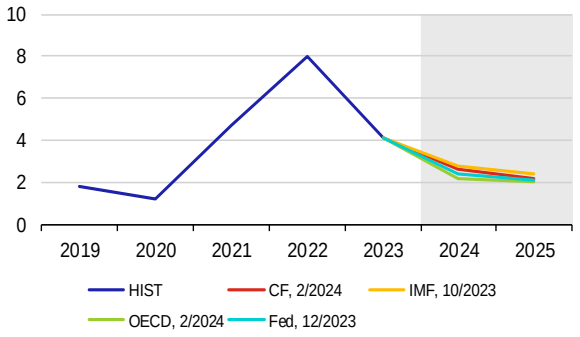
Market expectations about the timing of the first rate cut were pushed back by the Fed's communications in January and even further back by the new inflation figures. Markets had been expecting the Fed to be the first central bank to lower rates this year – in March. After the publication of the January figures, however, they now see the first cut happening only in June, with rates expected to fall by around 1 pp this year. At the press conference after the January meeting, Chair Powell said rates would not be reduced until the central bank had gained greater confidence that inflation was moving sustainably towards the target. Although annual inflation dropped to 3.1% in January, monthly and core inflation both rose.

GDP growth, %



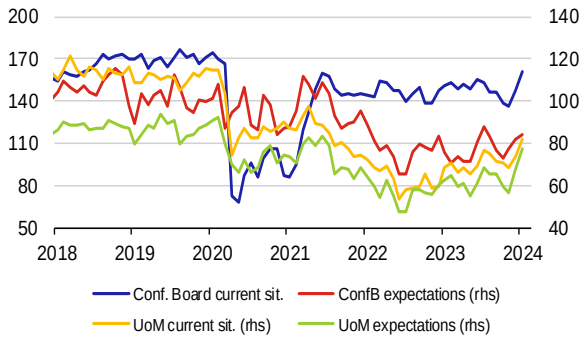
	CF		IMF		OECD		Fed
2024	2.1	↑	2.1	↑	2.2	↑	1.4
2025	1.7	→	1.7	↓	1.7	→	1.8

Inflation, %



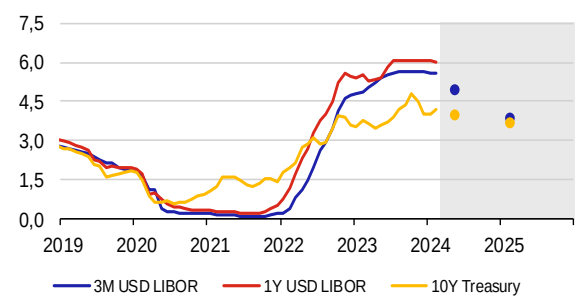
	CF		IMF		OECD		Fed
2024	2.6	→	2.8	↓	2.2	↓	2.4
2025	2.2	↓	2.4	↓	2.0	↓	2.1

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
11/23	136.5	77.4	68.3	56.8
12/23	147.2	81.9	73.3	67.4
1/24	161.3	83.8	81.9	77.1

Interest Rates, %



	1/24	2/24	5/24	2/25
USD LIBOR 3M	5.58	5.57	5.00	3.90
USD LIBOR 1R	6.04	6.04		
Treasury 10R	4.04	4.21	4.00	3.70

III.4 China

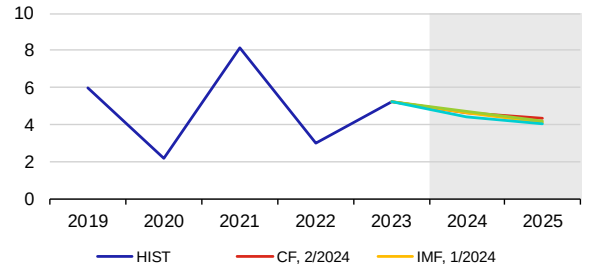
China's annual GDP growth was 5.2% at the end of last year according to official figures, following an upward revision of the Q3 data. The higher-than-expected growth figures were also due to strong activity in industry (month-on-month growth of 0.9% in November and 0.5% in December), while the data on private consumption – especially retail sales – were relatively weak in the final three months of the year. According to the latest data, the urban unemployment rate inched up in January. Government stimulus measures, which helped avert economic stagnation last year, are currently being hampered by the low creditworthiness of the overleveraged construction sector.

Business confidence according to the Caixin index was in the expansion zone overall in January (52.5 points), the same as a month earlier. The biggest contributor to the optimistic data was services (52.7 points), while manufacturing was only just above the 50-point mark (50.8, as in December). According to China's National Bureau of Statistics, business sentiment showed a fourth consecutive monthly contraction in January (49.2 points).

Consumer inflation was significantly negative in January (-0.8%), mainly due to a continuing fall in food prices. It was the fourth straight month of year-on-year price decline, although the CPI did start to rise in month-on-month terms (0.3%). Core inflation remained positive in January, despite being lower than in the previous three months (0.4% year on year, as against 0.6% previously). Annual inflation was positive mainly in the clothing, housing, health and education categories.

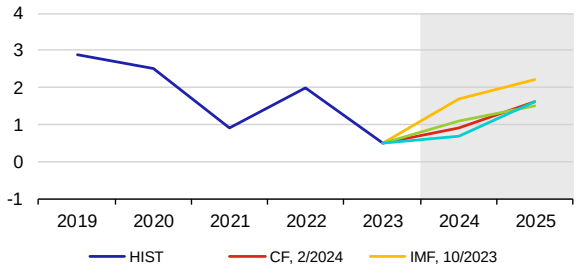
Exports from China stopped declining and began to grow in year-on-year terms at the end of last year. Nonetheless, exports to Russia (up 46.9% in 2023 as a whole) account for the bulk of this change, while exports to most industrial nations are down (for example by around 10% in the case of the USA and the EU for the year as a whole). The sectors bucking this trend are still (electric) cars and the rare earths used to make batteries for them. Imports to China were broadly flat last year, although large differences are apparent between trading partners. The balance of trade remains positive (USD 75.34 trillion at the year-end), thanks mainly to a growing trade surplus with Russia.

GDP growth, %



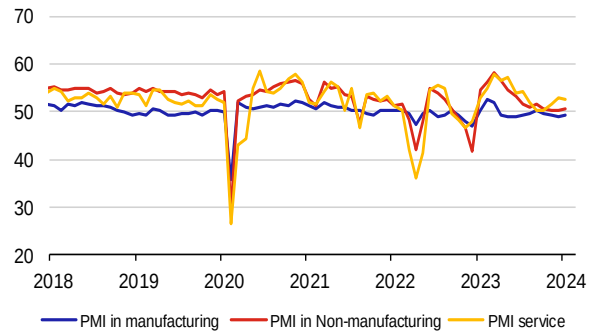
	CF	IMF	OECD	OE
2024	4.6	4.6	4.7	4.4
2025	4.3	4.1	4.2	4.0

Inflation, %



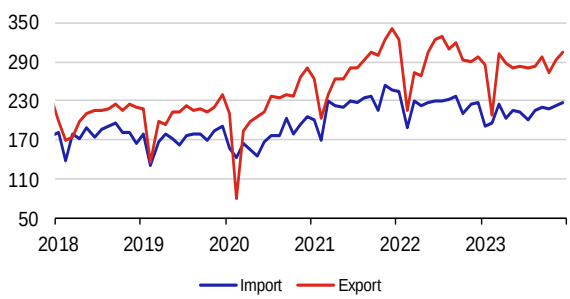
	CF	IMF	OECD	OE
2024	0.9	1.7	1.1	0.7
2025	1.6	2.2	1.5	1.6

Leading indicators



	PMI manuf.	PMI in Non-manufacturing	PMI service
11/23	49.4	50.2	51.5
12/23	49.0	50.4	52.9
1/24	49.2	50.7	52.7

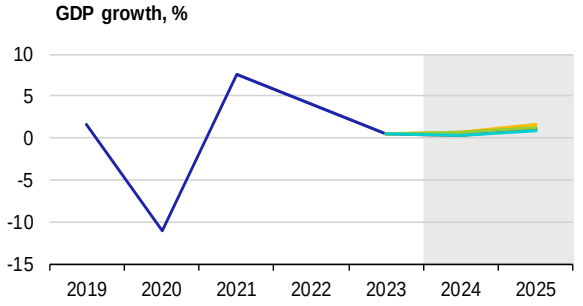
Development of China foreign trade, bil. USD



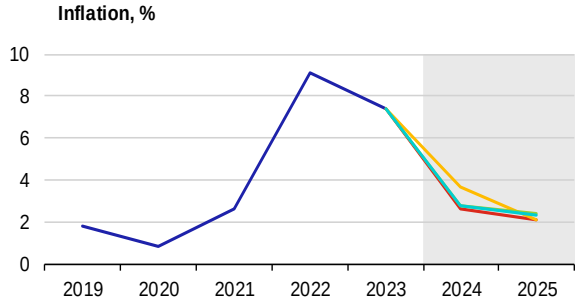
Source: Bloomberg

III.5 United Kingdom

The UK economy fell into a technical recession at the end of last year. According to the flash estimate, GDP decreased by 0.3% (quarter on quarter) in Q4, after declining by 0.1% in the previous quarter. The economy was broadly flat in 2023 (growth of 0.1%), while the new BoE and CF forecasts estimate growth of 0.3% for this year and about 1% for 2025. The IMF is much more optimistic. Consumer price inflation stabilised at 4% in January, the level it reached in December last year, when it unexpectedly rose year on year. Even core inflation had maintained its growth rate (5.1%). According to the BoE's new forecast, inflation should fall to the 2% target in spring and then increase slightly again. The policy rate remained at a 15-year high of 5.25% after the February meeting, due to the trend in inflation and concerns about price pressures as a result of the crisis in the Red Sea. Despite this crisis, the composite PMI in January was indicating a recovery in private sector activity (52.9), which has gathered momentum. This was the strongest growth rate since May 2023.



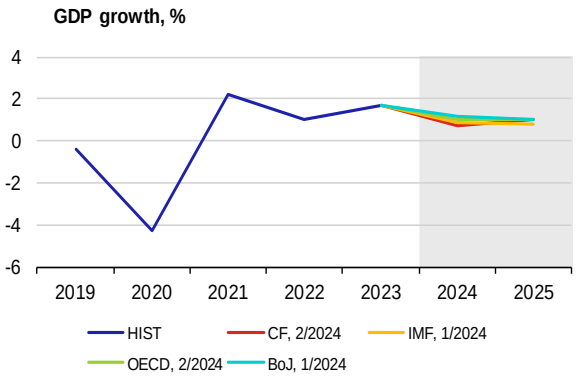
	CF	IMF	OECD	BoE
2024	0.3	0.6	0.7	0.3
2025	1.1	1.6	1.2	0.8



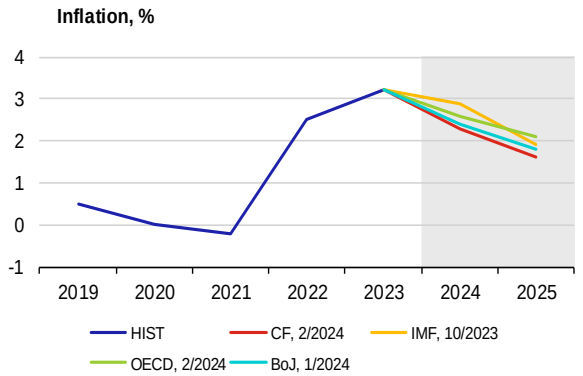
	CF	IMF	OECD	BoE
2024	2.6	3.7	2.8	2.8
2025	2.1	2.1	2.4	2.3

III.6 Japan

Japan slipped unexpectedly into technical recession and lost its position as the third-largest global economy. According to the flash estimate, after a decline in 2023 Q3, Japan saw a further quarter-on-quarter drop in GDP in Q4 (-0.1%). This was due to private consumption – weakened by a continuing drop in households' real income – and private investment. A weak yen moved the dollar value of the Japanese economy behind Germany, which thus replaced it as the world's third largest economy. China overtook Japan in 2010, and the rapidly growing Indian economy is likely to do so soon as well. Stagnant productivity and an ageing and shrinking population is dampening Japanese growth in the long term. At its January meeting, the BoJ left its monetary policy unchanged, but BoJ officials sent out a hawkish signal that monetary tightening could occur sooner rather than later. In light of new macro-data – including moderate leading inflation in Tokyo – this outlook looks less credible, and the markets are lowering their bets on the negative interest rate policy ending in the spring.



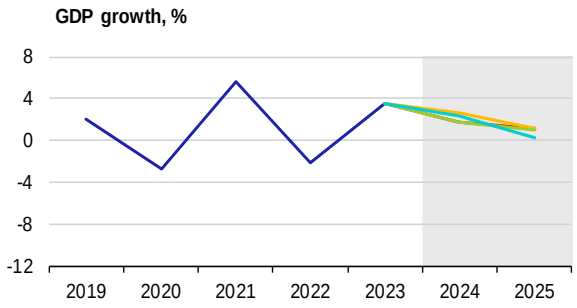
	CF	IMF	OECD	BoJ
2024	0.7	0.9	1.0	1.2
2025	1.0	0.8	1.0	1.0



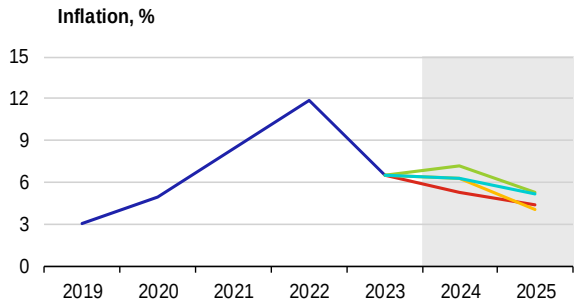
	CF	IMF	OECD	BoJ
2024	2.3	2.9	2.6	2.4
2025	1.6	1.9	2.1	1.8

III.7 Russia

The CBR's key rate remains unchanged at 16% after its February meeting, in line with market consensus. January saw a sharp rise in fruit and vegetable prices in Russia as well as an acceleration in core inflation due to a shortage of electronic goods and cars. This caused the month-on-month inflation rate to increase to 0.9%. Inflation expectations of households and firms remain elevated. Russia recorded higher-than-expected GDP growth of 3.6% in 2023, largely driven by state-funded weapons and munitions production. The Russian economy is also expected to grow in 2024, albeit at a rather slower pace. The unemployment rate rose to 3.0% in December 2023 from the historical low of 2.9% recorded in the previous two months. Labour shortages are still the main obstacle to increasing the country's output of goods and services. The rouble reached a six-month high in the second half of January and then gradually declined to its lowest level so far this year.



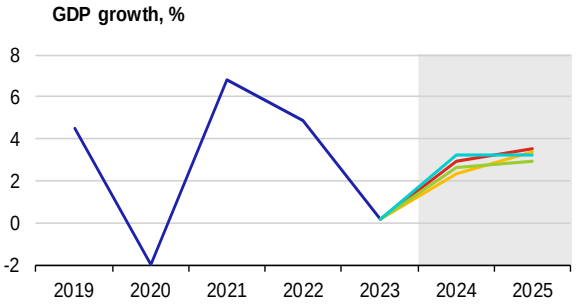
	CF	IMF	OECD	OE
2024	1.7	2.6	1.8	2.4
2025	1.1	1.1	1.0	0.2



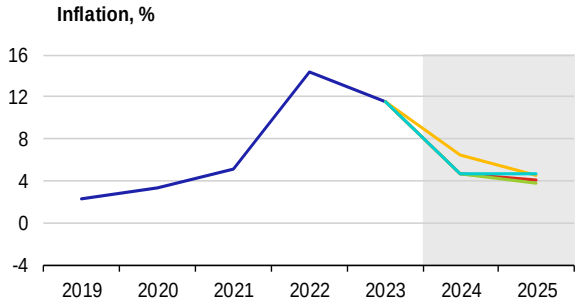
	CF	IMF	OECD	OE
2024	5.3	6.3	7.2	6.3
2025	4.4	4.0	5.3	5.2

III.8 Poland

In line with market expectations, the Polish central bank left its key rate unchanged at 5.75% for the fifth consecutive month in February. The bank is waiting to see what happens with inflation and views an uncertain fiscal outlook and slow economic recovery as the biggest risks. While annual inflation had been broadly flat at above 6% in 2023 Q4, it slowed sharply in January, falling from 6.2% to a preliminary figure of 3.9%, the lowest level since March 2021. Prices rose by 0.4% month on month. Producer prices are contributing to the weakening of inflation pressures, falling by 6.4% year on year in December. This was the sixth annual decline in a row. An appreciation of the Polish currency is also acting against inflation. Annual GDP growth rose from 0.5% to 1.0% in Q4. However, the economy was flat compared to the previous quarter and recorded growth of only 0.2% in 2023 as a whole. The situation is particularly unfavourable in manufacturing, which recorded a year-on-year contraction of 5.6% in December. According to the S&P Global PMI, the situation unexpectedly deteriorated even more in January. Unemployment rose from 5.0% to 5.1% in December. The January CF expects average GDP growth of 2.9% and 3.5% and consumer price inflation of 4.7% and 4.0% in 2023 and 2024 respectively.



	CF	IMF	OECD	OE
2024	2.9	2.3	2.6	3.2
2025	3.5	3.4	2.9	3.2

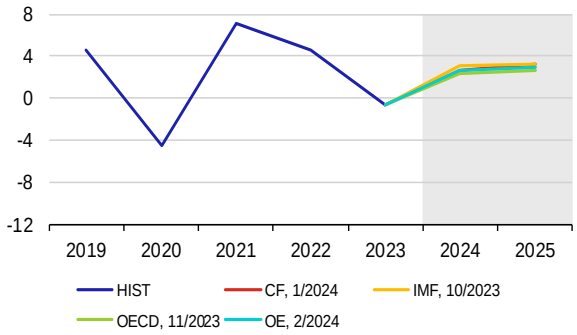


	CF	IMF	OECD	OE
2024	4.7	6.4	4.7	4.6
2025	4.0	4.5	3.7	4.6

III.9 Hungary

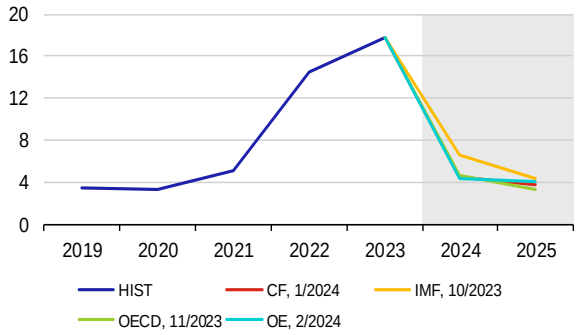
At its January meeting, the Hungarian central bank cut its key interest rate by less than expected – by 0.75 pp to 10%. The MNB expects inflation to fall further but remains cautious, as favourable base effects will fade out in the coming months. A weakening of the forint, which is under pressure not only from falling interest rates, but also due to political disputes with the EU, may also be a risk. However, January inflation exceeded expectations, slowing from 5.5% to 3.8%, its lowest level since March 2021 and much closer to the central bank's 3% target. Core inflation fell from 7.6% to 6.1%. Prices rose by 0.7% month on month in January. Conversely, GDP failed to meet optimistic expectations in Q4 and was flat in both year-on-year and quarter-on-quarter terms. There is no sign yet of the expected recovery in consumer demand, which should be supported by falling inflation and real wage growth (which picked up to 14.1% in nominal terms in November). External demand also remains weak. The situation in industry, which deteriorated at the end of last year in most sectors, is preventing stronger economic growth. The local manufacturing PMI leading indicator is not indicating a significant turnaround for January either, having fallen from 51.0 to 49.9. Industrial producer prices fell for the fifth successive month in December and the pace of decline accelerated. The unemployment rate rose to 4.4% in Q4, up from 3.9 % a year ago. Despite falling into deficit in December for the first time in 11 months, the trade balance is set to show a near-record surplus for 2023 as a whole due to a decline in prices of imported energy commodities. The January CF expects average GDP growth of 2.7% and 3.3% and average consumer price inflation of 4.5% and 3.7% for 2023 and 2024 respectively.

GDP growth, %



	CF	IMF	OECD	OE
2024	2.7	3.1	2.4	2.7
2025	3.3	3.3	2.7	2.9

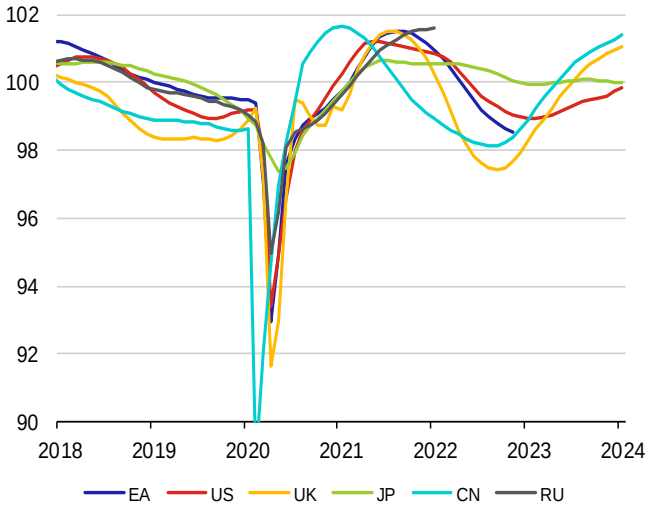
Inflation, %



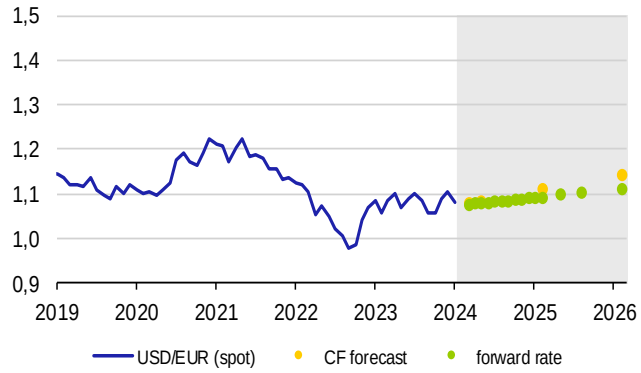
	CF	IMF	OECD	OE
2024	4.5	6.6	4.6	4.3
2025	3.7	4.3	3.3	4.1

IV. Leading indicators and exchange rate outlooks

OECD Composite Leading Indicator

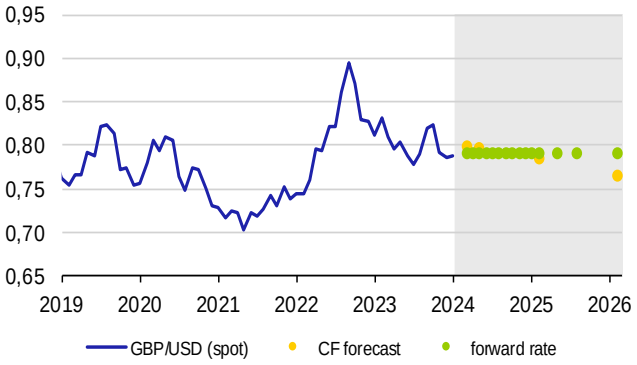


The US dollar (USD/EUR)



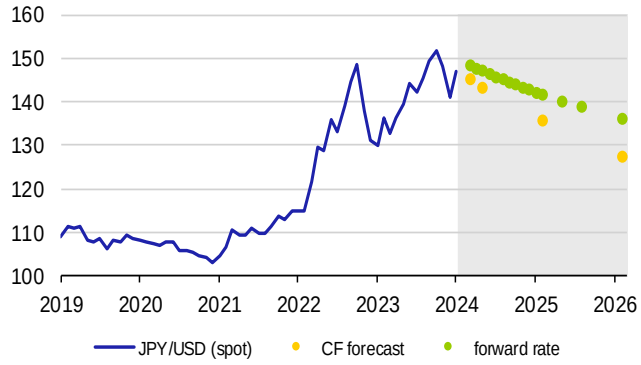
	12/2/24	3/24	5/24	2/25	2/26
spot rate	1.077				
CF forecast		1.081	1.086	1.113	1.145
forward rate		1.078	1.081	1.095	1.113

The British pound (GBP/USD)



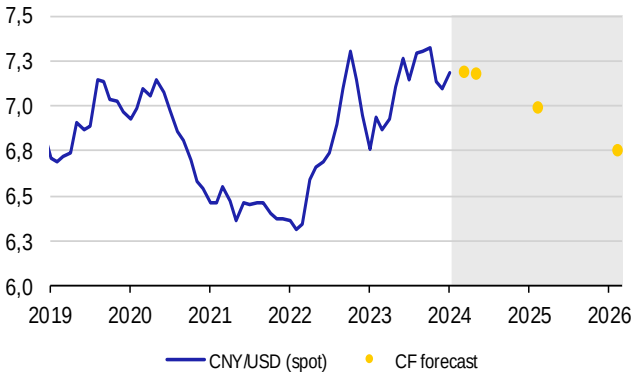
	12/2/24	3/24	5/24	2/25	2/26
spot rate	0.792				
CF forecast		0.800	0.797	0.786	0.767
forward rate		0.792	0.791	0.791	0.792

The Japanese yen (JPY/USD)



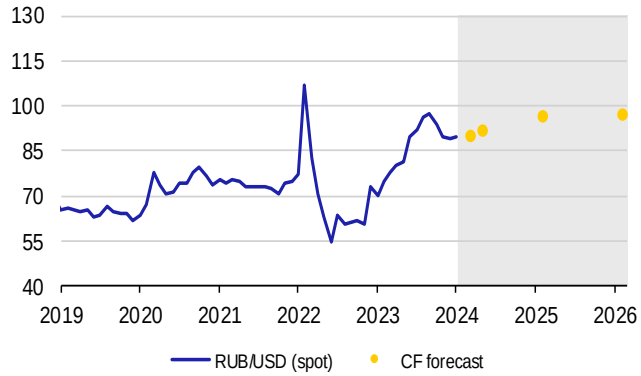
	12/2/24	3/24	5/24	2/25	2/26
spot rate	149.5				
CF forecast		145.2	143.3	135.9	127.5
forward rate		148.7	147.3	141.8	136.3

The Chinese renminbi (CNY/USD)



	12/2/24	3/24	5/24	2/25	2/26
spot rate	7.216				
CF forecast		7.195	7.180	6.999	6.764

The Russian rouble (RUB/USD)



	12/2/24	3/24	5/24	2/25	2/26
spot rate	91.25				
CF forecast		90.35	92.05	96.80	97.34

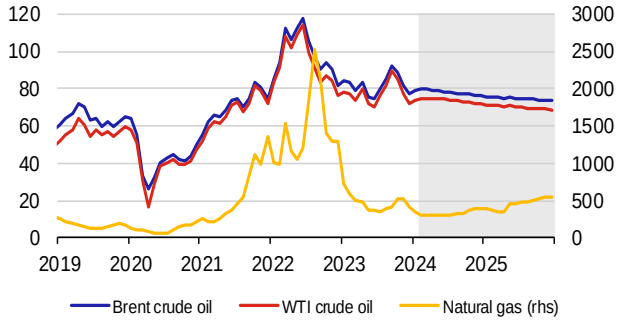
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

V.1 Oil

The Brent crude oil price recorded its first monthly increase since September in January and moved above USD 80/bbl at the end of the month. Global oil market balances tightened in January despite demand growth weakening further. This was due to supply outages in North America (prompted by an Arctic freeze) and Libya and further voluntary output curbs by OPEC+. Escalating geopolitical tensions in the Red Sea then led to delays in oil supplies as shipping companies made greater use of the longer route around southern Africa. The IEA estimates that annual gains in global demand eased from 2.8 million to 1.8 million barrels a day in 2023 Q4, due mainly to lower demand from China. The slowdown in demand growth is set to continue this year. Non-OPEC+ production growth will also weaken. Despite this, it should alone be stronger (1.6 million barrels a day) than the expected growth in world demand (1.2 million barrels a day). The Brent crude oil price dropped sharply to USD 76/bbl in early February after reports emerged of a possible temporary ceasefire between Israel and Hamas. Oil prices were also pushed down by an appreciating dollar in response to the Fed's statement that an early rate cut is unlikely. However, the Israeli prime minister later ruled out the possibility of a ceasefire and the oil price rapidly returned above 80 USD/bbl.

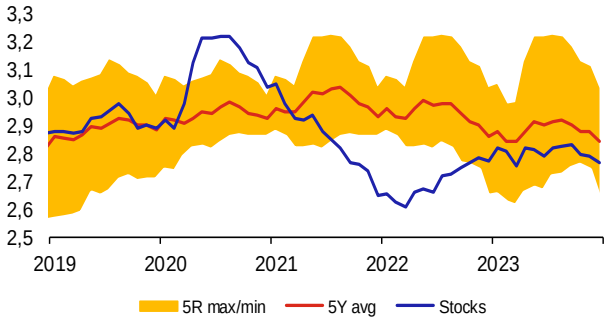
In the first half of February, the market curve for Brent crude oil futures was signalling prices of USD 76/bbl and USD 73/bbl at the end of this year and the next respectively. According to the EIA, global oil stocks will fall by an average of 0.8 million barrels a day in 2024 Q1, which will put upward pressure on oil prices. Demand and supply should be roughly balanced for the rest of this year. A moderate excess of oil on the market is forecasted for next year, with slowing growth in demand being outpaced by increasing production growth. According to the EIA, the oil price will rise to USD 85/bbl in April and then fall over the rest of the forecast period to USD 81/bbl at the end of 2024 and USD 78/bbl at the end of 2025. CF expects a Brent price of USD 80/bbl one year ahead.

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

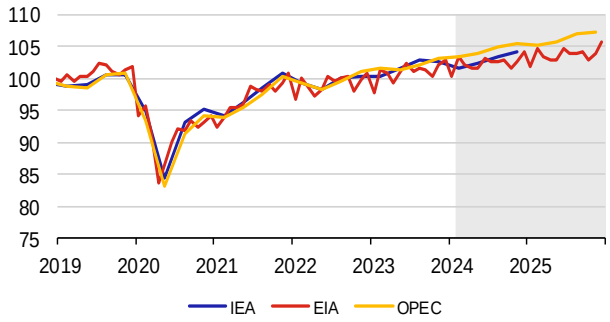


	Brent	WTI	Natural gas
2024	78.16	73.72	334.79
2025	74.66	70.04	459.10

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

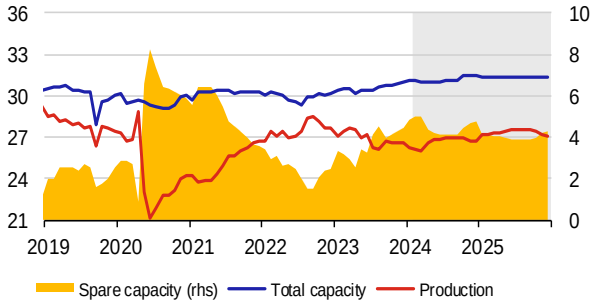


Global consumption of oil and oil products (mil. barrel / day)



	IEA	EIA	OPEC
2024	102.88	102.43	104.40
2025		103.72	106.24

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



	Production	Total capacity	Spare capacity
2024	26.66	31.13	4.48
2025	27.35	31.37	4.02

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.

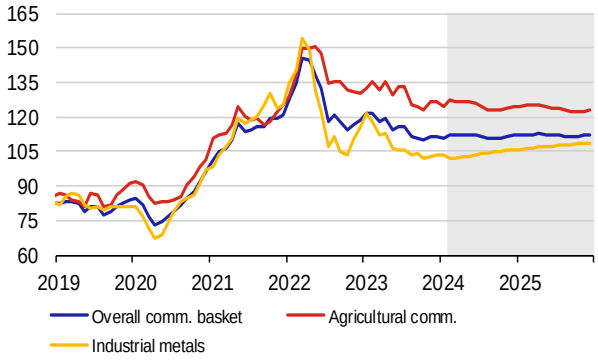
V.2 Other commodities

The price of natural gas in Europe continued to decline rapidly in January and the first half of February to below EUR 25/MWh, its lowest level since June 2023. Inventories fell temporarily below last year's level but remain at a comfortable level due to weak household consumption for heating and industrial consumption and to increased supplies from Norway. The price of coal for the European market continued to fall, as it has been doing since mid-October. This is mainly due to lower imports to China (where renewed import tariffs came into force in January) and higher Chinese production.

The industrial metals price index continued to trend down slightly in January and the first half of February. The outlook remains rising. The J.P.Morgan Global Manufacturing PMI rose to the neutral level of 50 in January, but weakness in Chinese industry (where the PMI was flat at 49.2) pushed metal prices down. The situation in the Chinese construction and property sector also remains bad. The aluminium price edged up on reports that the EU is mulling a ban on Russian aluminium imports under new sanctions. The nickel price fell for the ninth straight month due to weaker electric car production and surplus in the market. The prices of zinc and iron ore fell sharply in February due to the poor state of the Chinese construction sector and high inventories. The price of steel was broadly flat, as Chinese steelmakers curtailed production due to weak demand**.**

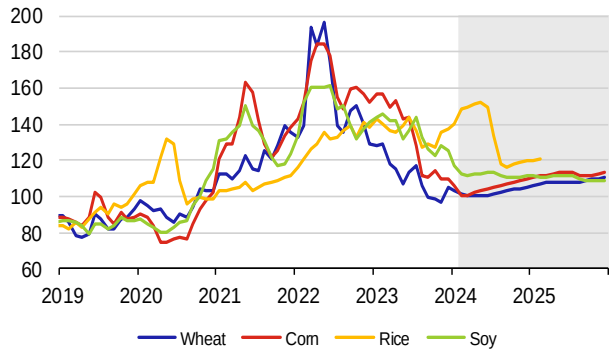
The food commodity price index fell in January but showed solid growth in the first half of February. The outlook is slightly falling. Individual prices showed mixed trends. Soy and corn prices continued to fall on expectations of higher stocks in the USA, high production in South America and weaker demand from China. Wheat prices also fell in mid-February due to rising expected production in Russia and elsewhere. Conversely, rice prices kept rising on the back of growing demand in Indonesia, Saudi Arabia and the Philippines. Cocoa and beef prices saw further strong growth, as did the sugar price in January.

Non-energy commodities price indicies



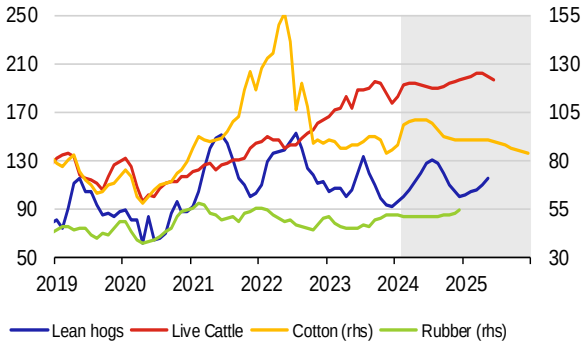
	Overall	Agricultural	Industrial
2024	111.6	125.0	103.9
2025	112.2	123.7	107.5

Food commodities



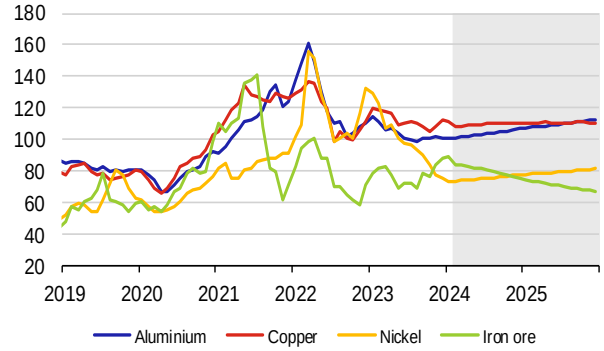
	Wheat	Corn	Rice	Soy
2024	102.2	105.0	134.6	112.3
2025	108.3	112.2	120.3	110.3

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2024	112.4	191.6	95.6	51.3
2025	107.1	199.3	88.0	

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2024	103.8	110.0	75.6	81.2
2025	110.1	110.9	79.8	70.9

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.

Central banks' macroeconomic forecasts: When two do the same thing, it is not the same thing[1]

What do central bankers base their interest rate decisions on? In this article, we compare the forecasting and analytical tools and processes applied by inflation-targeting central banks when making monetary policy. We draw on a questionnaire prepared by the Czech National Bank and distributed to the relevant units of 22 central banks in developed and developing economies in the second half of 2023. The responses reveal that a wide diversity of detail underlies the apparent similarity in central banks' internal macroeconomic forecasting processes. That diversity manifests in the range of analytical and forecasting tools used and the degree of transparency in the monetary policy process. We also show how the ownership of the forecast varies across banks and how intensively the bank's management is involved in preparing the macroeconomic forecast. Both have implications not only for the structure of the internal discussions inside the central bank, but also for the bank's external communications. We conclude by considering how the Covid and energy crises occurring in rapid succession gave rise to a new challenge for forecasting and for the role of forecasts in the monetary policy process in a context of growing tensions in the global economy. These events, among others, are motivating many central banks to review their monetary policy frameworks and often their modelling frameworks as well.

Cast in the same mould

Our survey shows that central banks' internal processes are very similar to each other in modern (inflation targeting-based) central banking. All the central banks (CBs) in our sample organise their monetary policy decision-making around a macroeconomic forecast prepared by experts at regular intervals using a combination of (semi-)structural macroeconomic models, statistical methods and expert judgement. All the CBs we surveyed complement the baseline scenario of their forecasts with alternative/sensitivity scenarios to capture key risks.

This similarity will be no surprise to those with knowledge of the field. Unlike other monetary policy regimes, inflation targeting is relatively new[2] and its intellectual tradition can be traced in specific academic publications. The operational procedures of inflation targeting have gradually been refined into "best practices" promoted by international financial institutions, most notably the IMF. The FPAS (forecasting and policy analysis) "gospel", which summarises the main principles, has been and continues to be spread via technical assistance to more and more countries (see, for example, Adrian, Laxton and Obstfeld, 2018)[3]. In other words, the similarity is no accident; it is a result of casting in the same mould.

There are, however, striking differences between central banks in the transparency and management of processes and in analytical and forecasting tools and their use in the monetary policy process. Some CBs rely on a single core model, while others prefer to use a set of models. Closely linked with this are differences in the perceived hierarchy between structural macroeconomic models, short-term forecasts and expert judgement. In this article, we describe these differences in CBs' practices in detail, looking at the trends in recent years and the outlook for the future.

Glass walls don't suit everyone

Although inflation-targeting central banks have similar forecasting infrastructures and internal processes, the CBs we surveyed differ widely in their willingness to let the public look under the hood. In other words, there are differences in how transparent the CBs are.[4] Most of them publish their core model and its structure on their websites, but almost a third do not.[5] There turns out to be a clear correlation between disclosure of the core model and the transparency index constructed by Dincer, Eichengreen and Geraats (2022). This is not surprising given that published model documentation is one of the 15 transparency index criteria. However, other questions from our questionnaire that are not explicitly included in the index also correlate strongly with it. For instance, all the CBs in our sample prepare alternative/sensitivity scenarios in addition to the baseline forecast, but fewer than 40% publish them usually or always. The overwhelming majority of these are CBs that have the highest transparency index values. More transparent CBs have also more often published reports on monetary policy reviews conducted in the last five years, although the statistical relationship is less clear-cut in this case.

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[1] Authors: Soňa Benecká, Martin Kábrt and Luboš Komárek. The views expressed in this article are those of the authors and do not necessarily reflect the official position of the Czech National Bank. The authors would like to thank the questionnaire respondents for their time and responses, as well as Petr Polák, Michaela Ryšavá and Anna Drahozalová for their assistance in collecting, processing and interpreting the data.

[2] New Zealand became the first inflation-targeting country in 1990.

[3] Implementation of FPAS in the Czech Republic is described by ČNB (2003).

[4] From the theoretical perspective, there is probably an optimal degree of transparency a CB can work towards. Lower-than-optimal and higher-than-optimal transparency both make a CB less understandable. However, it is not easy to determine the notional optimum level of transparency.

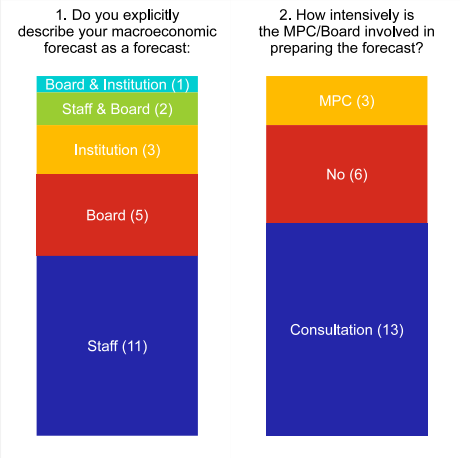
[5] Although some have published partial model documentation in research publications without disclosing the specific values of key parameters.

Yet even the most transparent CBs keep some forecasting results to themselves. The survey reveals that CBs that use a competing forecasting model alongside their core model do not publish alternative outlooks.[6]

Who owns the forecast?

There are also differences between central banks in the division of responsibility for the forecast between staff (experts) and the Board[7] (the decision-making body). Staff members are formally responsibility for the macroeconomic forecast in half (11) of the CBs surveyed, while the Board "owns" the forecast in five. In the rest, the ownership is shared – the forecast is assigned either by consensus to the institution as a whole or to the Board and staff jointly. In two CBs, the published forecast is owned by the Board, while the staff prepare an independent forecast internally as well (see Figure 1).

Figure 1 – Ownership of the forecast and the Board's degree of involvement in preparing it



Source: Authors' calculations

Most boards participate actively in forecasting even when the official forecast is assigned to staff. This involvement most frequently takes the form of consultation (13 CBs). Only in six cases does the Board completely refrain from involvement (see Figure 1). But even in these CBs, staff will often incorporate board members' opinions in the form of alternative scenarios. In CBs where the Board "owns" the forecast, it is more closely involved and usually also determines the final wording of the forecast. The above differences between countries in the management of monetary policy processes are most probably linked with national specifics and historical tradition – we found no clear correlation with the level of development of the economy, the monetary policy regime, or the CB's transparency or legal independence in the data. It seems that "old habits die hard".

Where the legal status of the CB can play a role, however, is in the fiscal part of the macroeconomic forecast. Fiscal policy has a significant influence on the macroeconomic environment and hence on future inflation. This is due to measures taken by the government (such as tax changes), the existence of administered prices in the economy, and also the size of central and local government budgets in the economy and the fiscal stimuli ensuing from them. Inflation-targeting CBs must therefore predict fiscal policy in their forecasts and keep track of the legislative process. Most of the CBs we surveyed prepare their own independent forecasts of fiscal variables, but a significant minority (five) – mostly CBs that have less legal independence than the others surveyed – only use the forecasts of their national fiscal authorities.

The interplay between models and expert judgement

All the CBs we surveyed use structural models, data-driven methods and expert judgement to construct their macroeconomic forecasts, but the roles and hierarchy of these three inputs differ visibly between banks. An integrated model-based framework is key for almost all the CBs. This strategy often involves adjusting outcomes using auxiliary models and incorporating expert judgement. By contrast, only two CBs emphasise a judgement-based approach over a model-based one. In these cases, the macroeconomic model serves more as a consultation point for sectoral experts.

More than a third of the CBs rely on one key forecasting model, while the majority apply a concurrent approach, engaging with multiple models. Even within this diverse modelling setup, a clear hierarchy emerges, with certain models exerting more influence than others. Ten of the twelve CBs that reported using multiple models regard one of them as the core one. The remaining two CBs treat the outcomes of their models as equal and average them in their forecasts. Even among the CBs that regard one model as the core one, there are differences in their perception of the function of complementary models. Some described their role as auxiliary to the core model, for example for calibrating adjustments to the core model, assessing its properties or capturing channels that the core model lacks. Other CBs emphasise interpreting the set of models as a diverse range of views on the economy, offering a different perspective or providing a control/alternative to the core model. In some cases, a complementary model is employed primarily for alternative scenarios, owing to its richer structure of economic relations, while a less structural and more data-driven core model is used for the baseline scenario.

[6] However, complementary models are not always viewed as competing. We examine the different roles of these models later in the article.

[7] In this article, we use the term "Board" to mean the generally competent authority that decides collectively on monetary policy in the country (the Bank Board, the Monetary Policy Committee etc.).

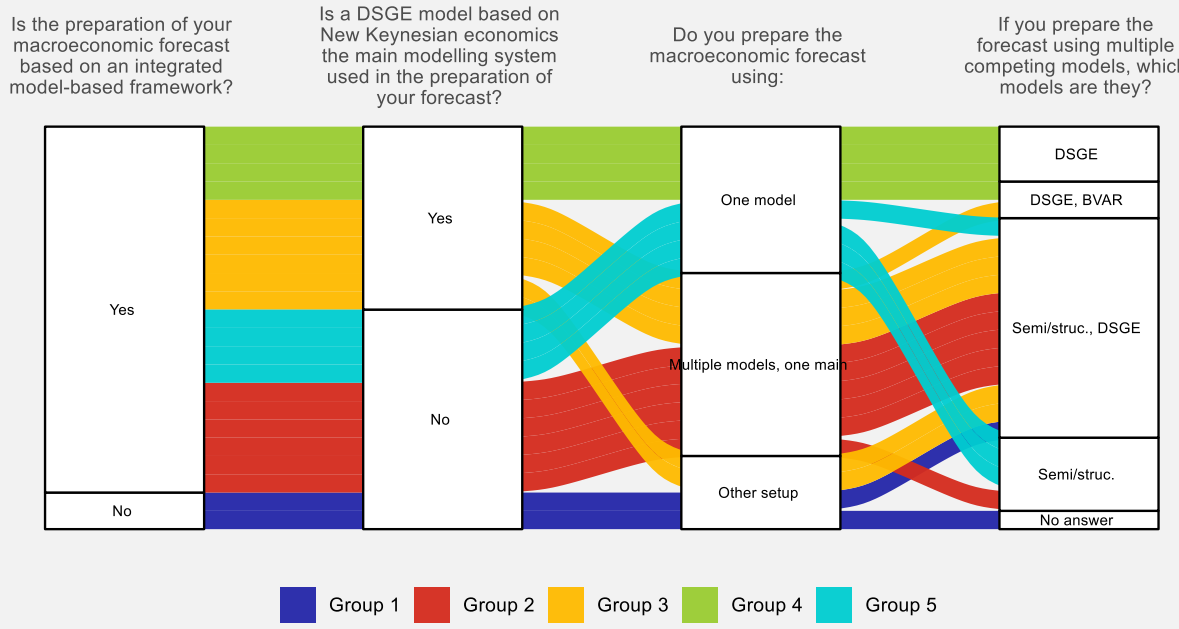
Compromises between theory and data (and other choices)

The modelling framework used to prepare the forecast has a strong bearing on CBs' internal discussions and external communications. However, there are several forecasting models/model "families" available, and each CB faces compromises between intuitiveness, flexibility, theoretical foundations, data fitting and complexity of economic linkages when choosing its core model. For example, many CBs prefer semi-structural models, which try to strike a balance between data-driven approaches and structurual approaches, which rely more on theoretical relationships often derived also from microeconomic foundations.[8] The outputs of semi-structural models tend to be simpler and more intuitive than those of more complex Dynamic Stochastic General Equilibrium (DSGE) models, which contain a wider range of theoretical linkages and transmission channels. By contrast, other CBs favour DSGE models as their core tool *because* of the theoretical micro-foundations of the behaviour of households and firms and the internal consistency of all the variables in such models. Other approaches employed by CBs include time series models (often based on Bayesian econometrics), which call for minimal theory and let the data speak for itself as far as possible.

Another important decision for the modelling framework is whether the forecast should be conditional on a given external interest rate path (such as a constant rate level or market expectations), or whether it should be unconditional, with rates determined consistently with the other variables inside the model.[9] The majority of CBs use unconditional forecasts. However, this does not mean that they do not prepare sensitivity scenarios simulating the impacts of constant rates or a required rate path for certain monetary policy issues.

We asked several questions about the properties of the models used by the CBs in our survey. In our subsequent interpretation, we also took on board the detailed comments attached to the responses and the published model documentation. To ascertain similar behaviour, we applied a machine-learning classification method adapted to work with categorical data. It uses a relatively simple principle to split selected countries into clusters, or groups, according to the similarity of the responses.

Figure 2 – Modelling frameworks across groups



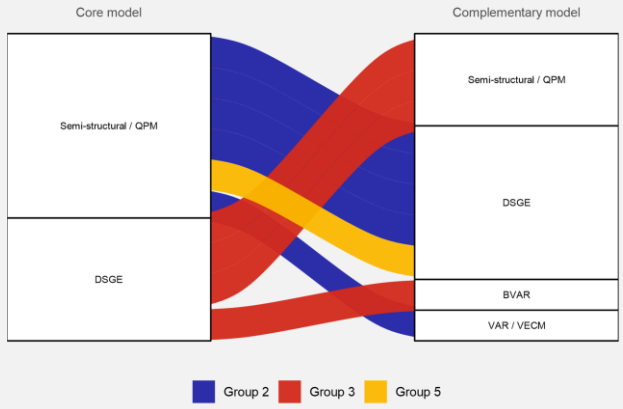
Source: Authors' calculations
Note: Countries are allocated to groups on the basis of clustering of mixed-type data (including categorical data) using partitioning around the medoids based on the Gower distance.

[8] A specific type of semi-structural model is a popular choice; prominent examples include the Fed's FRB/US model, the ECB's BASE model, the Bank of Canada's LENS model and the Bank of Japan's Q-JEM model. Another popular framework is the gap Quarterly Projection Model, which is used in a whole range of developing economies as well as several developed countries.

[9] Here again, there is a middle-ground option where rates are determined by a simple monetary policy rule. Some CBs use this option, while one told us that it regularly prepares both conditional and unconditional forecasts.

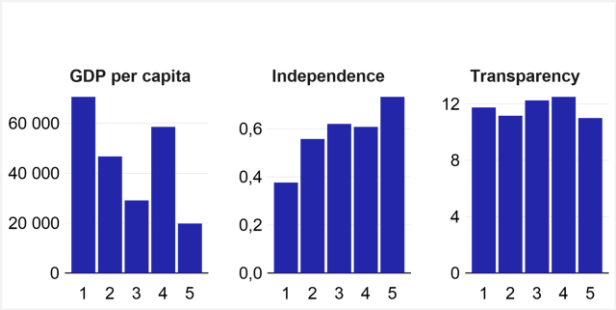
Our classification algorithm found five groups in which the modelling framework and forecast preparation setups were relatively similar (see Figure 2). The relatively small group 1 contains countries where both structural and DSGE models are used and the forecasts are conditional but expert judgement plays the key role. In groups 2 and 3 (the largest ones in terms of numbers), CBs make more use of the standard modelling framework based on multiple models concurrently, and the forecasts tend to be unconditional. However, the two groups differ in that DSGE models tend to play the main role in group 3, whereas countries in group 2 more often rely primarily on semi-structural models (see Figure 3). Groups 4 and 5 are also similar to each other, relying on just one key model – DSGE models in group 4 and semi-structural models in group 5.[10] This means that relatively few CBs have setups similar to that of the Czech National Bank, i.e. a modelling system in which a DSGE model has the dominant role (group 4). Although DSGE models are the most widespread forecasting tool among the CBs we surveyed, the majority of CBs take a richer set of complementary models into account.

Figure 3 – Model hierarchy in central banks applying multi-model approaches



Source: Authors' calculations
Note: In this figure, the sample of CBs is narrowed to those which rely on multiple forecasting models concurrently and described the hierarchy of those models in the questionnaire or model documentation. Countries are allocated to groups on the basis of clustering of mixed-type data (including categorical data) using partitioning around the medoids based on the Gower distance.

Figure 4 – Characteristics by group



Source: Authors' calculations
Note: x-axis – group numbers, y-axis – mean value of given indicator in group. Central bank independence à la Garriga (2016) and transparency à la Dincer et al. (2022)

The choice of modelling framework depends on many factors. CBs of wealthy and advanced economies can be found in all our groups. However, where a CB reports a rather looser framework in which expert judgement plays a greater role than modelling, it ranks among those from the wealthiest countries (countries with the highest GDP per capita), as Figure 4 shows. The CBs of smaller countries that are catching up with wealthy neighbours tend to use a tried-and-tested recipe, but a whole range of other factors also play a role here. The IMF is undoubtedly an important authority in this regard, not only providing technical assistance in many CBs and introducing best CB governance practices, but also coordinating international technical and research collaboration and facilitating personal contacts between central bank experts.

Time for a change?

Central banks all around the world are facing criticism for having failed to predict the inflation surge in 2021 and repeatedly getting their subsequent inflation forecasts wrong. Unprecedented shocks to the global economy – the pandemic and the related lockdowns and fiscal stimuli, the subsequent global supply chain disruptions, the energy crisis and Russia's invasion of Ukraine – have made their job harder. In our questionnaire, we asked the CBs how these shocks had affected their forecasting processes. We were also interested whether they were planning to make any major changes to their modelling frameworks or had conducted monetary policy reviews covering aspects of forecasting, or were planning to do so.

The CBs in the survey said they had encountered problems with modelling and preparing forecasts during the turbulent period. They mentioned, for example, high error rates of forecasts relying on past economic linkages, the breakdown of traditional seasonal equations, long data lags and large data revisions. The problems sometimes meant they had had to temporarily suspend their main modelling framework and put more weight on alternative data sources – mostly leading indicators – and expert judgement. Some CBs had added new sources of shocks to their core models. Another

[10] Near-term forecasting is significant in all CBs, with no systematic differences between banks. It plays a specific role in group 1, where the CBs reported a generally expert judgement-based approach to forecasting.

adaptation strategy had been to prepare more alternative scenarios reflecting the greater uncertainties and risks. CBs that generally rely more on expert judgement in the forecasting process[11] had met with fewer problems. Some institutions reported that the uncertainties had since diminished again and they had largely been able to return to previous practices in their forecasting processes; others, by contrast, said that the degree of expert judgement needed remained elevated.

Monetary policy reviews – especially those which focus on the macroeconomic forecast preparation process – also provide CBs with some feedback. A small set of CBs conduct reviews on a regular basis. This reflects their internal needs or legislative requirements. The majority of reviews are ad hoc, reflecting changes in communication or monetary policy, responding to difficult economic situations, or preceding the introduction of new instruments. The reviewers are usually CB staff, often supported by outside experts. CBs issue press releases on MP reviews. Most reviews are made publicly available, albeit occasionally in a partial format. CBs deem the reviews valuable and implement the recommendations arising from them. The quality of the forecasting framework tends not to be the core focus of MP reviews but is occasionally included. According to the CBs' comments, MP reviews have not fundamentally questioned the quality of forecasts or modelling frameworks. However, they have frequently prompted CBs to make refinements or give priority to particular areas.

The overwhelming majority of the CBs we surveyed are not planning to make major changes to their modelling frameworks. Some of the respondents identify their adaptations during the turbulent period and the development of new tools as evidence of the flexibility of the current processes. Numerous others mention plans to further develop their current core models or expand the set of models they use. Only one plans to alter its main modelling framework. Several others emphasise the need to adopt a multi-model approach, particularly in the aftermath of the recent shocks. According to some CBs, the multi-model approach will improve their ability to navigate evolving economic conditions. These findings may be linked to the fact that no new modelling approach having the potential to replace structural, semi-structural or DSGE models has yet been implemented, nor has academia offered a clear candidate.

The CBs have a similar view of the evolution of their forecasting tools over the past 20 years. The majority (14 CBs) replied that they had not stopped using any specific macroeconomic model or modelling framework in the past 20 years. Changes are interpreted more frequently as gradual improvements to models or expansion of the set of models used. The minority of cases (8 CBs) in which a framework was abandoned in the past most often involved a move towards more structural modelling (e.g. extension of theoretical relationships or implementation of a DSGE model). In one case, by contrast, a DSGE model was gradually replaced by a semi-structural model. In another, a DSGE model was used to shadow the core model but did not replace it, as it had insufficient predictive power.

Conclusion

Several main findings arise from the Czech National Bank's autumn 2023 survey. The first is the striking similarity of the CBs' key internal processes. On closer inspection of the responses, however, we see minor differences in the way macroeconomic forecasts are prepared and in the role of models across CBs and indirectly also over time. This is in line with our expectations, because (to borrow from biology) each CB went through its own evolutionary process in this area and its modelling framework is thus endemic to some degree. The second finding is that CBs have differing levels of transparency, especially with regard to the preparation of their macroeconomic forecasts. We find, for example, that even the most transparent CBs conduct part of their forecasting exercises for internal purposes only. The third finding concerns the ownership of the forecast, which also varies across CBs in terms of the role played by management in the preparation of the forecast. In some CBs, the forecast is produced almost solely by experts; in others, it is created jointly by experts and managers; and in some, management plays the pivotal role.

A total of 22 inflation-targeting CBs, including four key reserve banks, took part in the survey. We would like to take this opportunity to thank all the participating CBs again for their willingness and openness to share monetary policy-making information. The fraught start to this decade – the Covid, energy and security crises and the related tensions in the global economy – naturally laid bare the unspoken truth that forecasting is far more difficult in crisis periods than in times of normal business cycle uncertainty. Economists know that the modelling framework is an auxiliary tool that gives structure and multi-dimensionality to the monetary policy debate, not a machine for making final monetary policy decisions. The threshold effect of the post-2020 events clearly increased the incentive for CBs to review their modelling approaches and macroeconomic forecasting processes (using internal or external experts or a combination of the two) in order to identify what they could do better in the event of similar future shocks and to make sure their processes are correctly set up and robust. We hope that the shared aggregated and anonymised results of our questionnaire will help all central banks through this difficult process.[12]

[11] In the Czech National Bank's forecast preparation process, for example, near-term forecasting (NTF) played a larger role in the areas of GDP and wages. It was inserted into the model-based forecast instead of the standard coverage of the first quarter to one year ahead, replacing the purely model-based forecast from the core forecasting model (DSGE).

[12] The Czech National Bank is currently preparing a modelling exercise designed to determine what the outcomes of the core (DSGE) forecasting model probably would have looked like had we known the paths of the key economic variables that we normally base our simulations on (e.g. energy prices). This will form part of a broader monetary policy review to take place this year.

As the processors of the questionnaire, we believe that the sequence of events in recent years may prompt central banks to reconsider and, where necessary, revise their “best practices”. We feel that there is a need for a better understanding of some practices in those central banks which, for example, use several (competing and complementary) modelling outputs concurrently in their monetary policy decision-making – not only in the context of taking decisions on interest rates, but also in terms of making their decisions transparent and understandable for the public. We intend to address these and other issues in a follow-up questionnaire currently under preparation.

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Keywords

central banking, macroeconomic modelling, questionnaire

JEL Classification

C53, E58, C83

A1. Change in predictions for 2024

GDP growth, %

	CF		IMF		OECD		CB / OE	
EA	0	2024/2 2024/1	-0.3	2024/1 2023/10	-0.3	2024/2 2023/11	-0.2	2023/12 2023/9
US	+0.7	2024/2 2024/1	+0.6	2024/1 2023/10	+0.7	2024/2 2023/11	-0.1	2023/12 2023/9
UK	+0.1	2024/2 2024/1	0	2024/1 2023/10	0	2024/2 2023/11	+0.3	2024/2 2023/11
JP	-0.1	2024/2 2024/1	-0.1	2024/1 2023/10	0	2024/2 2023/11	+0.2	2024/1 2023/10
CN	0	2024/2 2024/1	+0.4	2024/1 2023/10	0	2024/2 2023/11	0	2024/2 2024/1
RU	0	2024/1 2024/1	+1.5	2024/1 2023/10	+0.7	2024/2 2023/11	0	2024/2 2024/1

Inflation, %

	CF		IMF		OECD		CB / OE	
EA	+0.1	2024/2 2024/1	+0.4	2023/10 2023/4	-0.3	2024/2 2023/11	-0.5	2023/12 2023/9
US	0	2024/2 2024/1	+0.5	2023/10 2023/4	-0.6	2024/2 2023/11	-0.1	2023/12 2023/9
UK	-0.1	2024/2 2024/1	+0.7	2023/10 2023/4	-0.1	2024/2 2023/11	-0.5	2024/2 2023/11
JP	+0.1	2024/2 2024/1	+0.7	2023/10 2023/4	0	2024/2 2023/11	-0.4	2024/1 2023/10
CN	-0.3	2024/2 2024/1	-0.5	2023/10 2023/4	+0.1	2024/2 2023/11	-0.1	2024/2 2024/1
RU	+0.2	2024/1 2024/1	+1.7	2023/10 2023/4	0	2024/2 2023/11	0	2024/2 2024/1

A2. Change in predictions for 2025

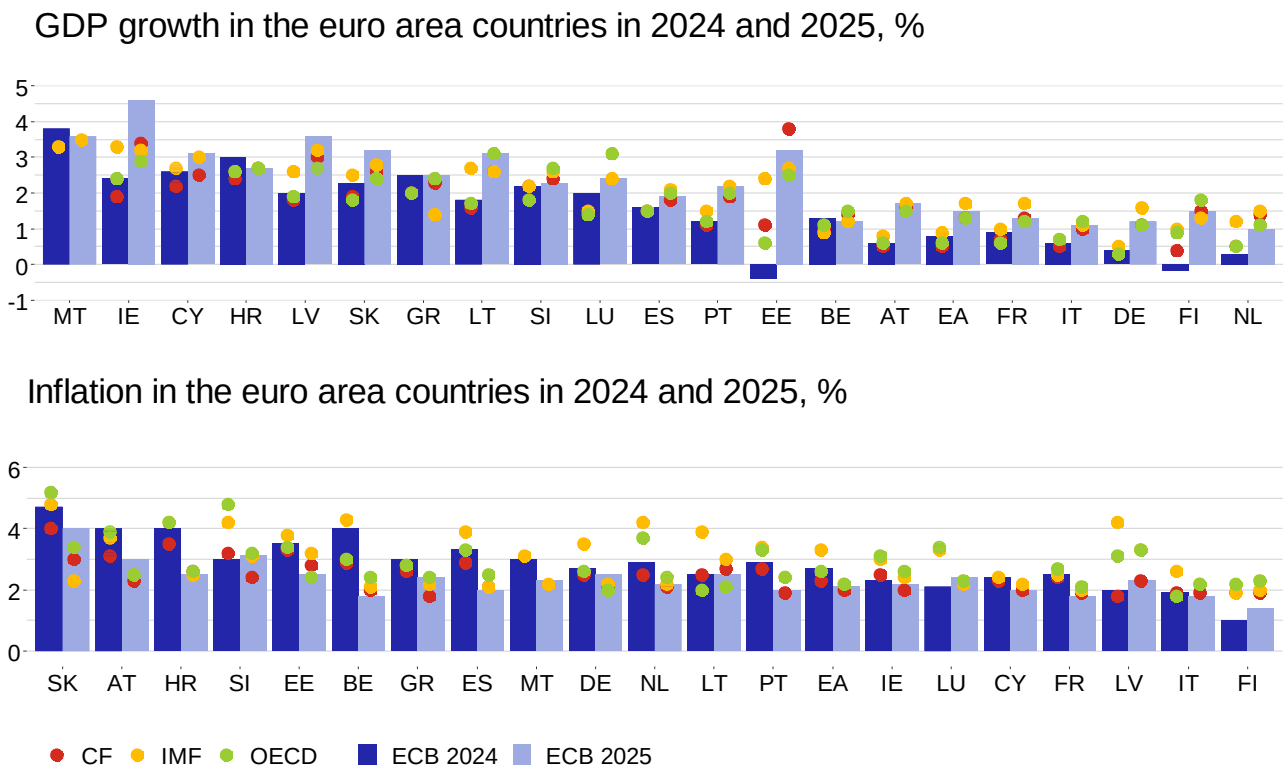
GDP growth, %

	CF		IMF		OECD		CB / OE	
EA	0	2024/2 2024/1	-0.3	2024/1 2023/10	-0.3	2024/2 2023/11	-0.2	2023/12 2023/9
US	+0.7	2024/2 2024/1	+0.6	2024/1 2023/10	+0.7	2024/2 2023/11	-0.1	2023/12 2023/9
UK	+0.1	2024/2 2024/1	0	2024/1 2023/10	0	2024/2 2023/11	+0.3	2024/2 2023/11
JP	-0.1	2024/2 2024/1	-0.1	2024/1 2023/10	0	2024/2 2023/11	+0.2	2024/1 2023/10
CN	0	2024/2 2024/1	+0.4	2024/1 2023/10	0	2024/2 2023/11	0	2024/2 2024/1
RU	0	2024/1 2024/1	+1.5	2024/1 2023/10	+0.7	2024/2 2023/11	0	2024/2 2024/1

Inflation, %

	CF		IMF		OECD		CB / OE	
EA	+0.1	2024/2 2024/1	+0.4	2023/10 2023/4	-0.3	2024/2 2023/11	-0.5	2023/12 2023/9
US	0	2024/2 2024/1	+0.5	2023/10 2023/4	-0.6	2024/2 2023/11	-0.1	2023/12 2023/9
UK	-0.1	2024/2 2024/1	+0.7	2023/10 2023/4	-0.1	2024/2 2023/11	-0.5	2024/2 2023/11
JP	+0.1	2024/2 2024/1	+0.7	2023/10 2023/4	0	2024/2 2023/11	-0.4	2024/1 2023/10
CN	-0.3	2024/2 2024/1	-0.5	2023/10 2023/4	+0.1	2024/2 2023/11	-0.1	2024/2 2024/1
RU	+0.2	2024/1 2024/1	+1.7	2023/10 2023/4	0	2024/2 2023/11	0	2024/2 2024/1

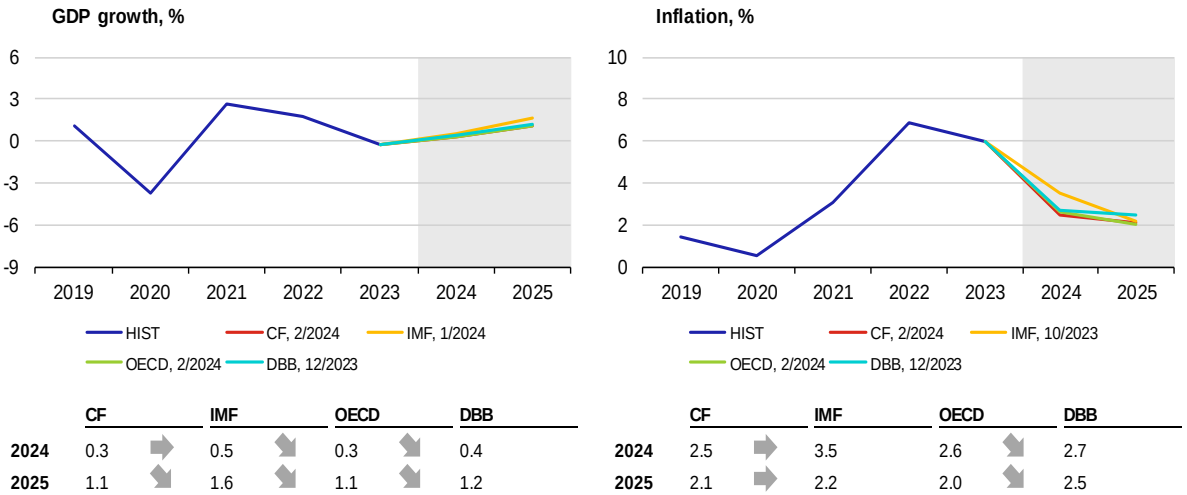
A3. GDP growth and inflation outlooks in the euro area countries



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

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

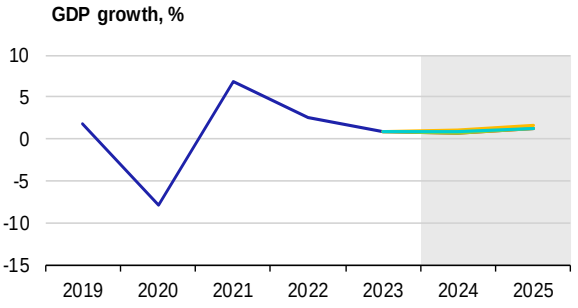
Germany



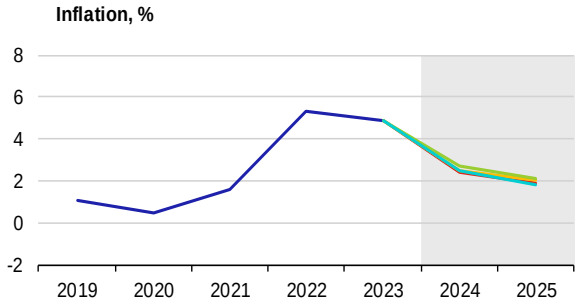
	CF	IMF	OECD	DBB
2024	0.3	0.5	0.3	0.4
2025	1.1	1.6	1.1	1.2

	CF	IMF	OECD	DBB
2024	2.5	3.5	2.6	2.7
2025	2.1	2.2	2.0	2.5

France

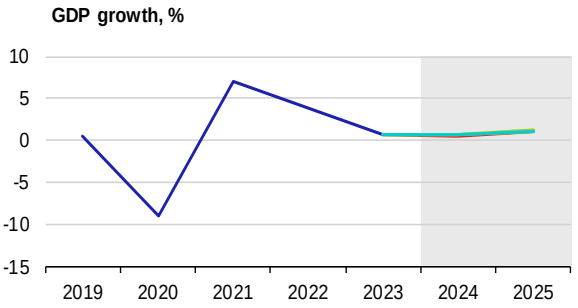


	CF	IMF	OECD	ECB
2024	0.7	1.0	0.6	0.9
2025	1.3	1.7	1.2	1.3

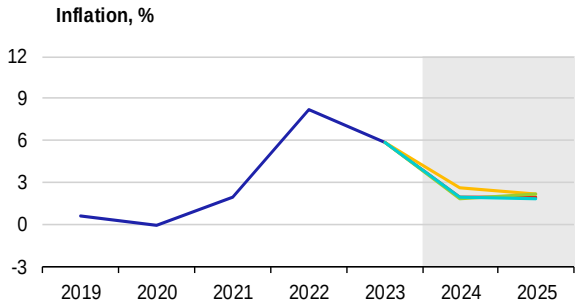


	CF	IMF	OECD	ECB
2024	2.4	2.5	2.7	2.5
2025	1.9	2.0	2.1	1.8

Italy

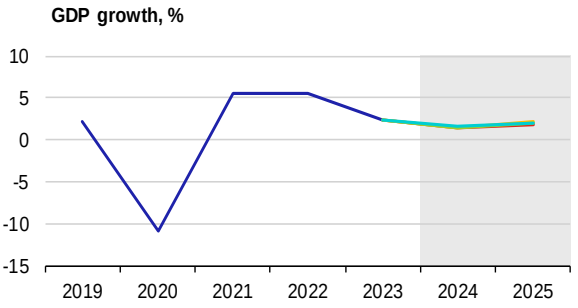


	CF	IMF	OECD	ECB
2024	0.5	0.7	0.7	0.6
2025	1.0	1.1	1.2	1.1

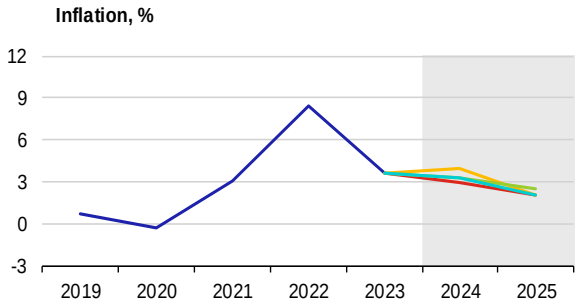


	CF	IMF	OECD	ECB
2024	1.9	2.6	1.8	1.9
2025	1.9	2.2	2.2	1.8

Spain



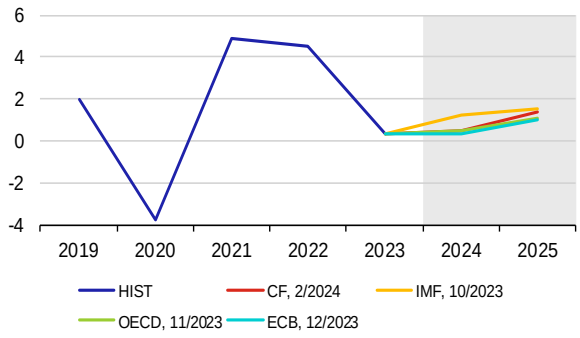
	CF	IMF	OECD	ECB
2024	1.5	1.5	1.5	1.6
2025	1.8	2.1	2.0	1.9



	CF	IMF	OECD	ECB
2024	2.9	3.9	3.3	3.3
2025	2.1	2.1	2.5	2.0

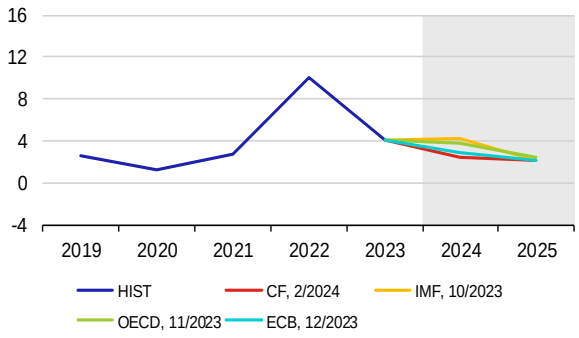
Netherlands

GDP growth, %



	CF	IMF	OECD	ECB
2024	0.5	1.2	0.5	0.3
2025	1.4	1.5	1.1	1.0

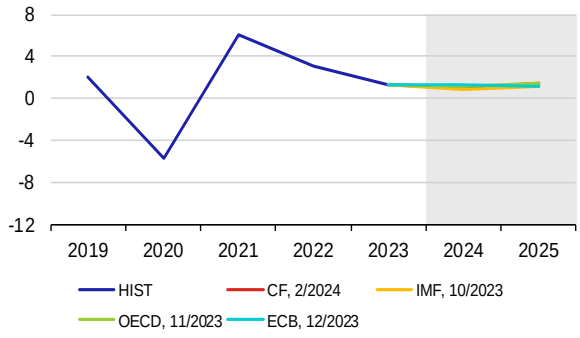
Inflation, %



	CF	IMF	OECD	ECB
2024	2.5	4.2	3.7	2.9
2025	2.1	2.2	2.4	2.2

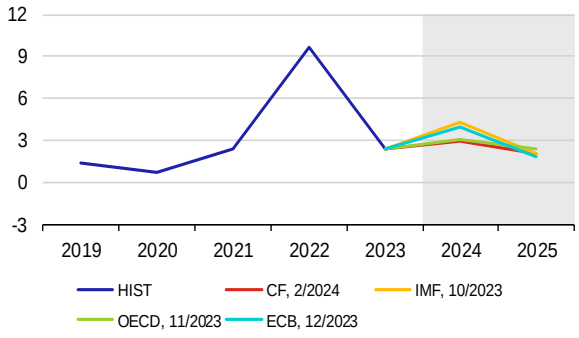
Belgium

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.0	0.9	1.1	1.3
2025	1.4	1.2	1.5	1.2

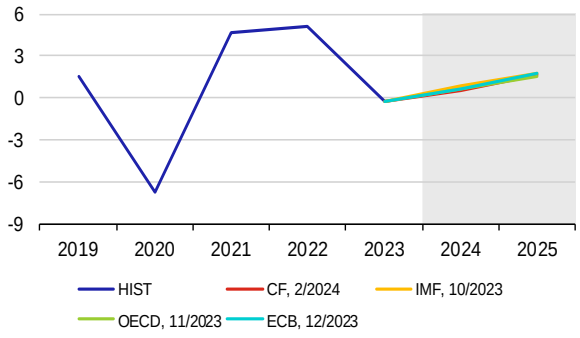
Inflation, %



	CF	IMF	OECD	ECB
2024	2.9	4.3	3.0	4.0
2025	2.0	2.1	2.4	1.8

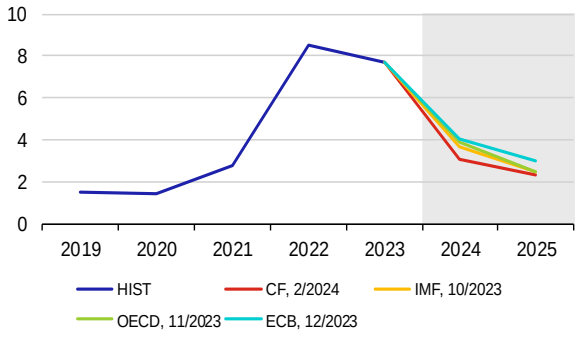
Austria

GDP growth, %



	CF	IMF	OECD	ECB
2024	0.5	0.8	0.6	0.6
2025	1.6	1.7	1.5	1.7

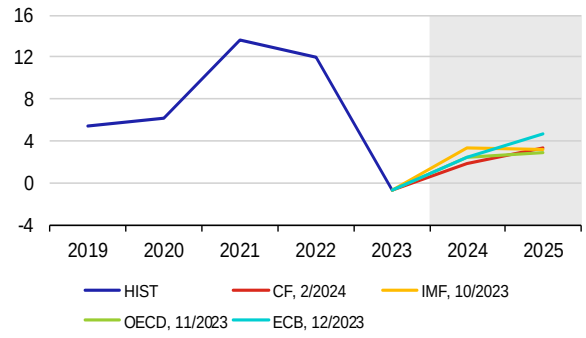
Inflation, %



	CF	IMF	OECD	ECB
2024	3.1	3.7	3.9	4.0
2025	2.3	2.5	2.5	3.0

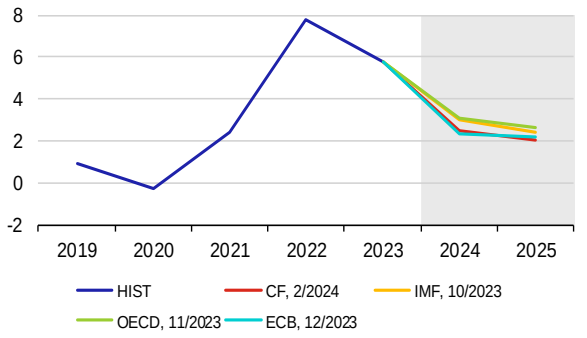
Ireland

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.9	3.3	2.4	2.4
2025	3.4	3.2	2.9	4.6

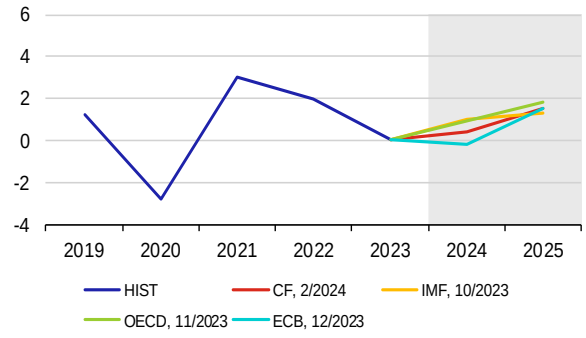
Inflation, %



	CF	IMF	OECD	ECB
2024	2.5	3.0	3.1	2.3
2025	2.0	2.4	2.6	2.2

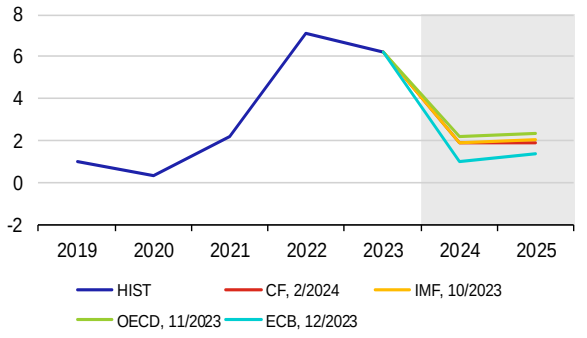
Finland

GDP growth, %



	CF	IMF	OECD	ECB
2024	0.4	1.0	0.9	-0.2
2025	1.5	1.3	1.8	1.5

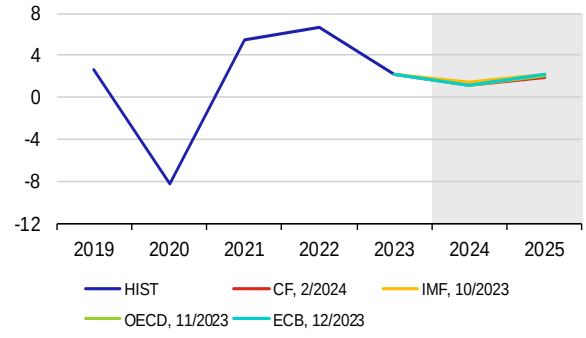
Inflation, %



	CF	IMF	OECD	ECB
2024	1.9	1.9	2.2	1.0
2025	1.9	2.0	2.3	1.4

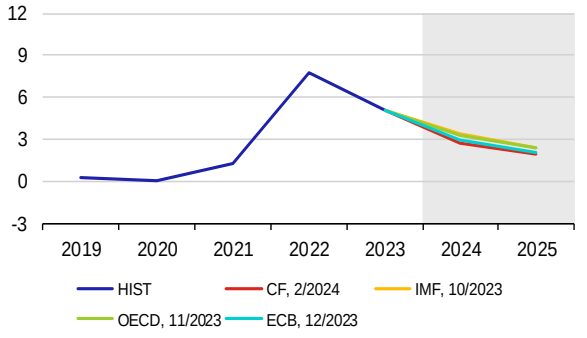
Portugal

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.1	1.5	1.2	1.2
2025	1.9	2.2	2.0	2.2

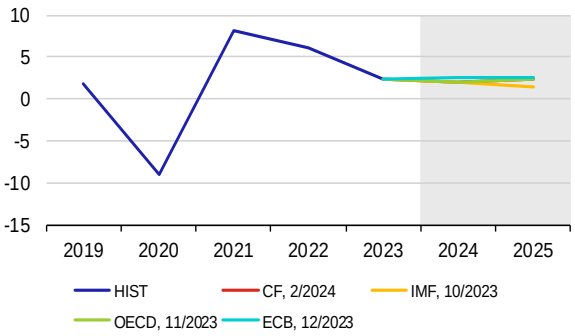
Inflation, %



	CF	IMF	OECD	ECB
2024	2.7	3.4	3.3	2.9
2025	1.9	2.4	2.4	2.0

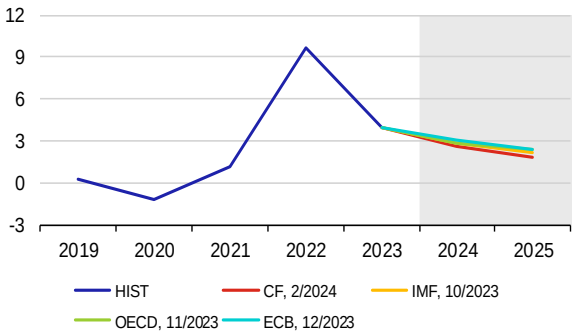
Greece

GDP growth, %



	CF	IMF	OECD	ECB
2024	2.0	2.0	2.0	2.5
2025	2.3	1.4	2.4	2.5

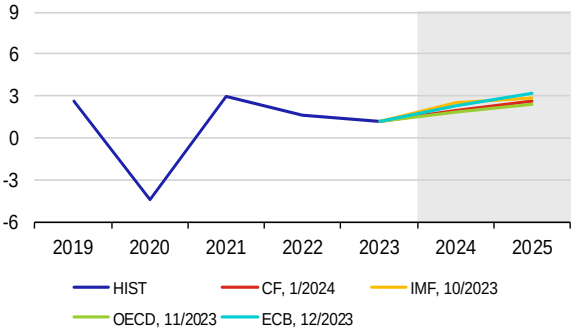
Inflation, %



	CF	IMF	OECD	ECB
2024	2.6	2.8	2.8	3.0
2025	1.8	2.2	2.4	2.4

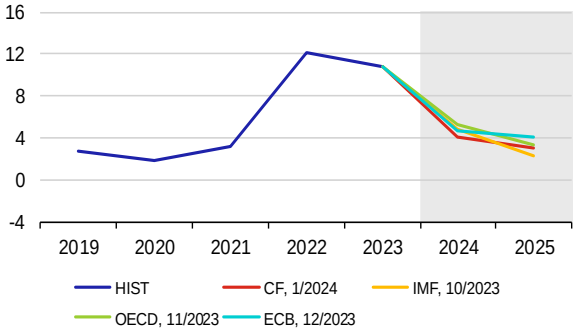
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.9	2.5	1.8	2.3
2025	2.6	2.8	2.4	3.2

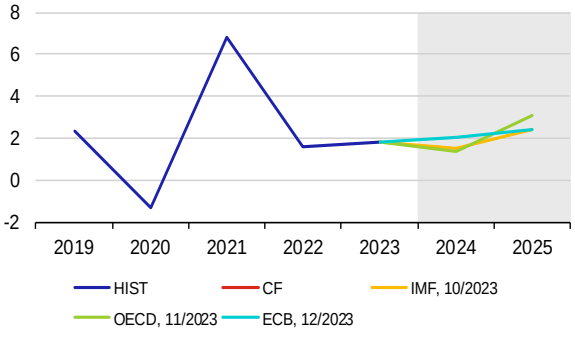
Inflation, %



	CF	IMF	OECD	ECB
2024	4.0	4.8	5.2	4.7
2025	3.0	2.3	3.4	4.0

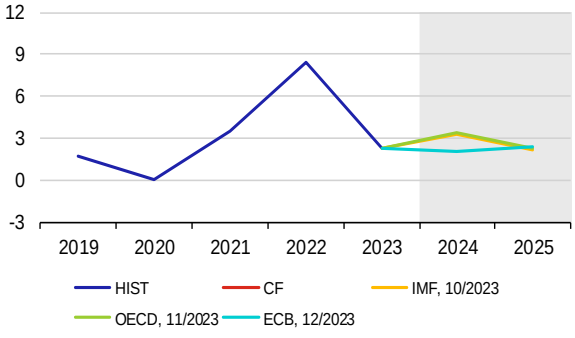
Luxembourg

GDP growth, %



	CF	IMF	OECD	ECB
2024	n. a.	1.5	1.4	2.0
2025	n. a.	2.4	3.1	2.4

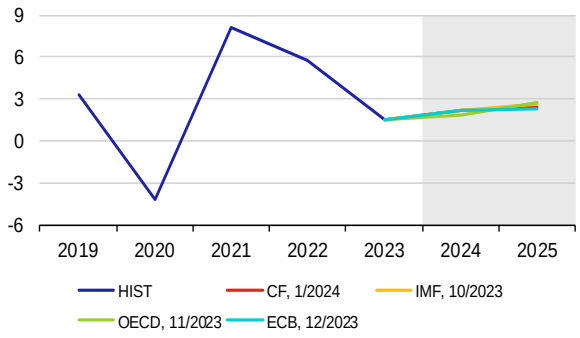
Inflation, %



	CF	IMF	OECD	ECB
2024	n. a.	3.3	3.4	2.1
2025	n. a.	2.2	2.3	2.4

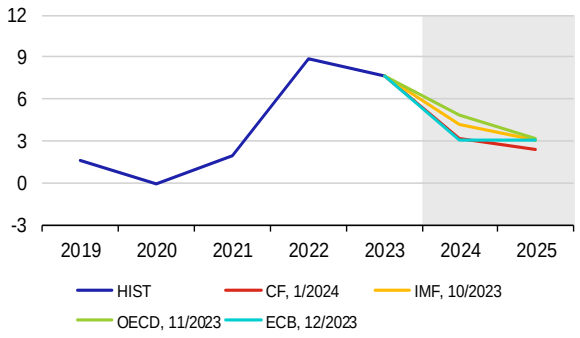
Slovenia

GDP growth, %



	CF	IMF	OECD	ECB
2024	2.2	2.2	1.8	2.2
2025	2.4	2.6	2.7	2.3

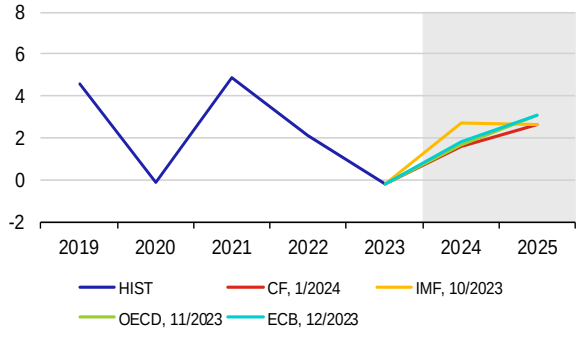
Inflation, %



	CF	IMF	OECD	ECB
2024	3.2	4.2	4.8	3.0
2025	2.4	3.1	3.2	3.1

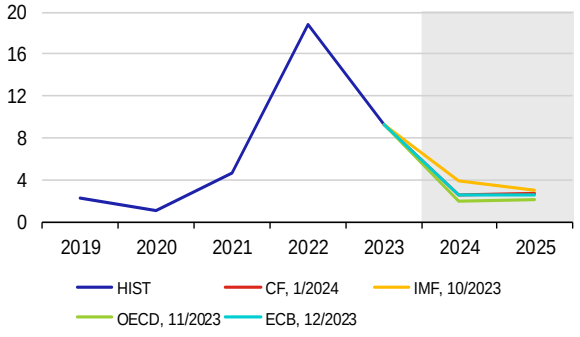
Lithuania

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.6	2.7	1.7	1.8
2025	2.6	2.6	3.1	3.1

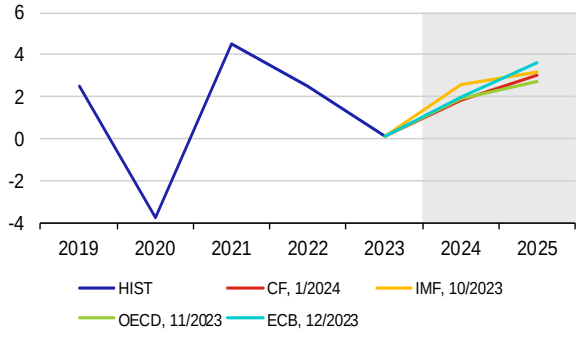
Inflation, %



	CF	IMF	OECD	ECB
2024	2.5	3.9	2.0	2.5
2025	2.7	3.0	2.1	2.5

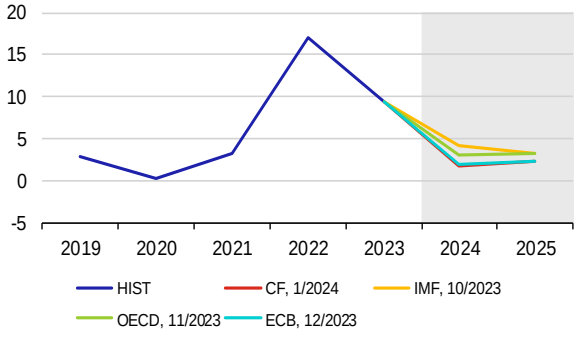
Latvia

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.8	2.6	1.9	2.0
2025	3.0	3.2	2.7	3.6

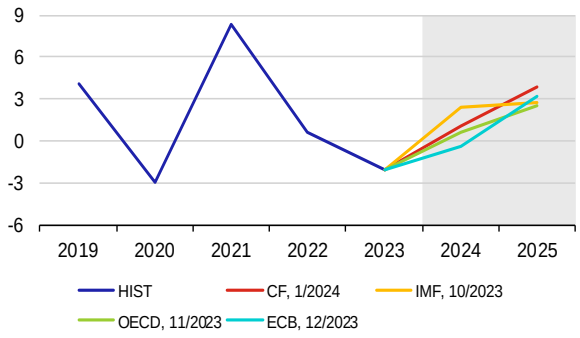
Inflation, %



	CF	IMF	OECD	ECB
2024	1.8	4.2	3.1	2.0
2025	2.3	3.3	3.3	2.3

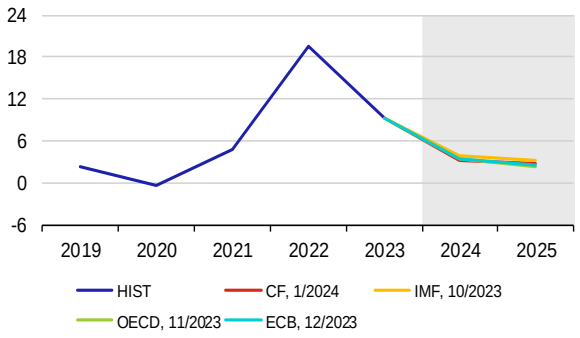
Estonia

GDP growth, %



	CF	IMF	OECD	ECB
2024	1.1	2.4	0.6	-0.4
2025	3.8	2.7	2.5	3.2

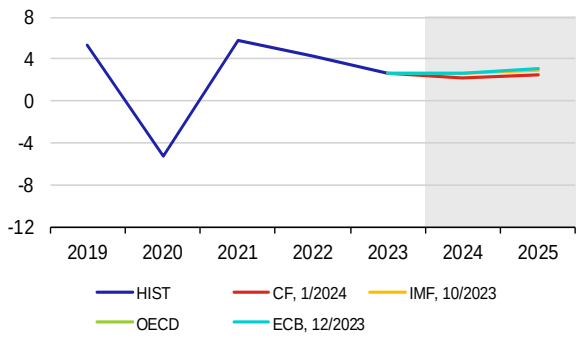
Inflation, %



	CF	IMF	OECD	ECB
2024	3.3	3.8	3.4	3.5
2025	2.8	3.2	2.4	2.5

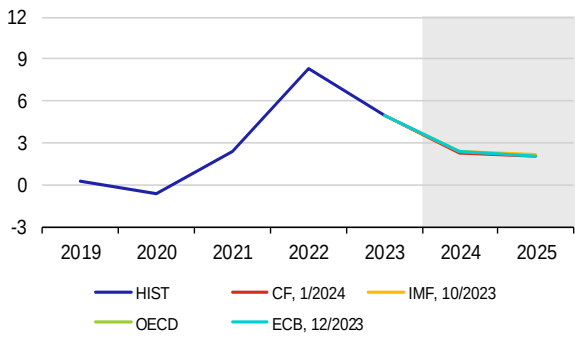
Cyprus

GDP growth, %



	CF	IMF	OECD	ECB
2024	2.2	2.7	n. a.	2.6
2025	2.5	3.0	n. a.	3.1

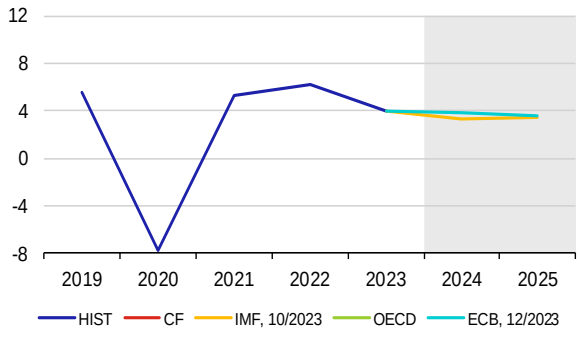
Inflation, %



	CF	IMF	OECD	ECB
2024	2.3	2.4	n. a.	2.4
2025	2.0	2.2	n. a.	2.0

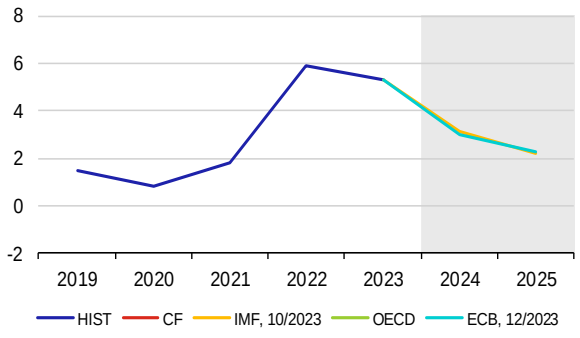
Malta

GDP growth, %



	CF	IMF	OECD	ECB
2024	n. a.	3.3	n. a.	3.8
2025	n. a.	3.5	n. a.	3.6

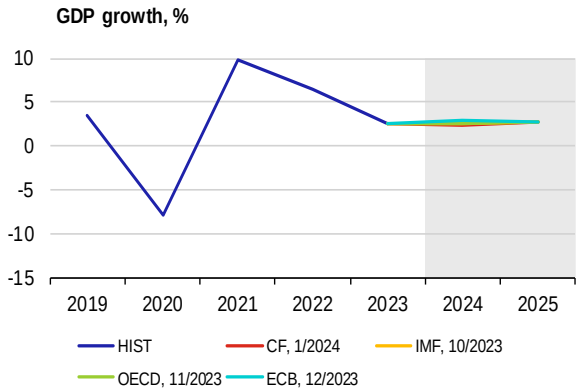
Inflation, %



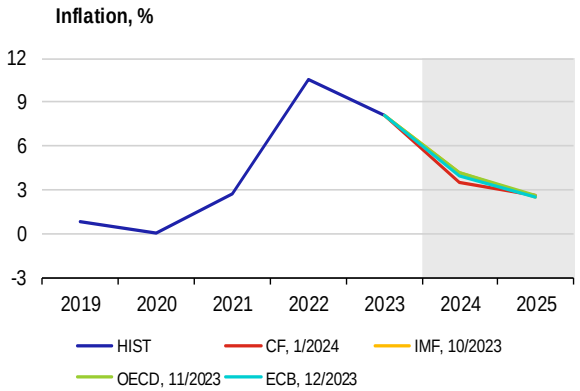
	CF	IMF	OECD	ECB
2024	n. a.	3.1	n. a.	3.0
2025	n. a.	2.2	n. a.	2.3

Ddd

Croatia



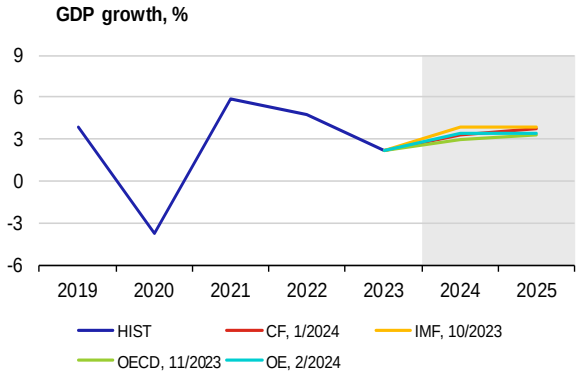
	CF	IMF	OECD	ECB
2024	2.4	2.6	2.6	3.0
2025	2.7	2.7	2.7	2.7



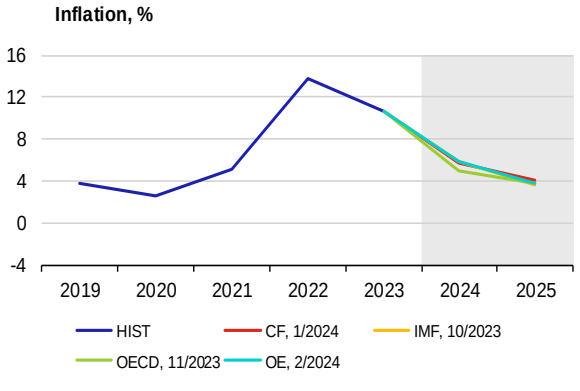
	CF	IMF	OECD	ECB
2024	3.5	4.2	4.2	4.0
2025	2.6	2.5	2.6	2.5

A5. GDP growth and inflation in other selected countries

Romania



	CF	IMF	OECD	OE
2024	3.3	3.8	3.0	3.4
2025	3.7	3.8	3.3	3.4



	CF	IMF	OECD	OE
2024	5.7	5.8	5.0	5.9
2025	4.0	3.6	3.7	3.7

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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ČESKÁ NÁRODNÍ BANKA
Na Příkopě 28
115 03 Praha 1
Česká republika

Contact:
ODBOR KOMUNIKACE SEKCE KANCELÁŘ
Tel.: 224 413 112
Fax: 224 412 179
www.cnb.cz