Global Economic Outlook

July 2023

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

CNB CZECH NATIONAL BANK

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Foreword

Dear GEO Readers,

In front of you is the new issue of a publication which has been issued for the past 12 years. It provides clear and comprehensive information about the global macroeconomic situation, which determines the path of the Czech Republic's small and fairly open economy. If we sometimes tend to focus too much on our local situation, GEO is always here to remind us that we have to look carefully around us first, even quite afar.

In the middle of last year, I came back to the CNB Bank Board after almost 17 years. The starting situation was no more favourable than in 2000 when I was appointed a Bank Board member for the first time. At that time, there was a conflict between the CNB and part of the political representation about the independence of Czech monetary policy, while a systemic crisis of the Czech banking sector was still being felt. Our summer 2022 forecast said that inflation would reach almost 20% at the end of the year, a figure we had not been able even to imagine for decades.

The August 2022 forecast was harsh but true, as least as regards inflation. Inflation ultimately did not reach 20%, but only because the Czech Statistical Office "deducted" from it the effects of the energy savings tariff and the waiver of the fee for renewable energy sources in the final months of the year. But this methodologically correct step will backfire on us this year, as it will increase inflation again in the final months of this year. We will thus not get to very low single-digit inflation before the start of next year.

The regular "Focus" section of GEO assesses to what extent forecasts by international institutions, selected central banks and Consensus Forecasts were also "harsh but true". When browsing through the information included in this section of GEO, it is impossible to overlook that analysts and forecasts obviously underestimated the size of the inflation pressures and central banks' determination to respond to them with similar force as the CNB. I believe that the fact that even large central banks ultimately did so will help restore price stability in the Czech Republic. At the same time, this confirms the observations that macroeconomic analysts do not have much imagination, i.e. they tend to estimate paths of macroeconomic variables based on recently observed data. This creates room for alternative scenarios and simulations within central banks' forecasts.

Wishing you a great summer

Jan Frait, CNB Deputy Governor

Cut-off date for data
14 July 2023

CF survey date
10 July 2023

GEO publication date
21 July 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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Martin Kábrt	III.6 Japan, III.9 Hungary
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Filip Novotný	VI. Focus

I. Introduction

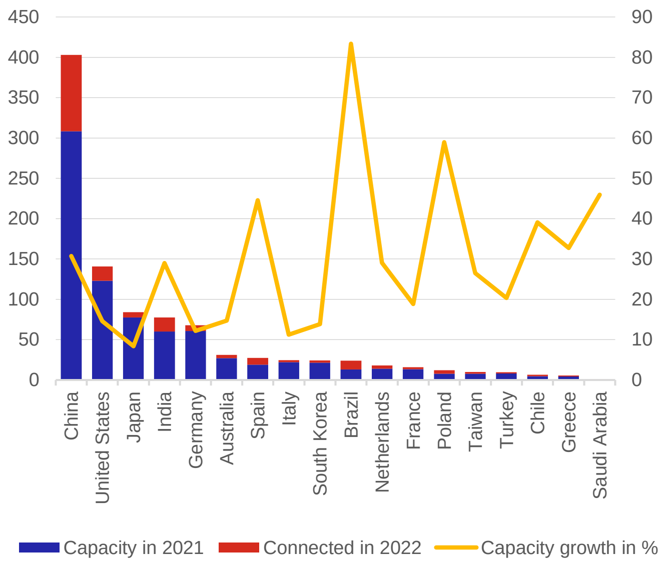
At the start of the second half of 2023, the global economy is heading towards more subdued economic growth and normalisation of inflation pressures. The euro area is expected to hit a trough of just 0.5% growth this year, mainly due to the ongoing recession in Germany, its strongest economy. The decline in US economic growth will likewise halt at 0.5% next year. In the following years, global growth will be driven by India and by renewed solid growth in China.

The observed taming of inflation is a result of several factors – supply-side factors (a sharp drop in energy prices after the economic impacts of Russia's attack on Ukraine stabilised, a drop in world food prices, the fade-out of problems in global supply chains and falling container transport prices), demand factors (the depletion of households' forced savings accumulated during Covid and the creation of preventive savings due to increased uncertainty) and the actions of central banks (monetary tightening) and governments (the end of fiscal stimuli and more or less successful fiscal consolidation efforts). However, the unusually slowly falling core inflation is a concern for central bankers. This is probably due to growth in the share of households' expenditure on services, which was partly replaced by demand for goods during Covid. Prices of services are less affected by domestic and foreign competition than those of goods and also make up a substantial part of GDP in advanced economies.

The key central banks will complete the process of raising rates this summer, but a drop in rates cannot be expected until 2024. The ECB and very probably also the Fed will deliver rate hikes (already priced in) at their meetings in July, while the BoJ can be expected to extend the period of rate stability.

The chart in the current issue shows investment in solar power stations around the world. China has the highest installed capacity and raised its capacity by one-third last year. In per capita terms, Australia would rank first, with an installed capacity of 1.2 GW per million inhabitants, followed by the Netherlands with 1 GW. The popularity of solar panels is also growing among households, as the technology is becoming increasingly affordable. The first European Solar Day was also celebrated on 21 June 2023.

Growth in the power generating capacity of solar power stations in selected countries in 2022; GW; right-hand scale in %



Source: Solar Power Europe

The current issue also contains an analysis: *Annual assessment of the forecasts included in GEO*. This regular article assesses how successful individual institutions were in forecasting inflation last year. Contrary to expectations, 2022 was again turbulent due to Russia's aggression in Ukraine, but economies were surprisingly resilient. The analysis shows that the expected GDP growth did not materialise last year, while inflation in the countries under review was higher than expected.

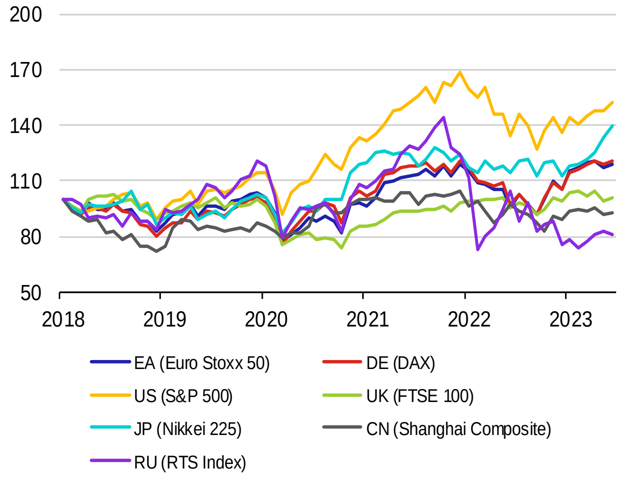
GEO Barometer for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP	**2023**	0.5 ↘	-0.3 ↘	1.6 ↗	0.1 →	1.2 ↗	5.5 ↘	0.4 ↗
(%)	**2024**	0.9 →	1.1 →	0.5 →	0.4 ↘	0.8 ↘	4.8 ↘	1.3 →
Inflation	**2023**	5.4 →	5.9 ↘	4.1 →	7.4 ↗	2.9 ↗	1.0 ↘	5.1 ↘
(%)	**2024**	2.4 →	2.6 ↗	2.6 →	3.2 →	1.5 →	2.1 ↘	4.6 ↘
Unemployment	**2023**	6.6 ↘	5.6 →	3.7 ↘	4.1 →	2.6 →	3.5 →	3.3 ↘
(%)	**2024**	6.8 →	5.6 ↗	4.5 ↘	4.1 →	2.4 →	3.4 →	3.4 ↘
Exchange rate	**2023**	1.12 ↘	1.12 ↘		1.27 ↗	129.4 ↗	7.05 ↗	83.3 ↗
(against USD)	**2024**	1.14 ↘	1.14 ↘		1.31 ↗	123.1 ↗	6.79 ↗	85.1 ↗

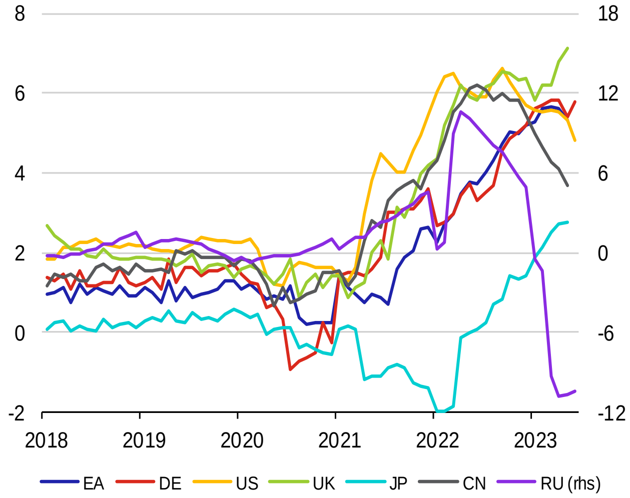
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

II. Macroeconomic barometer

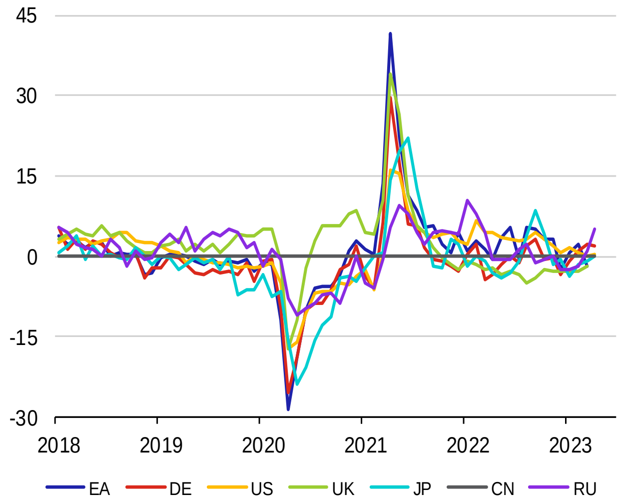
Equity markets development, index 100 = January 2018



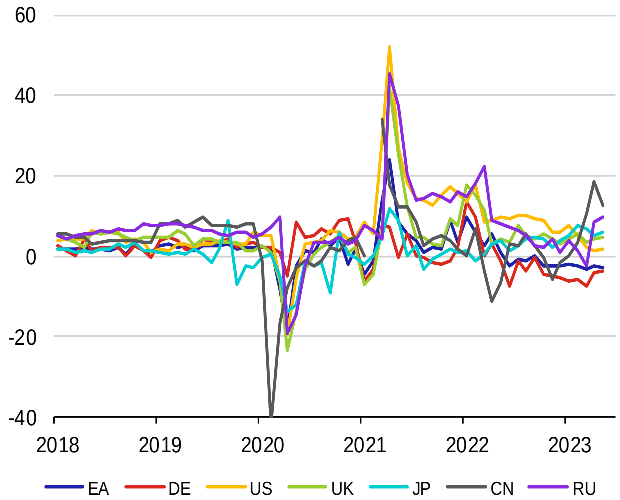
Core inflation, %



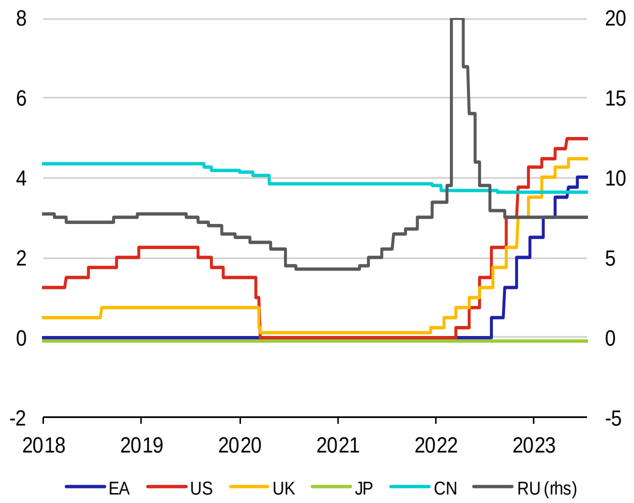
Manufacturing production, yoy %



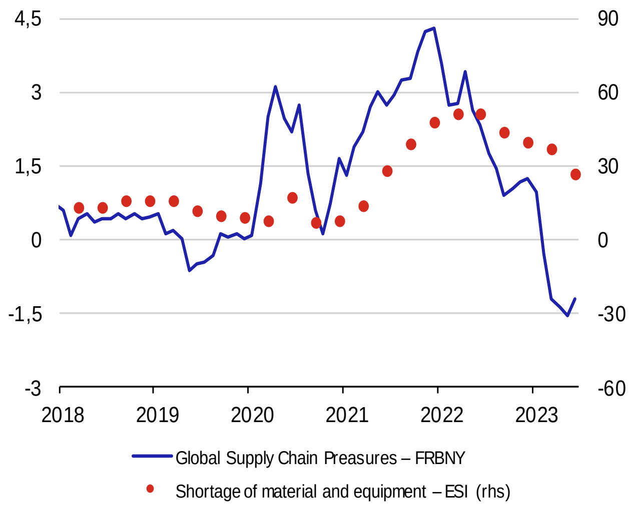
Retail sales, yoy %



Monetary policy rates, %



Supply chains development



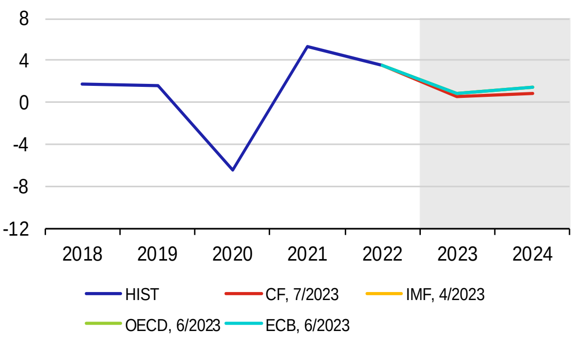
Source: Refinitiv Datastream, European Commision.

III.1 Euro area

New data have slightly lowered the short-term outlook for economic growth in the euro area. Industrial production growth slowed to 0.2% in May (-2.2% year on year). In June, the composite PMI slid into the contraction band (49.9) for the first time this year, as, in addition to falling output, new orders and employment in manufacturing, the services sub-index recorded a sharp drop due to worsening external demand. The survey of purchasing managers thus suggests that the economy grew only slightly in Q2. Economic sentiment indicators are offering no good news either. The ZEW index fell further as a result of a deteriorating economic outlook due to continued growth in short-term interest rates in the euro area and the USA and an only weak recovery in China. According to the June ESI, sentiment worsened in both industry and services. However, consumer sentiment continues to improve. Retail sales were flat in real terms in May for the second consecutive month (after a previous decline) and the labour market remains tight. After assessing the newly available data, the CF analysts lowered the expected GDP growth rate for this year to 0.5%.

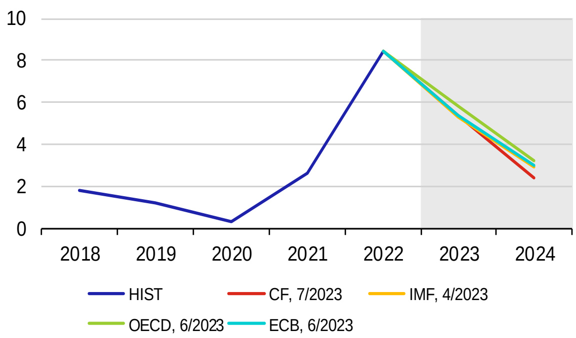
Markets expect two more rate hikes due to persisting core inflation and hawkish communication from the ECB head. Headline consumer price inflation slowed further (to 5.5% in June). However, this was due solely to a sharp drop in energy prices, while the growth in other price categories remains elevated. In month-on-month terms, prices started rising again (0.3%) due to a significant rise in food and services prices. Core inflation increased (to 5.4%). All this confirms the ECB President's June comment about the need to raise rates further. The Governing Council is thus now expected to make a standard hike not just at its policy meeting in June, but with a rising probability also at the one in September. The continued tightening should help return inflation to the target sooner than indicated in the ECB's June forecast (i.e. not until 2025), which was built on an assumption of the market outlook for 3M EURIBOR rates as of the end of May (i.e. 3.4% in 2023 and 2024).

GDP growth, %



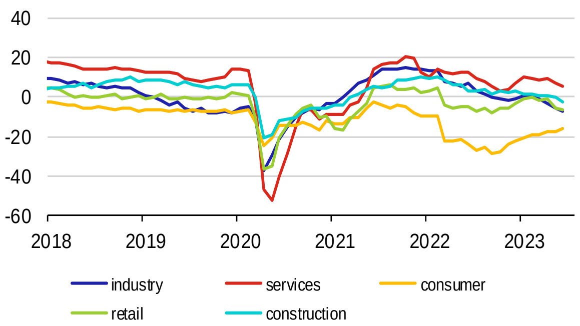
	CF	IMF	OECD	ECB
2023	0.5	0.8	0.9	0.9
2024	0.9	1.4	1.5	1.5

Inflation, %



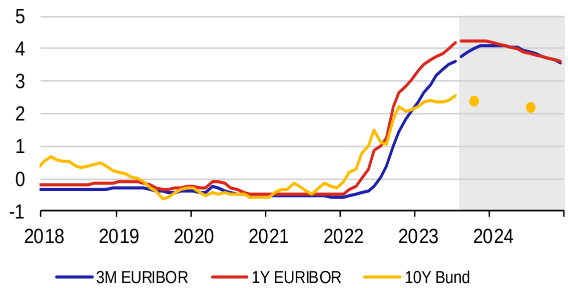
	CF	IMF	OECD	ECB
2023	5.4	5.3	5.8	5.4
2024	2.4	2.9	3.2	3.0

ESI leading indicators



	industry	services	consum.	retail	constr.
4/23	-2.9	9.7	-17.5	-1.0	0.7
5/23	-5.3	7.1	-17.4	-5.3	-0.3
6/23	-7.2	5.7	-16.1	-6.0	-2

Interest Rates, %



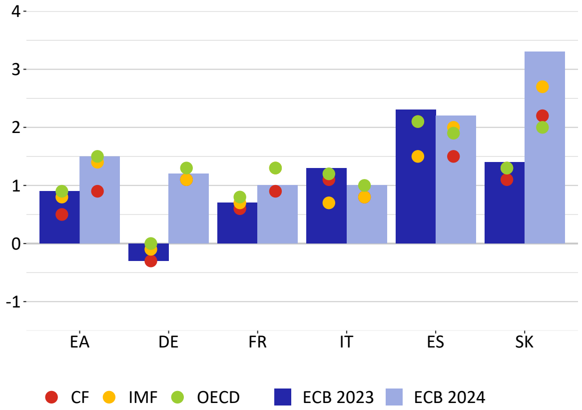
	6/23	7/23	10/23	7/24
3M EURIBOR	3.54	3.63	4.01	3.90
1Y EURIBOR	4.01	4.17	4.25	3.86
10Y Bund	2.40	2.54	2.40	2.20

III.2 Germany

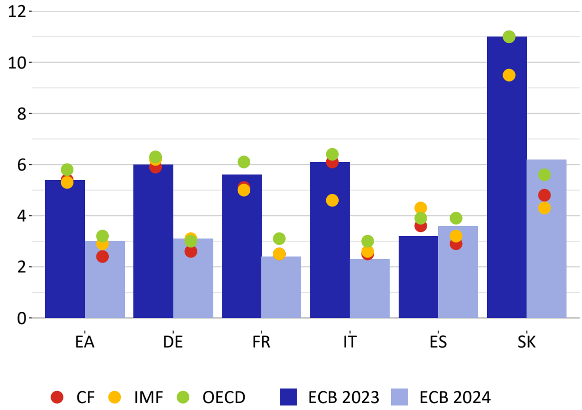
According to indicators, the German economy will remain weak following a technical recession in 2023 Q1. The economy and its export-oriented industry are under the pressure of an outlook for slowing demand, dragged down mainly by monetary policy tightening. There are concerns mainly about weak manufacturing industry. GDP has been declining over the last two quarters and the outlook is far from optimistic. CF now predicts a drop in GDP of 0.3% this year and growth of 1.1% next year. Business sentiment weakened again, reaching its lowest level since last December. According to the IFO and ZEW indices, the drop in business confidence mainly reflects uncertainty regarding the economic recovery as a result of global interest rate increases. The assessment of the current situation was much more pessimistic, as were expectations. Owing to the rising uncertainty, consumer confidence has also started to fall slightly. It worsened for the first time in nine months. The composite PMI fell sharply to 50.6 in June (from 53.9 in May), remaining just above the expansion threshold. This figure signals a sharp slowdown in growth to a five-month low due to a combination of slower growth in services (54.1) and a deepening decline in manufacturing (40.6), where production is being cut due to falling orders.

Annual consumer price inflation rose slightly again in June after having slowed for three months. HICP inflation reached 6.8% (as against 6.3% in May). Food prices are still showing above-average growth and remain the main driver of inflation. By contrast, growth in energy prices remains subdued. However, headline inflation was also partly fuelled by a sharp rise in transport prices due to the base effect of last year's generous government subsidies, specifically the cheap, EUR 9 monthly ticket. Inflation excluding food and energy prices also increased slightly, nearing 6%. According to CF, inflation will reach almost 6% this year and drop below 3% in 2024. By contrast, annual industrial producer price inflation slowed for the eighth consecutive month to 1% (as against 4.1% in April), which is the smallest rise in almost two and a half years.

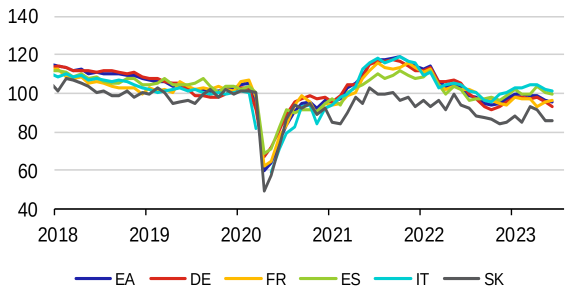
GDP growth in selected euro area countries in 2023 and 2024, %



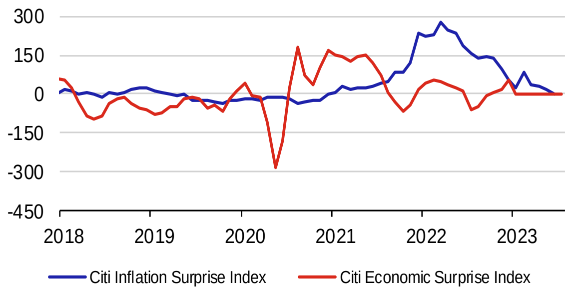
Inflation in selected euro area countries in 2023 and 2024, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
4/23	98.9	98.3	93.3	103.6	104.6	91.7
5/23	96.4	95.3	95.6	100.5	102.3	86.0
6/23	95.3	93.4	96.4	99.6	101.2	86.0

Inflation expectations based on 5year inflation swap and SPF

	5y5y	SPF
5/23	2.46	2.13
6/23	2.51	2.13
7/23	2.56	

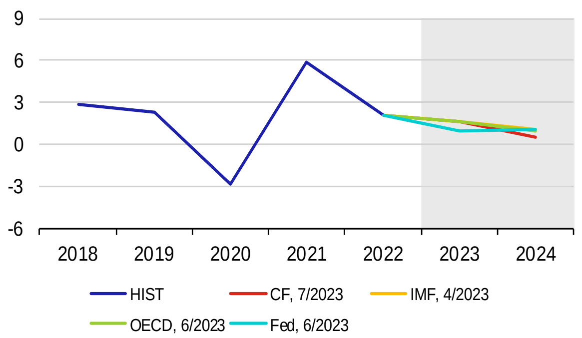
III.3 United States

Some analysts predict a drop in US economic output in Q3, but the latest figures are much more optimistic. According to the latest Bloomberg survey among analysts, GDP growth will only stagnate instead of falling in Q3. The CF analysts' latest GDP growth outlook has shifted upwards to 1.6% for this year while remaining unchanged for next year. US markets are also on the crest of a wave – the S&P 500 index has gained almost a quarter since the start of the year. However, it is important to note that the increase is being driven by the largest, mostly technology firms and that, according to some comments, this is just another bubble fuelled by the growth and popularity of artificial intelligence (AI).

In public speeches delivered across the USA, President Biden has been giving examples intended to show that his economic policy is working. He has decided to use "Bidenomics", an initially rejected term with negative connotations, to his advantage. According to the Democrats, the policy of targeted government support of selected sectors adopted by the current administration will open a path to prosperity. Last year, for example, USD 400 billion was provided to support the "green agenda", USD 50 billion was invested in US chip production following the global chip shortage, and USD 40 billion will now be spent to support the roll-out of high-speed internet across the USA.

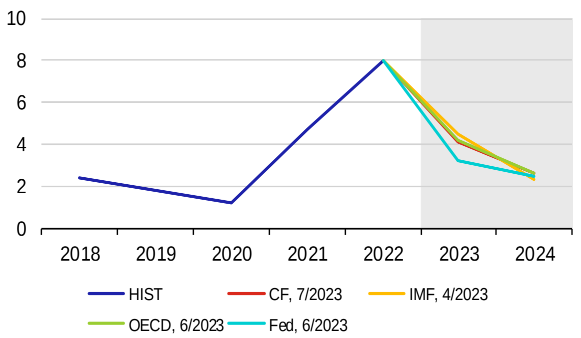
The Fed is expected to raise rates by 0.25 pp again at its July meeting. Inflation outperformed expectations (3.1%) again in June, falling to to 3% in year-on-year terms. The slowdown was due mainly to base effects, which led to a year-on-year drop in energy prices of 16.7%. In month-on-month terms, however, consumer prices rose by 0.2%. Core inflation slowed to 4.8% in June. As in Europe, there are concerns about services inflation, which was running at 5.7% in June. A continuing stable trend in services was confirmed by the PMI, which reached 54.4 in June, while the manufacturing PMI is in the contraction band.

GDP growth, %



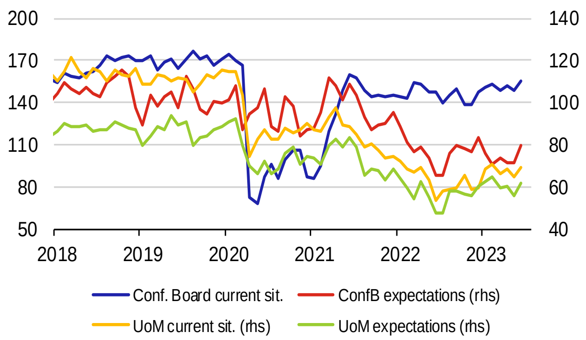
	CF		IMF	OECD	Fed
2023	1.6		1.6	1.6	1.0
2024	0.5		1.1	1.0	1.1

Inflation, %



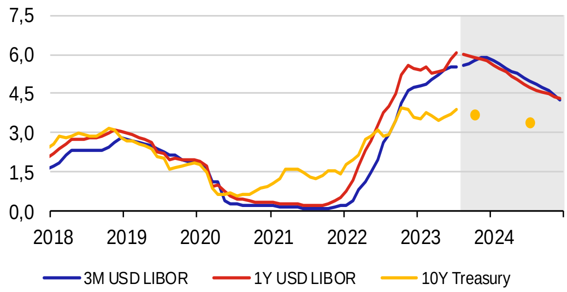
	CF		IMF	OECD	Fed
2023	4.1		4.5	4.2	3.2
2024	2.6		2.3	2.6	2.5

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
4/23	151.8	71.7	68.2	60.5
5/23	148.9	71.5	64.9	55.4
6/23	155.3	79.3	69.0	61.5

Interest Rates, %



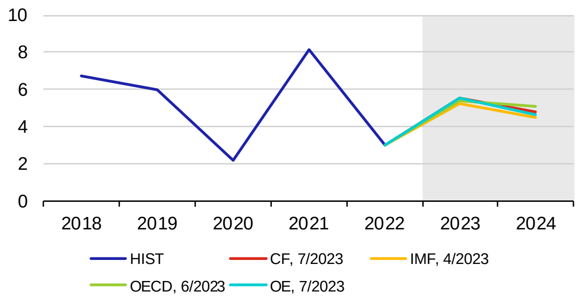
	6/23	7/23	10/23	7/24
USD LIBOR 3M	5.53	5.55	5.76	4.97
USD LIBOR 1R	5.85	5.85	5.89	4.75
Treasury 10R	3.75	3.88	3.70	3.40

III.4 China

The Chinese economy continued to weaken in 2023 Q2, growing by just 6.3% compared to a year earlier, when dozens of Chinese cities had been locked down in quarantine. In quarter-on-quarter terms, it recorded only slight growth of 0.8%, as against 2.2% in 2023 Q1. The manufacturing PMI rose slightly in June but remained in the contraction band. By contrast, the PMI in non-manufacturing sectors dropped. Subdued activity in services and a reduction in consumer expenditure was confirmed by the Caixin index, which fell sharply to a five-month low in June. The weak domestic demand was accompanied by weak external demand, with exports falling year on year for the second consecutive month. In June, exports even recorded their largest drop since February 2020. Given the worse outlooks for global economic growth, dampened by the tight monetary policies of major central banks, external demand cannot be expected to contribute significantly to Chinese economic growth in the months ahead. According to the CF analysts' July outlook, the year-on-year rate of growth of the Chinese economy will reach 5.5% this year and slow to 4.8% next year.

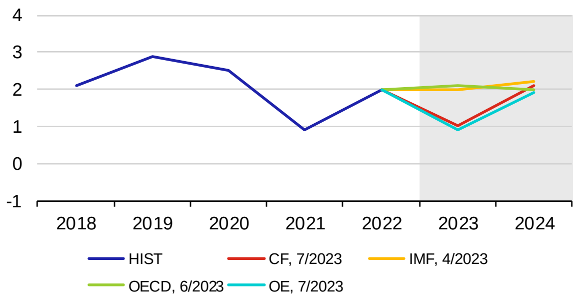
Consumer prices were flat in June, while producer prices fell significantly further. Consumer price inflation is thus at its lowest level since 2021. The weak price pressures in June were due to slackening domestic demand, growing supply following the normalisation of both Chinese and global supply chains, and lower commodity prices compared to the same period of last year. Growth in new loans also slowed further in June. After cutting in interest rates in June, the Chinese central bank can be expected to lower rates further in the second half of this year. In addition, the reserve requirement ratio for banks is likely to be reduced further. It was last lowered in March. According to the July CF outlook, consumer prices will grow by just 1% this year and accelerate to 2.1% next year. The year-on-year decline in producer prices deepened further from 4.6% in May to 5.4% in June. The continued producer price deflation was due most of all to falling energy commodity prices.

GDP growth, %



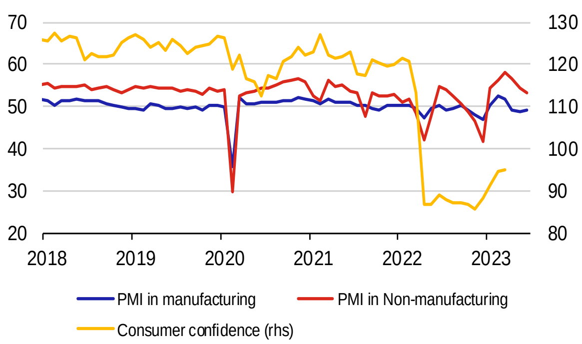
	CF	IMF	OECD	OE
2023	5.5	5.2	5.4	5.5
2024	4.8	4.5	5.1	4.6

Inflation, %



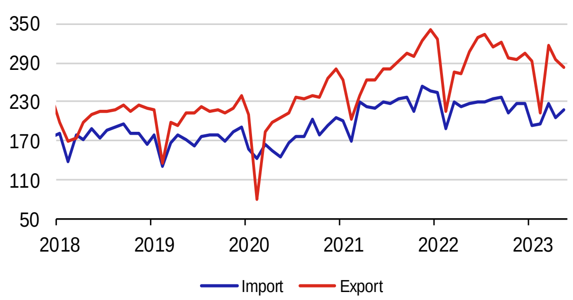
	CF	IMF	OECD	OE
2023	1.0	2.0	2.1	0.9
2024	2.1	2.2	2.0	1.9

Leading indicators



	PMI manuf.	PMI in Non-manufacturing	Cons. conf (rhs)
4/23	49.2	56.4	
5/23	48.8	54.5	
6/23	49.0	53.2	

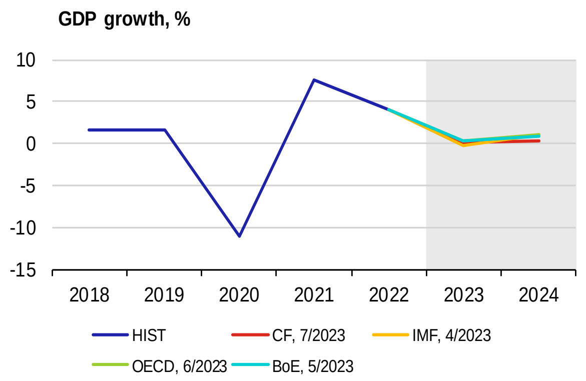
Development of China foreign trade, bil. USD



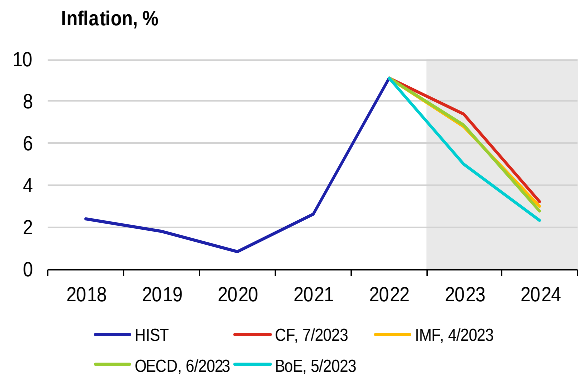
Source: Bloomberg

III.5 United Kingdom

Annual consumer price inflation stagnated in May, to which the BoE responded by raising the base interest rate. The June meeting resulted in a thirteenth consecutive hike to 5% (due in part to greater resilience of the UK economy). However, the hikes have worsened the GDP growth outlook for next year, which does not even reach 0.5%. For this year, it is just above zero. Inflation lagged behind expectations at 8.7%, due mainly to continued high growth in food prices (18.4%). In addition, core inflation rose further and exceeded 7%, signalling persisting inflation pressures. Wage growth also remains unpleasantly high. The government and the BoE have called for pay restraint in an effort to tame inflation. The BoE expects inflation to slow markedly by the year-end. This will mainly reflect a slowdown in energy prices, although food price inflation is also predicted to fall. Consumer confidence has been growing continuously since January and is proving resilient to the high inflation and sharply rising mortgage rates. The composite PMI fell further in June (to 52.8), but the private sector continues to grow. Solid growth in services (to 53.7) contrasted with a further fall in manufacturing (to 46.5).



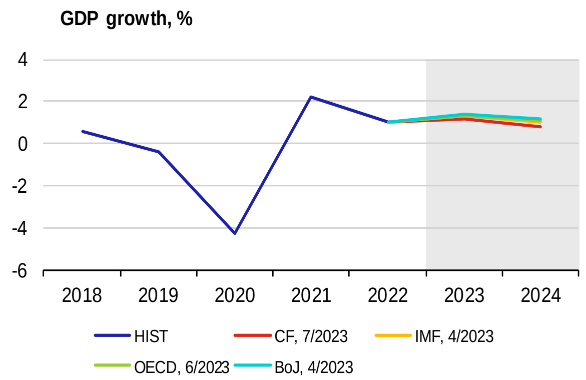
	CF	IMF	OECD	BoE
2023	0.1	-0.3	0.3	0.3
2024	0.4	1.0	1.0	0.8



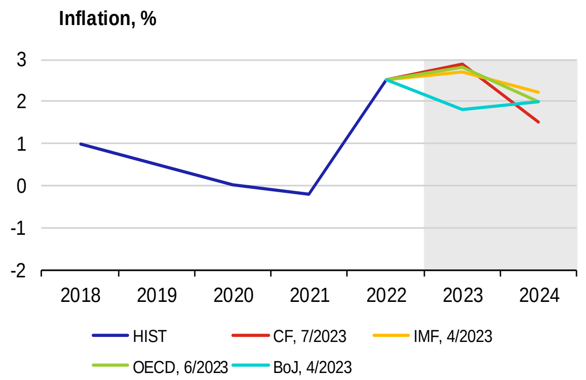
	CF	IMF	OECD	BoE
2023	7.4	6.8	6.9	5.0
2024	3.2	3.0	2.8	2.3

III.6 Japan

Economic indicators are showing the strength of Japan's economy before a key monetary policy decision. Leading indicators of economic activity, including the PMI and the large-scale Tankan business sentiment survey, suggest a continued recovery of the Japanese economy. The proportion of large industrial firms considering business conditions to be favourable rose in Q2, exceeding analysts' expectations. In services, this proportion even exceeded the pre-Covid level for the first time. Firms also disclosed major investment plans and their inflation expectations in the survey. They expect the latter to stay above the BoJ's target even five years ahead. Although inflation dropped slightly to 3.2% in May, core inflation rose again to a new 42-year high of 4.2%. The condition of Japan's economy is increasing the pressure to tighten monetary policy. Bets on a partial easing of the yield curve control policy have been causing the yen to appreciate since early July. The yen has thus erased the losses it incurred in June.



	CF	IMF	OECD	BoJ
2023	1.2	1.3	1.3	1.4
2024	0.8	1.0	1.1	1.2

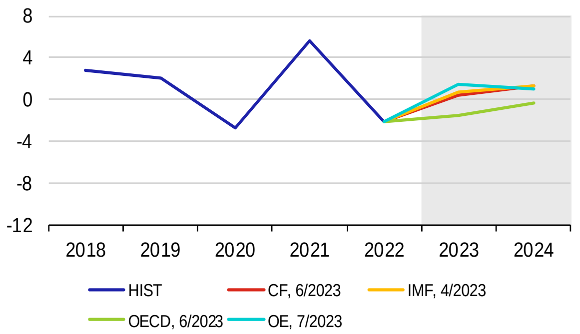


	CF	IMF	OECD	BoJ
2023	2.9	2.7	2.8	1.8
2024	1.5	2.2	2.0	2.0

III.7 Russia

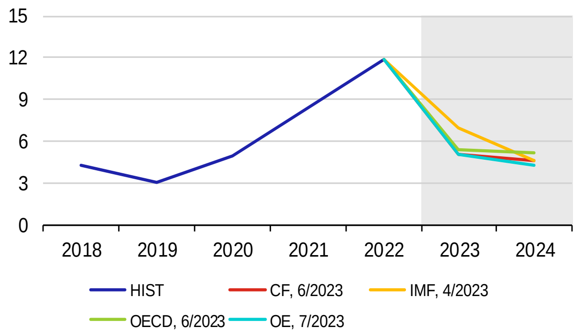
The rouble lost almost one-tenth of its value in late June. Only after Russia's invasion of Ukraine had the Russian currency been at a significantly weaker level. This time, though, it depreciated sharply because of an internal military crisis. The depreciation trend halted in mid-July and the rouble fluctuated mostly above RUB 90 to the dollar. While Yebgeny Prigozhin's armed rebellion exacerbated the already substantial political uncertainty in the country, the impact of energy sanctions on Russia is causing much greater concerns. The state budget results for the first half of 2023 published in early July reveal a year-on-year drop in crude oil and natural gas export revenues of 47% (from RUB 6.38 trillion to RUB 3.38 trillion). The year-on-year fall in the total goods surplus in Russia's balance of payments in the first half of 2023 was due both to a lower volume of exports and to price effects – primarily falling energy commodity prices. Import volumes were meanwhile comparable with the first half of 2021. The Russian central bank does not rule out a monetary policy rate hike this year.

GDP growth, %



	CF	IMF	OECD	OE
2023	0.4	0.7	-1.5	1.5
2024	1.3	1.3	-0.4	1.0

Inflation, %

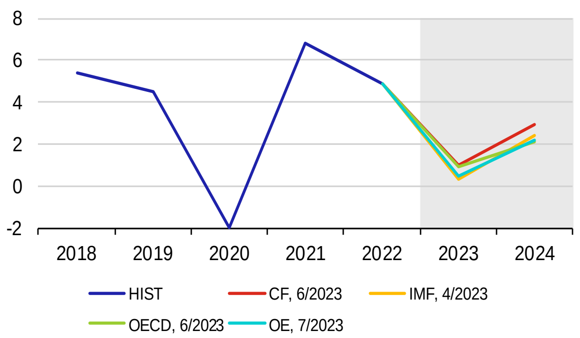


	CF	IMF	OECD	OE
2023	5.1	7.0	5.4	5.0
2024	4.6	4.6	5.2	4.3

III.8 Poland

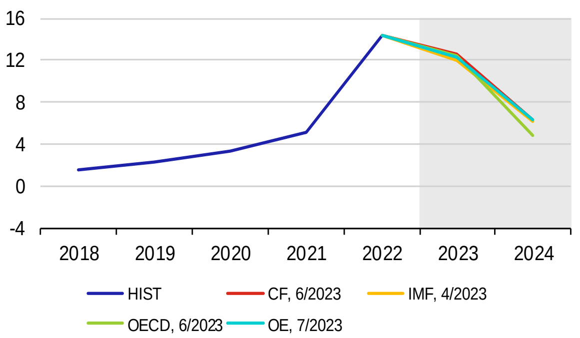
Economic growth will be subdued this year, while inflation will decline more slowly over the outlook horizon. The NBP's new forecast lowered the GDP growth outlook for this year (to -0.2–1.3%), whereas the latest CF survey increased the estimate (to 1%). Domestic economic growth might rise to 2–3% next year. The available data for Q2 are none too impressive. Industrial production seem to be experiencing problems with external and domestic demand. The industrial PMI continues to fall (45.1). On the other hand, the labour market remains tight. Employment growth slowed in the spring, but the unemployment rate remains very low (5.1%) and nominal wage growth high (real wage growth is only slightly negative). Nonetheless, the persistently high inflation is starting to impact on consumers. Retail sales declined in real terms in May. Inflation slowed to 11.5% in June. In month-on-month terms, prices have been flat for two consecutive months. The NBP left its key rates unchanged in July, too. Markets expect rates to start falling in the autumn. However, the NBP's new forecast does not expect average inflation to drop below 5% next year, even assuming rates stay unchanged.

GDP growth, %



	CF	IMF	OECD	OE
2023	1.0	0.3	0.9	0.5
2024	2.9	2.4	2.1	2.2

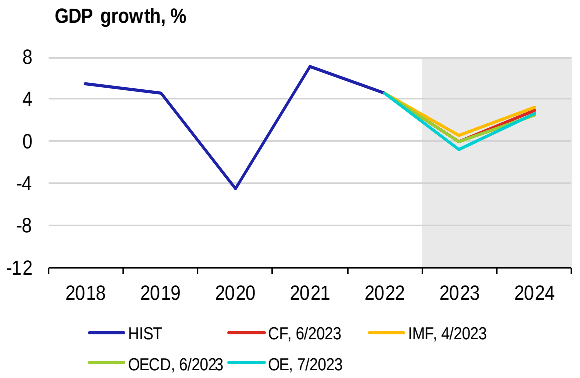
Inflation, %



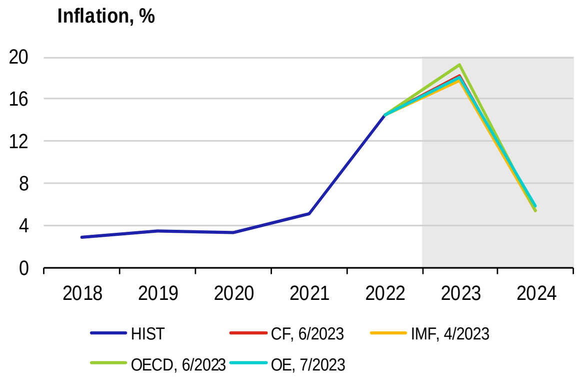
	CF	IMF	OECD	OE
2023	12.5	11.9	12.4	12.2
2024	6.3	6.1	4.8	6.3

III.9 Hungary

The MNB is gearing up for a long fight against inflation. Month-on-month consumer price inflation has been falling rapidly across price categories since January but remains well above the target in annualised terms. The disinflation is being fostered by falling commodity prices and a cooling global economy, and also by weakening domestic demand. Even so, annual inflation and core inflation stood at 20.1% and 20.8% respectively in June, by some way the highest levels in the EU. The MNB's new forecast expects inflation to fall into single figures by the year-end and return to the tolerance band in 2025. Inflation will be kept above the target solely by core prices (excluding food and energy) in 2024. Households' inflation expectations have been decreasing since the start of 2023 but remain close to 10% one year ahead. The MNB is cautiously easing monetary conditions – in June it again lowered the ceiling on the interest rate band and the overnight deposit rate by 1 pp. However, it held the base rate at 13%.



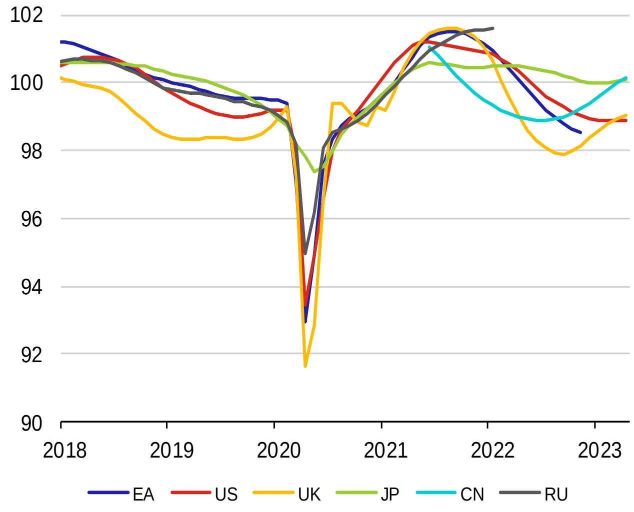
	CF	IMF	OECD	OE
2023	0.0	0.5	0.0	-0.8
2024	2.9	3.2	2.5	2.7



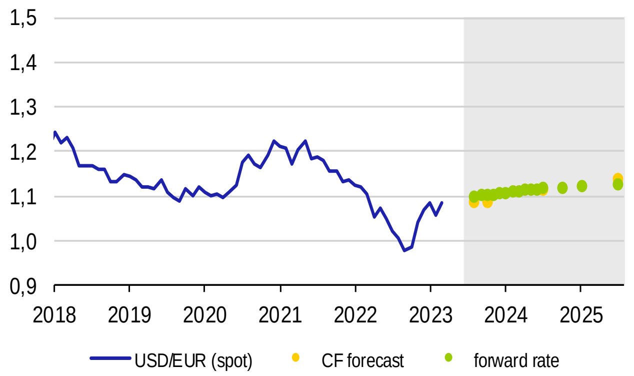
	CF	IMF	OECD	OE
2023	18.2	17.7	19.2	18.1
2024	5.4	5.4	5.4	5.9

IV. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

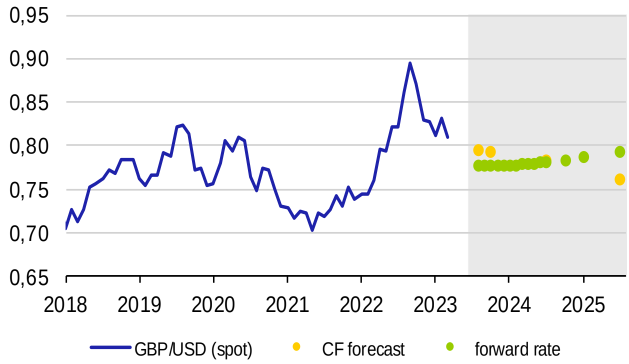


The US dollar (USD/EUR)



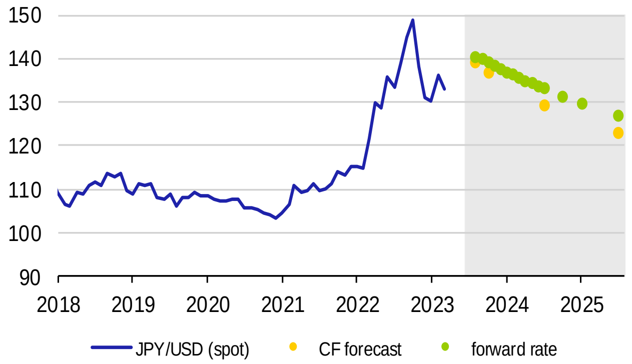
	10/7/23	8/23	10/23	7/24	7/25
spot rate	1.098				
CF forecast		1.089	1.091	1.115	1.139
forward rate		1.102	1.105	1.119	1.130

The British pound (GBP/USD)



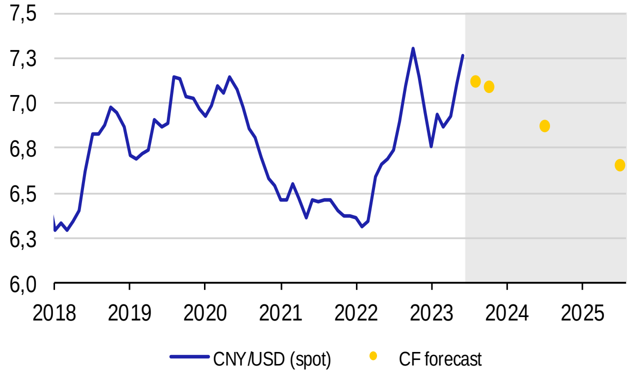
	10/7/23	8/23	10/23	7/24	7/25
spot rate	0.780				
CF forecast		0.796	0.793	0.785	0.763
forward rate		0.777	0.777	0.782	0.794

The Japanese yen (JPY/USD)



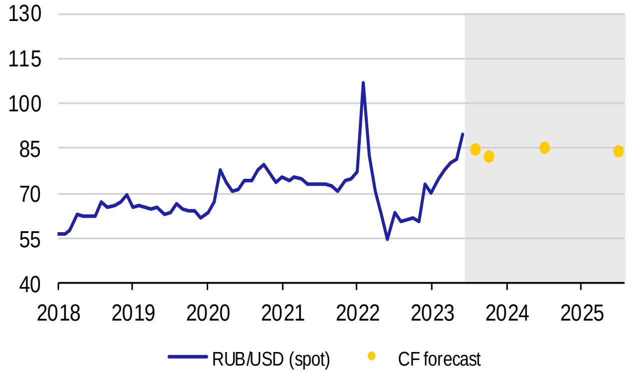
	10/7/23	8/23	10/23	7/24	7/25
spot rate	141.7				
CF forecast		139.2	137.0	129.4	123.1
forward rate		140.6	139.3	133.3	127.2

The Chinese renminbi (CNY/USD)



	10/7/23	8/23	10/23	7/24	7/25
spot rate	7.234				
CF forecast		7.125	7.096	6.880	6.663

The Russian rouble (RUB/USD)



	10/7/23	8/23	10/23	7/24	7/25
spot rate	90.95				
CF forecast		84.90	82.72	85.46	84.55

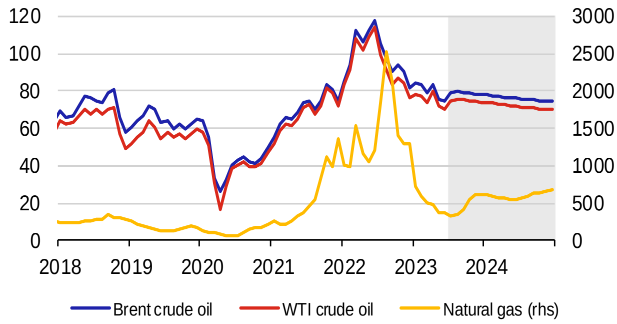
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

V.1 Oil

The Brent oil price exceeded USD 80/bbl in mid-July for the first time since the end of April. OPEC+ production cuts began to be felt on the market. The oil price stayed mostly within the narrow band of USD 74–77/bbl in May and June due to uncertainty about future global economic growth and weak demand in China. OPEC+ failed in its effort to support the price by cutting production, maybe because the previous strong interest rate growth significantly increased oil storage costs, and inventories owners thus reduced the amount of oil in tanks, dampening the effect of lower output. The oil price started to rise quickly in mid-July. The physical market was affected by a strong unilateral production cut by Saudi Arabia, which, moreover, was extended to August. For the first time in a long time, oil exports from Russia recorded a long-expected decline. This was accompanied by outages in Libya and Nigeria, while the global demand outlook improved, due among other things to the Chinese government's stimulation plans. The oil price was also supported by lower-than-expected inflation in the USA, which alleviated concerns of further tightening by the Fed and led to a weaker dollar. The price growth was amplified by the oil price breaking through several technical levels of resistance and thus leaving its previous narrow band. This, combined with improved sentiment on financial markets, led to financial investors closing massive short positions.

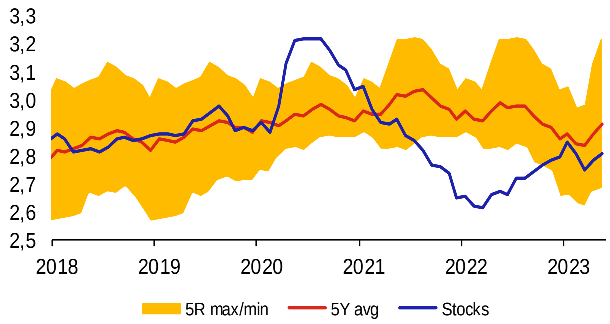
The market curve moved up significantly over the entire horizon in mid-July compared to the previous forecast. It remains downward-sloping, signalling a Brent price of USD 78.1 and 74.4/bbl at the end of 2023 and 2024 respectively. By contrast, the EIA forecast was unchanged, expecting global oil inventories to decline over the next five quarters. This will push the oil price up to USD 81 and 85/bbl respectively at the end of this year and the next. The July CF (broadly in line with the EIA) expects a price of USD 80.5/bbl one year ahead (although this does not yet take into account the mid-July price surge).

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

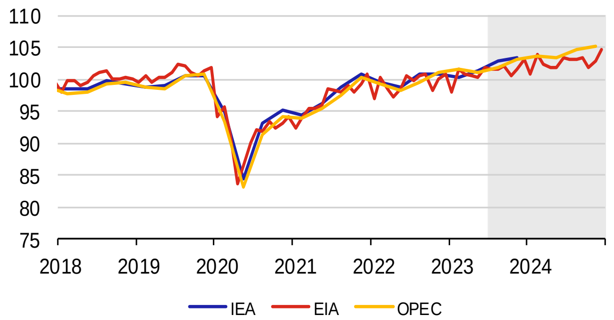


	Brent		WTI		Natural gas	
2023	79.56	↗	74.91	↗	490.63	↘
2024	76.01	↗	71.71	↗	603.65	↗

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

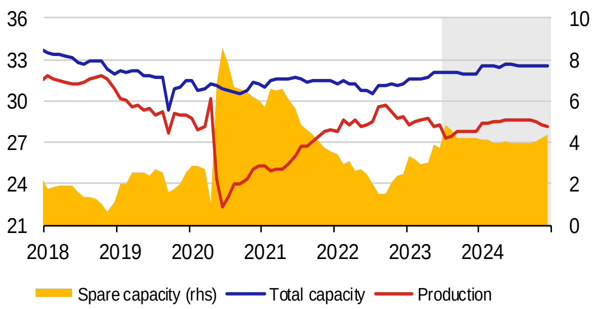


Global consumption of oil and oil products (mil. barrel / day)



	IEA		EIA		OPEC	
2023	102.01	↗	101.17	↗	102.00	↗
2024			102.81	↗	104.24	★

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



	Production		Total capacity		Spare capacity	
2023	28.03	↘	31.89	↗	3.86	↗
2024	28.49	↗	32.53	→	4.05	↘

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.

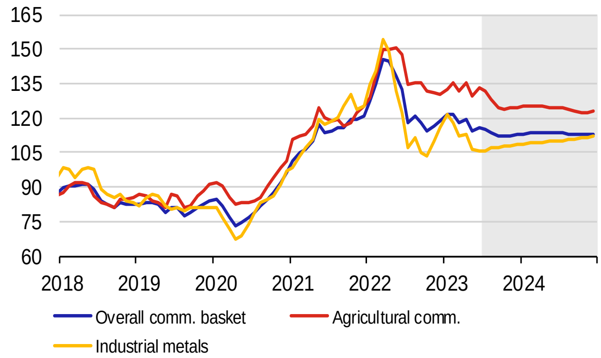
V.2 Other commodities

The situation on the natural gas market has calmed and the price in Europe remains just below the spot price in Asia. Inventories both in Europe and in most Asian countries are unusually high, reducing the summer demand for gas. Conversely, hot weather in both regions, which is pushing up gas consumption for electricity generation for air-conditioning, is preventing the price from falling further. However, the price of gas is expected to surge before the coming winter. The price of coal has also been broadly stable since mid-May. Although China has increased domestic production and reduced imports, demand there remains strong due to the government's efforts to prevent power cuts in the heat of summer, when hydropower generation declines. Demand for coal is also decreasing in Europe.

The decline in the industrial metals price index halted in June, when prices of most of its components stabilised. Only the price of tin edged up. The Chinese manufacturing PMI fell slightly in June but remained in the growth band at 50.5. However, the global industrial PMI fell deeper into the contraction band (48.8). On the LME, aluminium stocks increased while copper stocks declined. The outlook for the index is upward due to the traditionally increasing outlook for the price of aluminium and now also nickel. Conversely, the outlook for the iron ore price (which is not included in the index) is downward.

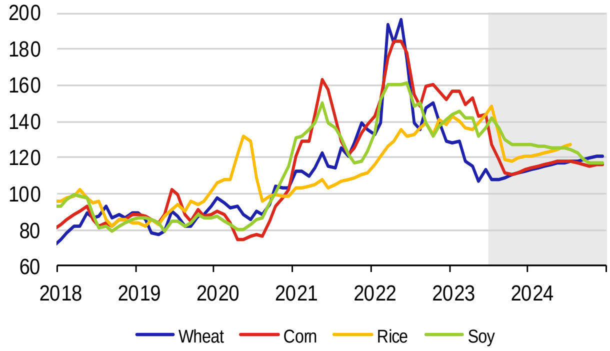
The food commodity price index rose in June but erased part of its gains in the first half of July. A further decline is expected after this year's harvest. Most components have a downward outlook, the exception being the wheat price. It surged temporarily in mid-June due to problems with exports from Ukraine, but later decreased again. However, the price of wheat rebounded in mid-July when Russia refused to extend the agreement allowing exports of grain from Black Sea ports. Most other food commodity prices declined due to an improved outlook for harvests in the USA and Latin America, which is also dampening wheat price growth. However, the price of beef is expected to reach another historical high.

Non-energy commodities price indicies



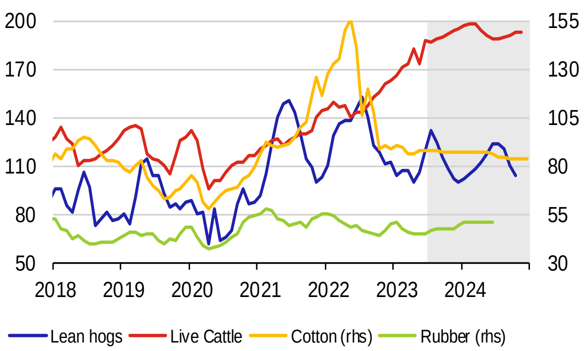
	Overall	Agricultural	Industrial
2023	115.7	129.6	110.1
2024	113.1	124.2	110.3

Food commodities



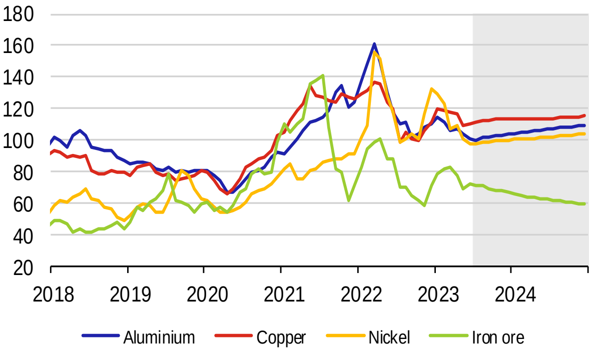
	Wheat	Corn	Rice	Soy
2023	114.2	133.0	132.9	136.0
2024	117.4	116.4	123.8	122.9

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2023	110.3	183.2	87.7	46.9
2024	112.7	192.9	85.4	50.9

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2023	104.9	114.3	105.2	73.4
2024	107.2	114.2	102.4	62.7

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.

Annual assessment of the forecasts included in GEO[1]

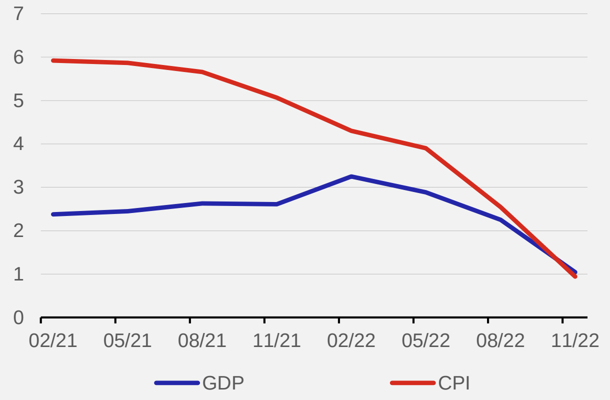
Every month, Global Economic Outlook (GEO) provides an overview of the latest economic forecasts issued by international institutions, selected central banks and Consensus Economics. The outlooks for last year were strongly affected by the onset of the war in Ukraine and the resulting energy crisis in Europe. The monitored institutions were thus on average optimistic about the outlooks for GDP growth in 2022, expecting higher growth, which, however, failed to materialise. By contrast, higher-than-expected inflation came as a surprise. A long-running period of low interest rates combined with analysts' conservatism were reflected in a substantial underestimation of outlooks for short-term interest rates at the one-year horizon for the euro area and the USA. The exchange rates of the monitored currencies against the dollar saw an increase in volatility last year due not only to uncertainties, but also differing inflation. The oil price was underestimated in the forecasts over the entire assessment period, as nobody expected another energy shock.

Introduction

Every year, we assess the accuracy of the forecasts of the economic variables regularly monitored in GEO. The results of this assessment provide valuable information about which of the monitored institutions produced estimates that were the closest to the subsequently recorded outcomes and were thus the most successful in their forecasts. In addition to Consensus Forecasts (CF), we assess the outlooks derived from market contracts when assessing the forecasts for interest rates, the dollar exchange rate and oil prices. The assessment always applies to the past year. In the case of the forecasts for GDP growth and CPI inflation for a given calendar year (fixed-event forecasts), we are now assessing the forecasts for 2022. In the case of the forecasts published for a fixed horizon that shifts further into the future each time a new forecast is published (rolling-event forecasts), the assessment covers the predictions since 2021. From the outlooks regularly published in GEO, this category of rolling forecasts contains, for example, the three-month and one-year outlooks for foreign interest rates, oil prices and the outlooks for exchange rates of the monitored currencies against the dollar. The general characteristics of the outlooks are quite obvious – the shorter the horizon, the more precise the forecasts become (see Chart 1).

Chart 1 – Gradual improvement of forecasts for 2022

(RMSE average)



Note: All the monitored institutions and all six regions (the USA, the euro area, China, the United Kingdom, Japan and Russia)

Owing to the short length of the time series under assessment, the analysis mainly uses the simple mean forecast error (MFE). The forecast error e_t is calculated as the difference between the ex post known actual value a_t and the corresponding forecast f_t: $e_t = a_t - f_t$. A positive forecast error therefore means that the forecasted value undershot the subsequent outcome, while a negative error means that it overshot it.[2]

Moreover, we use the RMSE indicator to assess the accuracy of the GDP and inflation growth forecasts across institutions. We also use the mean absolute percentage error (MAPE) to assess forecast accuracy across the currencies' exchange rates against the dollar. This variable, expressed in percentages, is suitable for cross-checking variables of various dimensions. Moreover, the individual errors are given in absolute terms, so (similarly to the RMSE) positive and negative forecast errors do not cancel each other out, as is the case with the MFE. The formal notation is as follows:

$$MAPE = \frac{100}{n}\sum_{t=1}^{n}\left|\frac{a_t - f_t}{a_t}\right|. \quad (1)$$

$$RMSE = \sqrt{\frac{\sum_{t=1}^{n}(a_t - f_t)^2}{n}} \quad (2)$$

[1] Authors: Filip Novotný and Petr Polák. 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 source of actual levels of GDP and consumer price inflation growth for 2022 is the publication Consensus Forecasts. The source of the actual levels of the other variables is Refinitiv. Futures contracts for interest rates, exchange rates and the Brent crude oil price are obtained from the Bloomberg database

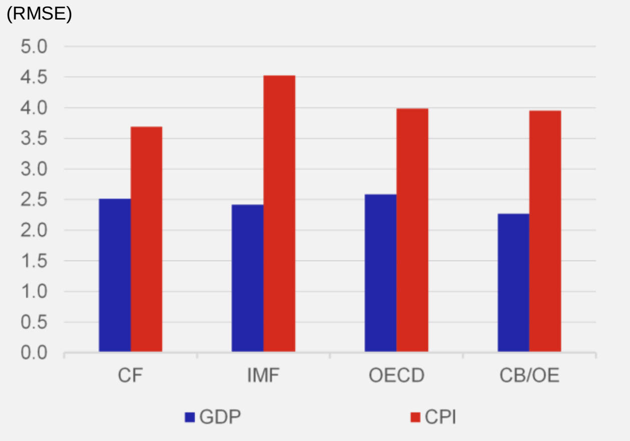
Assessment of the accuracy of the GDP growth and CPI inflation forecasts for 2022

GEO regularly monitors actual and predicted GDP growth and CPI inflation in the euro area, the USA, the UK, Japan, China and Russia. The forecasts for GDP growth and inflation for these countries are taken primarily from the CF survey, the International Monetary Fund (IMF) and the Organisation for Economic Cooperation and Development (OECD). These three institutions cover all the countries monitored. In the case of advanced economies, we also monitor the forecasts of their central banks, i.e. the European Central Bank (ECB), the Federal Reserve, the Bank of Japan (BoJ) and the Bank of England (BoE). Oxford Economics forecasts are used for China and Russia instead. These institutions differ in the frequency and date of publication of their forecasts. The forecast updates are either monthly (CF and the OE) or quarterly (the IMF, OECD, ECB, Fed and BoJ). Assessed are quarterly forecasts, specifically the February, May, August and November forecasts.

The average expectations of economic growth in the monitored economies were higher than the actual outcomes. The opposite was true for inflation, except for China. Features of stagflation have thus appeared in the individual countries in connection with the war (see Chart 2). The charts in Appendix 1 show the deviations of the GDP growth forecasts from the actual outcomes in the monitored countries. The largest variability[3] of outlooks for both GDP growth and inflation was naturally recorded for Russia, which was impacted not only by the war but also international sanctions. The euro area GDP growth outlooks were the most accurate (as measured by the RMSE). In addition, the euro area was characterised by low variability of forecasted growth. The GDP growth of 4.1% expected by CF at the start of 2021 ultimately came in at 0.6 pp lower. Much larger differences were seen for the other countries, with the biggest difference recorded by Russia (4.8 pp). The outlooks for most countries were most underestimated during 2021, i.e. even before the start of the war in Ukraine. The outlooks for economic growth were revised downwards after the outbreak of the war (by 14.7 pp in the case of Russia). The accuracy of the economic growth forecasts of all the institutions under comparison was very similar across all countries (see Chart 2).

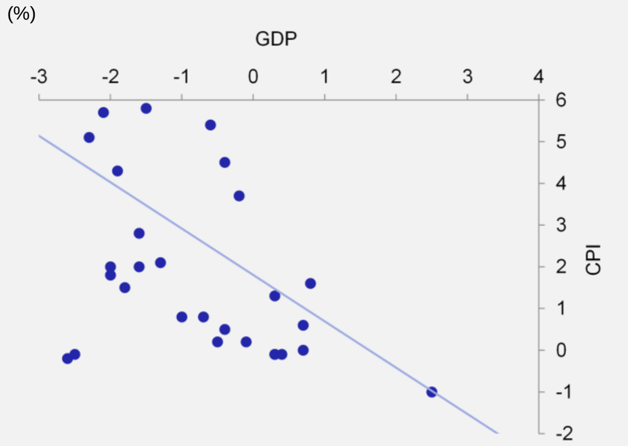
Owing to the energy crisis caused by the war and the fading effect of the post-pandemic recovery, actual inflation (with the exception of China) was well above its initial expected levels in early 2021 (see Appendix 2). There is therefore a clear inverse relationship between the forecast errors for economic growth and inflation according to CF for all countries under review (see Chart 3). Central banks' inflation outlooks were characterised by similar inaccuracies as the outlooks of other institutions. The greatest inflation forecast variability was again specific to Russia and, to a lesser extent, the United Kingdom. The average expected inflation in the euro area for 2022 reached 1.1% in early 2021, but the actual outcome was a sizeable 7.3 pp higher. CF analysts had the most accurate inflation outlooks on average for all countries (see Chart 2). However, no more general conclusions can be drawn from the results for only one year, as the accuracy of forecasts usually changes over time and across institutions.[4] However, the charts capturing deviations in GDP and inflation growth show a general trend where the shorter the forecast horizon, the more accurate the forecasts gradually become (Chart 1).

Chart 2 – Comparison of the accuracy of institutions forecasting GDP and inflation for all countries



Note: CF – Consensus Forecasts, IMF – International Monetary Fund, OECD – Organisation for Economic Cooperation and Development, CB/OE = central bank or Oxford Economics.

Chart 3– Relationship between the deviations in GDP and CPI



Note: CF forecasts for the countries under review.

[3]Variability is measured by the standard deviation in the analysis.

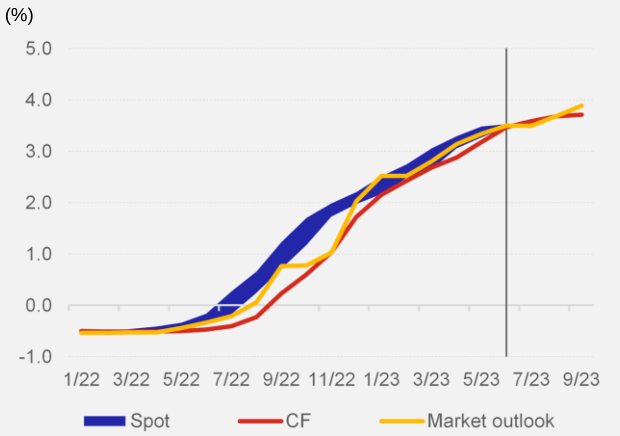
[4] A longer forecast period was assessed,for example, in Novotný and Raková (2010): Assessment of Consensus Forecasts Accuracy: The Czech National Bank Perspective. CNB WP.

Assessment of the accuracy of the forecasts for foreign interest rates

In GEO, interest rate outlooks are monitored for the euro area and the USA. In addition to the CF outlook, the monitored outlooks for three-month interest rates are also accompanied by an outlook derived from futures. By contrast, outlooks for long-term (ten-year) government bond yields are taken from CF only. As inflation and inflation expectations started to increase last year, central banks responded by increasing their rates. Now, in mid-2023, we are not done yet.

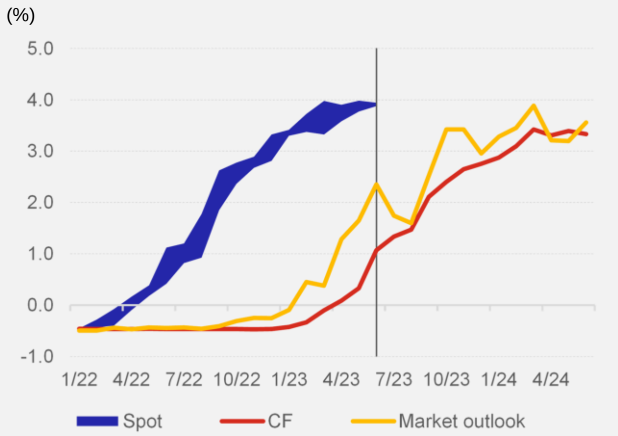
Market expectations regarding short-term interest rates were quite reliable from the second half of last year but still too conservative for one-year rates (see Charts 4 and 5). The ECB's communication regarding the temporary nature of inflation gradually subsided in early 2022, and markets and analysts were unable to estimate when rates would start to increase. Rates increased for the first time in the middle of the year and the market started to estimate the future situation fairly well after that. But the analysts were more cautious about the tightness of the ECB's monetary policy (see Chart 4a). Chart 4b, capturing the outlooks at the one-year horizon, shows a much larger degree of uncertainty in expectations and much more cautious analysts (CF outlooks) compared to market outlooks. Expectations regarding rate increases were very cautious and accelerated only in the second half of 2022. At the same time, one-year outlooks are now subject to a high degree of uncertainty regarding a subsequent decrease in rates, which market outlooks expect in about a year.

Chart 4a – 3M outlook for 3M interest rates in the euro area and a comparison with the actual outcome



Note: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

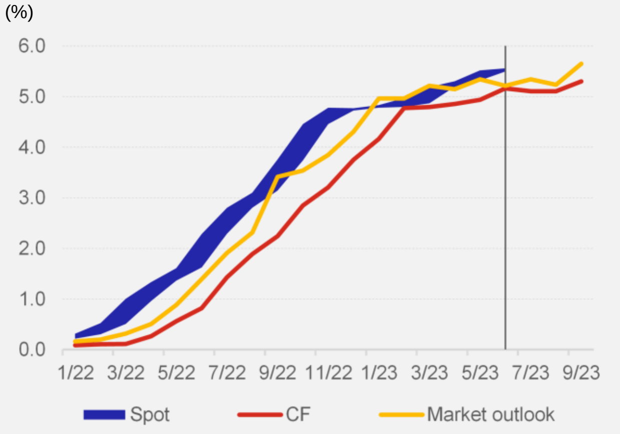
Chart 4b – 1Y outlook for 1Y interest rates in the euro area and a comparison with the actual outcome



Note: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

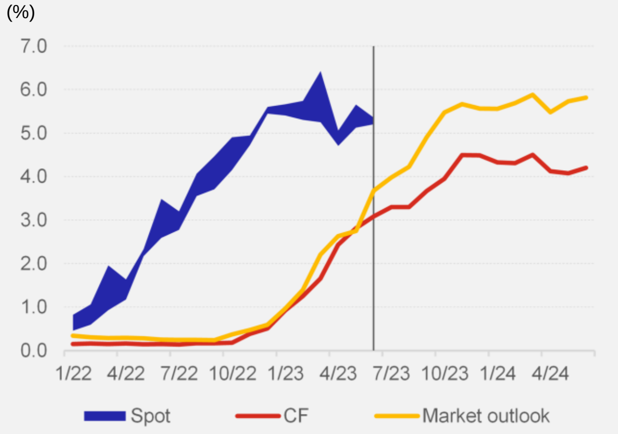
The outlooks for the United States are very similar; unlike the market outlooks, the analysts did not believe in such radical measures. The US Fed responded to inflation pressures faster, setting a very hawkish tone already at the end of 2021, which was reflected in growth in outlooks for both short-term and long-term rates (see Chart 5). It also holds true that market outlooks responded much more flexibly and faster than CF outlooks, which are thus significantly delayed and rather more conservative. The assessment also shows that there was a large difference between the market outlook and the analysts' outlook at the one-year horizon, which still persists, and CF analysts do not believe in higher rates and expect them to decrease from the current high levels, whereas the market expects them to stay at just below 5% even in mid-2024 (see Chart 5b).

Chart 5a – 3M outlook for 3M interest rates for the United States and a comparison with the actual outcome



Note: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

Chart 5b – 1Y outlook for 1Y interest rates for the United States and a comparison with the actual outcome



Note: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

Assessment of the accuracy of the forecasts for the dollar exchange rate

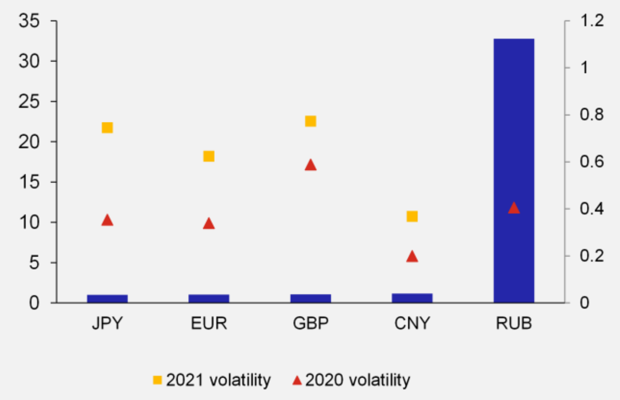
In 2022, the monitored exchange rates were greatly affected by Russia's aggression in Ukraine, which mainly affected the exchange rate of the rouble (see Chart 6). GEO provides information about the outlooks for the exchange rates of selected currencies against the US dollar based on CF forecasts. In addition, forward rates are provided for the euro, the Japanese yen and, since 2017, sterling. They are based on covered interest parity and represent the current ability to hedge the future exchange rate rather than the outlook. The accuracy of CF outlooks and market contracts does not differ, as illustrated in Chart 7, which shows their monthly evolution over more than the last two years.

Overall, the three-month outlooks for the euro-dollar exchange rate were relatively closely linked to the observed outcome in the period under review. Chart 6 illustrates first a weakening of the dollar against the euro since the start of 2020, followed by its appreciation from spring 2021 to the end of 2022 and then the appreciation of the euro. Both the market outlooks and CF outlooks have always been equally skewed and have been unable to capture a change in the trend at the three-month horizon.

The exchange rate of the Japanese yen was the most accurate of all the currency pairs at both the three-month and one-year horizons. The forecasts for the Japanese yen performed the best for most of the previous years. As usual, the forecasts for the Russian rouble were the worst performers at the three-month horizon (see Chart 6). The accuracy of the forecasts was also determined by the observed volatility of the monitored currencies, which, however, increased significantly last year compared to 2021 due mainly to uncertainty relating to Russia's aggression in Ukraine.

Chart 6 – Forecast errors of the exchange rate of selected currencies against the dollar (3M outlooks)

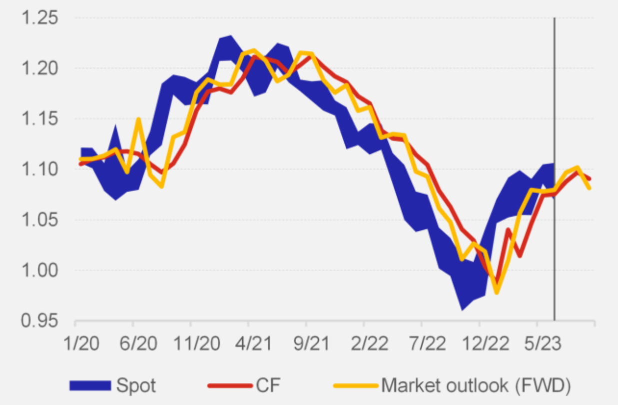
(MAPE; right-hand scale: volatility:



Source: CF, Bloomberg
Note: MAPE, volatility.

Chart 7 – Three-month outlook for the euro-dollar exchange rate and the actual outcome

(USD/EUR)

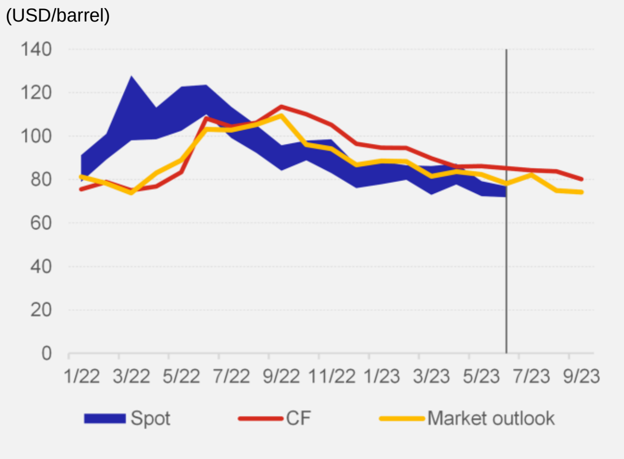


Source: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

Assessment of the accuracy of the Brent crude oil price forecasts

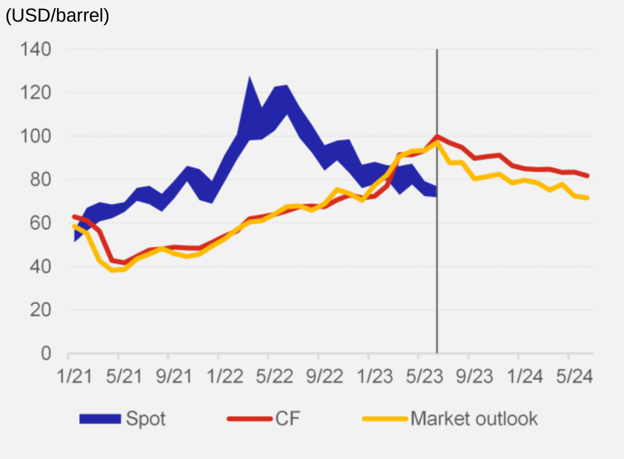
The Brent crude oil price is one of the most important commodity price outlooks presented in GEO. The accuracy of the forecasts for the Brent crude oil price according to both futures contracts and CF was the same on average. GEO regularly describes both sources of outlooks, and Charts 8 and 9 show that the values and trends of the outlooks differ only marginally. The oil price increased significantly at the start of last year due to Russia's aggression in Ukraine, as Russia exported most of its production to Europe and European countries gradually started to rid themselves of their dependence on Russian oil. Of course, this situation could not be captured at both the three-month and one-year horizon. The prediction error was naturally higher at the one-year horizon, which reflected 2021 inflation. Market outlooks were able to better capture the subsequent price decrease than CF outlooks, which predicted a slower price decrease. The outlook is currently almost constant at around USD 75/bbl at the short-term horizon. Market outlooks expect the price to be around USD 70/bbl at the one-year horizon, while CF analysts expect it at slightly above USD 80/bbl. Owing to the ongoing conflict in Ukraine, a more pronounced price decrease cannot be expected.

Chart 8 – Three-month outlook for Brent oil price



Source: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

Chart 9 – One-year outlook for Brent oil price



Source: CF, Bloomberg
Note: The blue area indicates the range between the minimum and maximum prices in the given month. The vertical line indicates the end of the observed data.

Conclusion

Last year saw a major unexpected external shock in the form of the war in Ukraine. The war significantly affected the original estimates of GDP growth and inflation in the countries under review, as well as commodity prices. The energy crisis in Europe caused an even more pronounced increase in inflation pressures and led, to a lesser extent, to a downward revision of GDP growth. Financial variables in particular were significantly affected by the long-running easy monetary policy of central banks and a lack of confidence in the rapid monetary policy tightening especially among the analysts.

This article uses simple methods to assess the accuracy of the forecasts monitored in GEO over the past year. The accuracy of the forecasts of the institutions covered by GEO changes from year to year. This is one of the reasons why several institutions' forecasts are monitored in GEO. The accuracy of CF forecasts has long been comparable to the available alternative forecasts, which was also the case in 2022. In addition, CF has the advantage of being published monthly and covering a relatively wide range of economic variables. The accuracy of CF stems from its defining characteristic, namely that it is the simple average of the forecasts from the contributing private institutions.[5] The disadvantage is a slow response of predicted variables, especially in turbulent times, which then "lag behind" market outlooks.

Contrary to expectations, 2022 was another turbulent year, and the resilience of economies came as a surprise. Pessimistic expectations and high volatility were shaped by the initial shock caused by Russia's aggression in Ukraine at the start of 2022. Subsequently though, economies adjusted relatively quickly to the sanction measures introduced and tensions on the energy market gradually moderated due to favourable weather. High demand for goods and a robust labour market coupled with energy prices contributed to the rapid growth in inflation, which was the main economic topic in 2022.

[5] The characteristics of CF are described in more detail in an earlier article "How consensus has evolved in Consensus Forecasts" by Adam and Hošek in GEO 04/2015.

Keywords

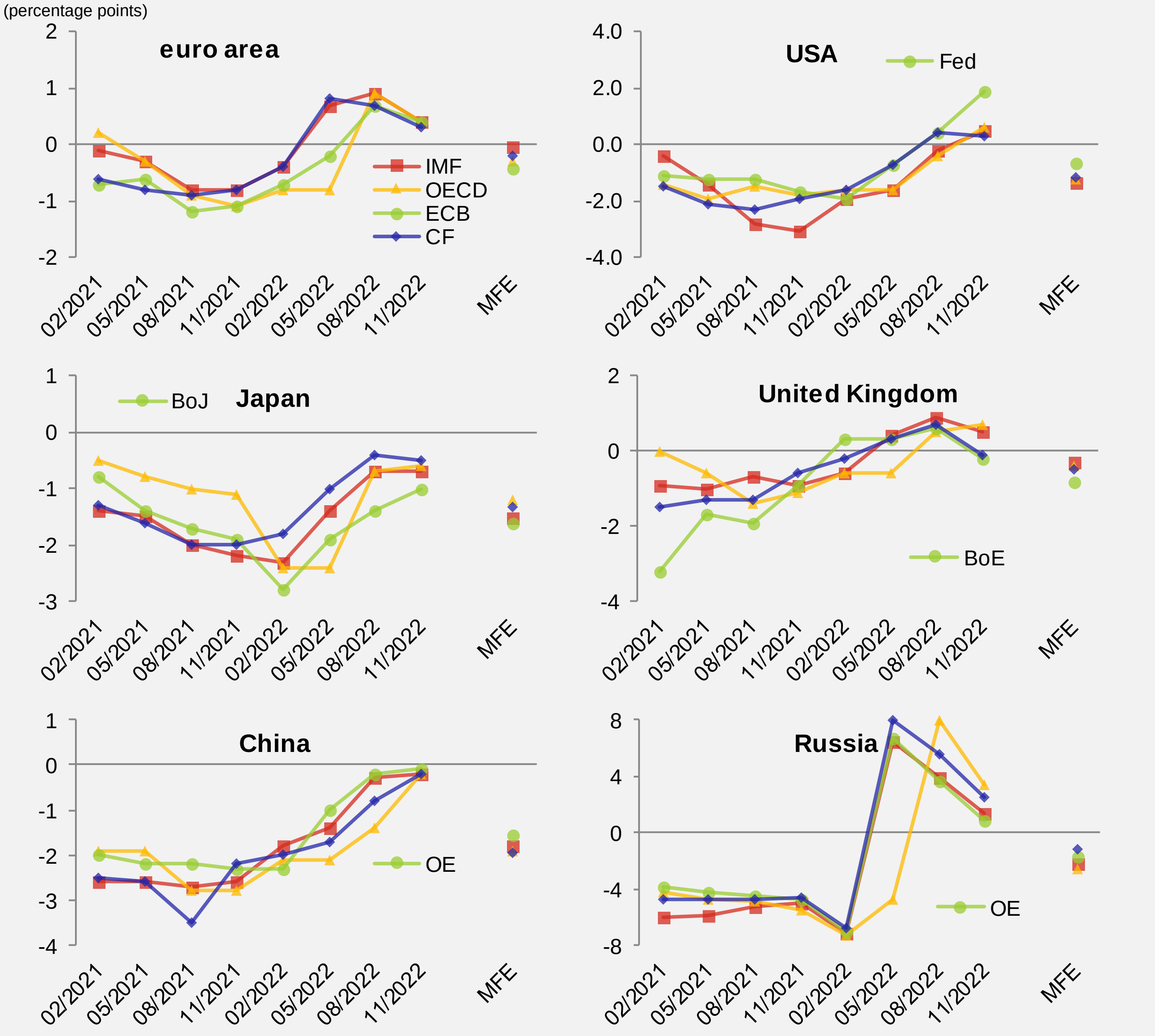
Forecast error, economic outlook, Consensus Forecasts

JEL Classification

E66, E27, C18

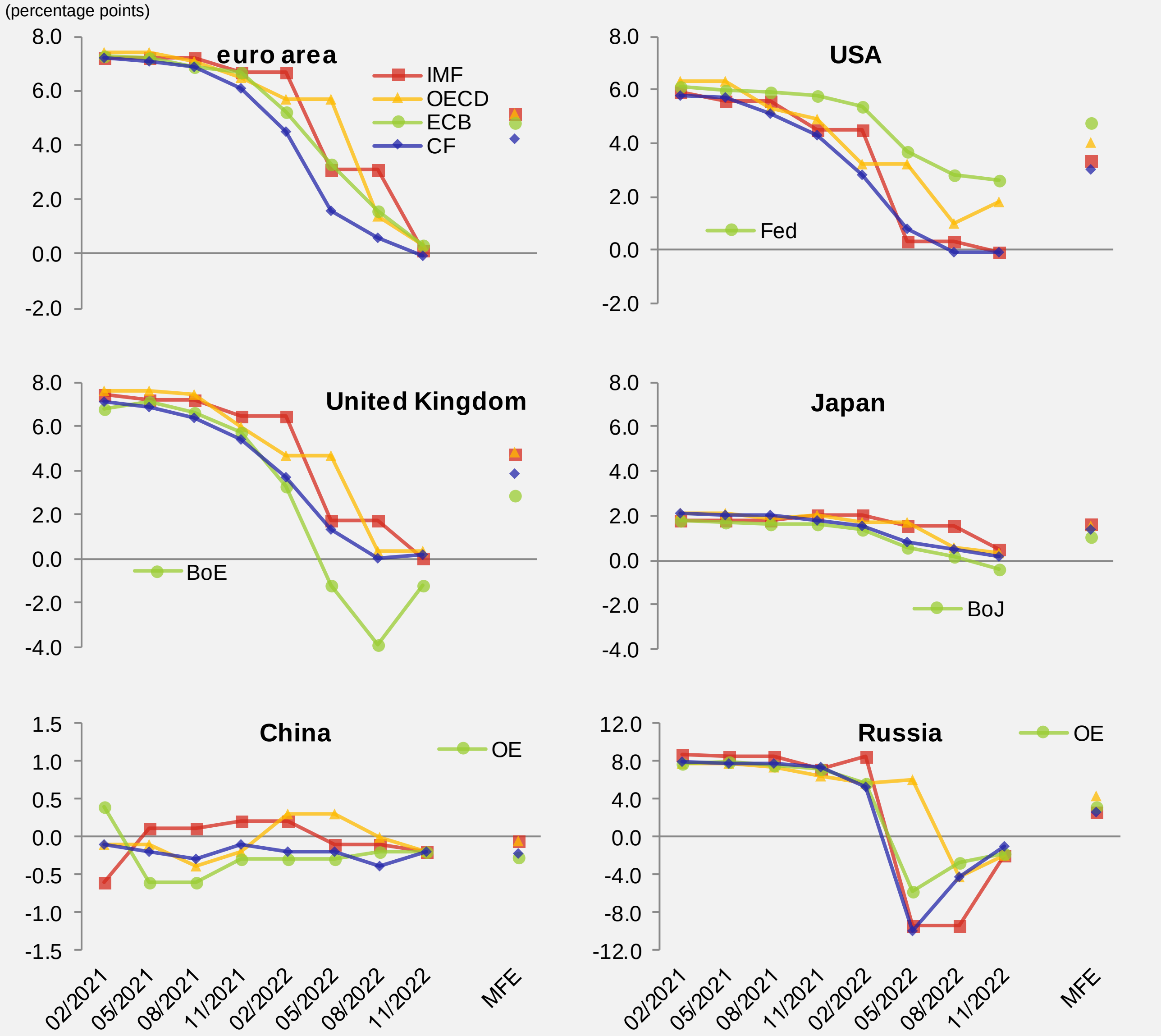
Annex 1 – Forecast errors for GDP growth for 2022

(percentage points)



Note: CF – Consensus Forecasts, IMF – International Monetary Fund, OECD – Organisation for Economic Cooperation and Development, ECB – European Central Bank, Fed – Federal Reserve System of the USA, Boe – Bank of England, BoJ – Bank of Japan, EIU - Economist Intelligence Unit. MFE is the mean forecast error for the given year.

Annex 2 – Forecast errors for consumer price inflation for 2022 (percentage points)



Note: CF – Consensus Forecasts, IMF – International Monetary Fund, OECD – Organisation for Economic Cooperation and Development, ECB – European Central Bank, Fed – Federal Reserve System of the USA, Boe – Bank of England, BoJ – Bank of Japan, EIU - Economist Intelligence Unit. MFE is the mean forecast error for the given year.

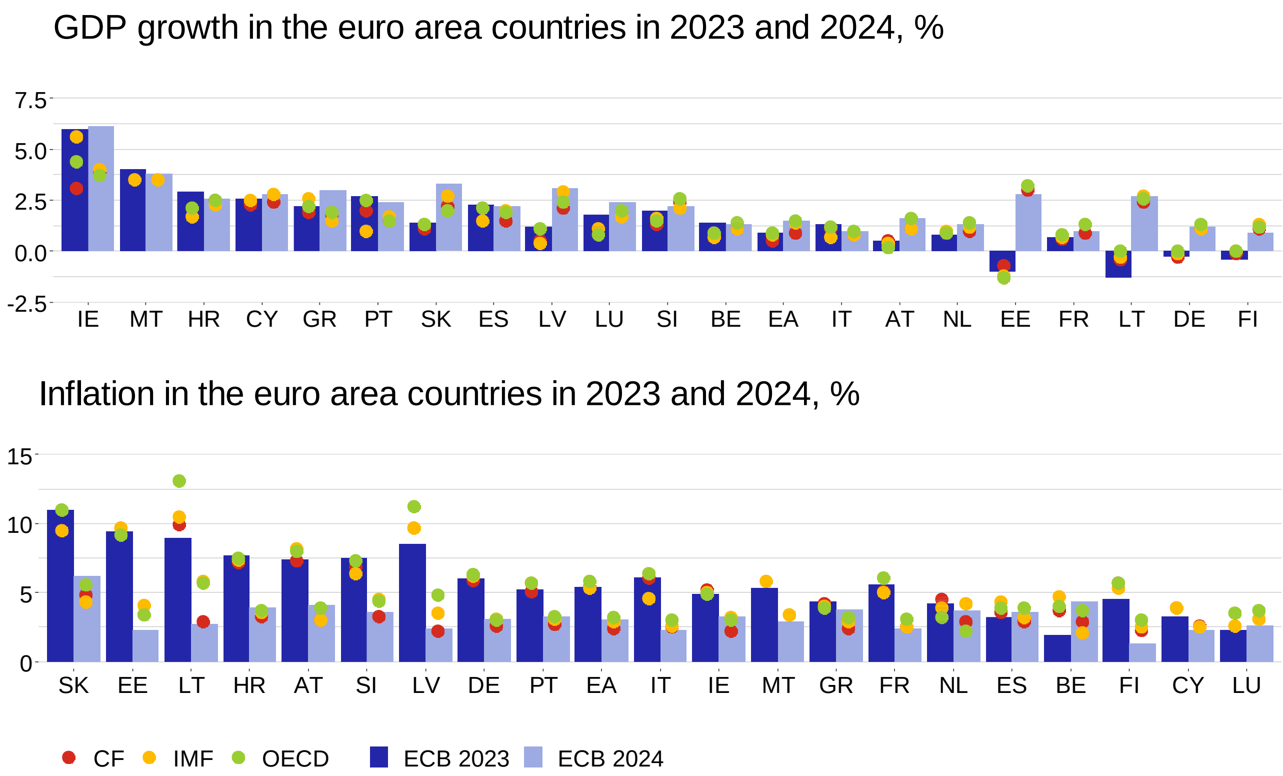
A1. Change in predictions for 2023

	GDP growth, %								Inflation, %							
	CF		IMF		OECD		CB / OE		CF		IMF		OECD		CB / OE	
EA	-0.1	2023/7 2023/6	+0.1	2023/4 2023/1	+0.1	2023/6 2023/3	-0.1	2023/6 2023/3	0	2023/7 2023/6	-0.4	2023/4 2022/10	-0.4	2023/6 2023/3	+0.1	2023/6 2023/3
US	+0.3	2023/7 2023/6	+0.2	2023/4 2023/1	+0.1	2023/6 2023/3	+0.6	2023/6 2023/3	0	2023/7 2023/6	+1.0	2023/4 2022/10	+0.5	2023/6 2023/3	-0.1	2023/6 2023/3
UK	0	2023/7 2023/6	+0.3	2023/4 2023/1	+0.5	2023/6 2023/3	+0.8	2023/5 2023/2	+0.1	2023/7 2023/6	-2.2	2023/4 2022/10	+0.2	2023/6 2023/3	+1.0	2023/5 2023/2
JP	+0.1	2023/7 2023/6	-0.5	2023/4 2023/1	-0.1	2023/6 2023/3	-0.3	2023/4 2023/1	+0.1	2023/7 2023/6	+1.3	2023/4 2022/10	+0.3	2023/6 2023/3	+0.2	2023/4 2023/1
CN	-0.2	2023/7 2023/6	0	2023/4 2023/1	+0.1	2023/6 2023/3	0	2023/7 2023/6	-0.3	2023/7 2023/6	-0.2	2023/4 2022/10	-0.1	2023/6 2023/3	-0.5	2023/7 2023/6
RU	+0.7	2023/6 2023/5	+0.4	2023/4 2023/1	+1.0	2023/6 2023/3	+0.9	2023/7 2023/6	-0.4	2023/6 2023/5	+2.0	2023/4 2022/10	-1.0	2023/6 2023/3	+0.1	2023/7 2023/6

A2. Change in predictions for 2024

	GDP growth, %								Inflation, %							
	CF		IMF		OECD		CB / OE		CF		IMF		OECD		CB / OE	
EA	0	2023/7 2023/6	-0.2	2023/4 2023/1	0	2023/6 2023/3	-0.1	2023/6 2023/3	0	2023/7 2023/6	+0.2	2023/4 2022/10	+0.2	2023/6 2023/3	+0.1	2023/6 2023/3
US	0	2023/7 2023/6	+0.1	2023/4 2023/1	+0.1	2023/6 2023/3	-0.1	2023/6 2023/3	0	2023/7 2023/6	+0.1	2023/4 2022/10	+0.1	2023/6 2023/3	0	2023/6 2023/3
UK	-0.4	2023/7 2023/6	+0.1	2023/4 2023/1	+0.1	2023/6 2023/3	+1.1	2023/5 2023/2	0	2023/7 2023/6	-0.7	2023/4 2022/10	0	2023/6 2023/3	+0.8	2023/5 2023/2
JP	-0.2	2023/7 2023/6	+0.1	2023/4 2023/1	0	2023/6 2023/3	+0.1	2023/4 2023/1	0	2023/7 2023/6	+1.2	2023/4 2022/10	+0.2	2023/6 2023/3	+0.2	2023/4 2023/1
CN	-0.1	2023/7 2023/6	0	2023/4 2023/1	+0.2	2023/6 2023/3	0	2023/7 2023/6	-0.2	2023/7 2023/6	+0.3	2023/4 2022/10	0	2023/6 2023/3	-0.5	2023/7 2023/6
RU	0	2023/6 2023/5	-0.8	2023/4 2023/1	+0.1	2023/6 2023/3	-0.7	2023/7 2023/6	-0.2	2023/6 2023/5	+0.6	2023/4 2022/10	-0.1	2023/6 2023/3	0	2023/7 2023/6

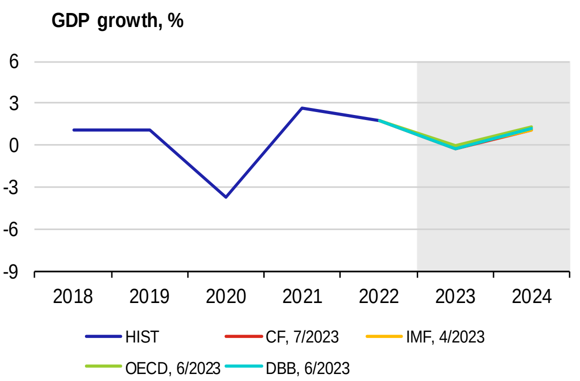
A3. GDP growth and inflation outlooks in the euro area countries

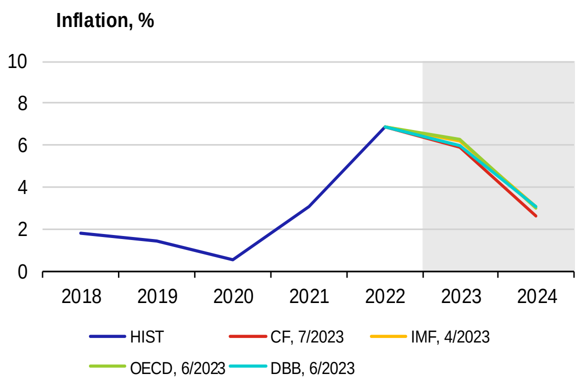


Note: Charts show institutions' latest available outlooks of for the given country.

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

Germany



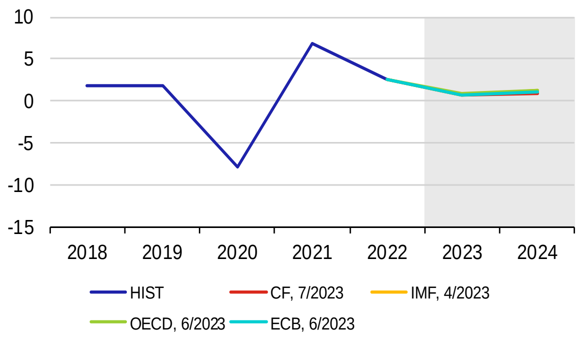


	CF	IMF	OECD	DBB
2023	-0.3	-0.1	0.0	-0.3
2024	1.1	1.1	1.3	1.2

	CF	IMF	OECD	DBB
2023	5.9	6.2	6.3	6.0
2024	2.6	3.1	3.0	3.1

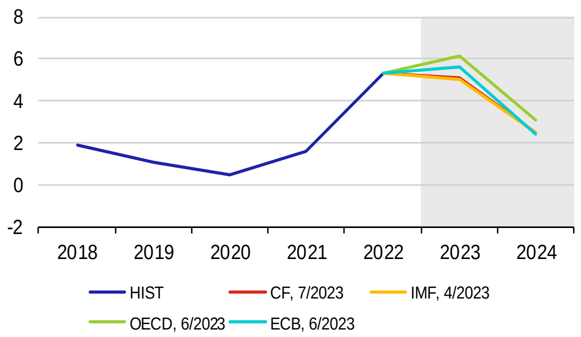
France

GDP growth, %



	CF		IMF	OECD	ECB	
2023	0.6	→	0.7	0.8	0.7	↗
2024	0.9	→	1.3	1.3	1.0	↘

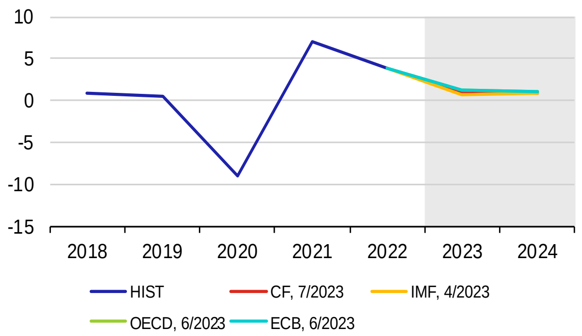
Inflation, %



	CF		IMF	OECD	ECB	
2023	5.1	↘	5.0	6.1	5.6	↘
2024	2.5	↘	2.5	3.1	2.4	↘

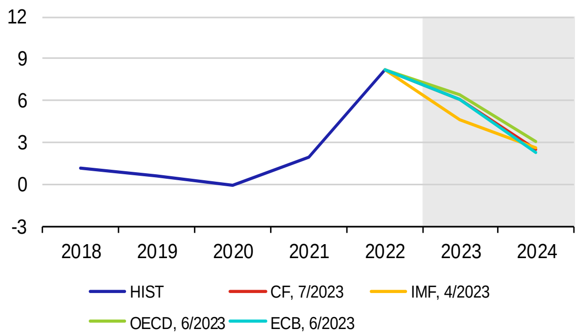
Italy

GDP growth, %



	CF		IMF	OECD	ECB	
2023	1.1	↗	0.7	1.2	1.3	↗
2024	0.8	→	0.8	1.0	1.0	↘

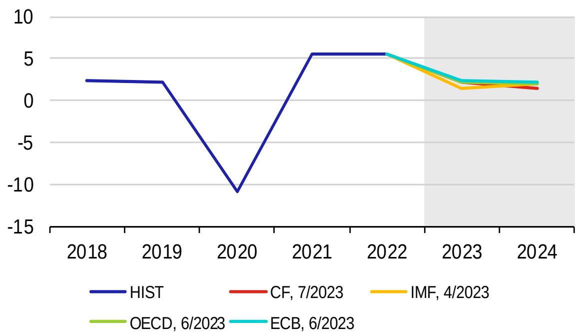
Inflation, %



	CF		IMF	OECD	ECB	
2023	6.1	→	4.6	6.4	6.1	↘
2024	2.5	→	2.6	3.0	2.3	↘

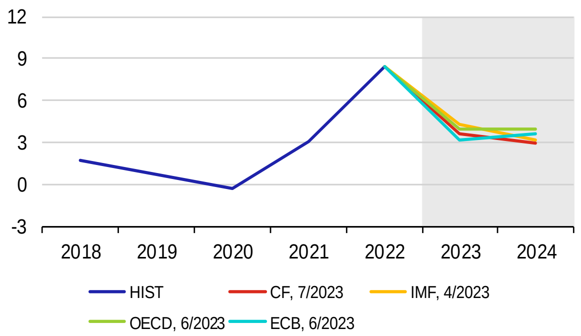
Spain

GDP growth, %



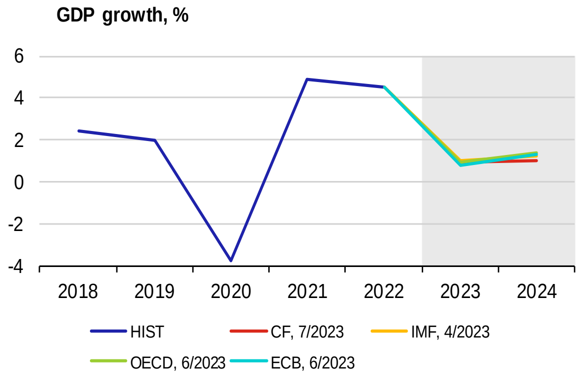
	CF		IMF	OECD	ECB	
2023	2.1	↗	1.5	2.1	2.3	↗
2024	1.5	→	2.0	1.9	2.2	↘

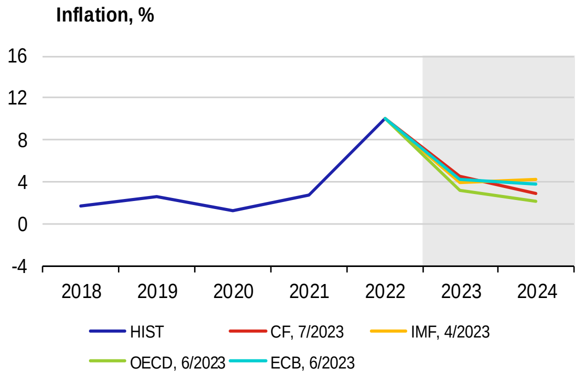
Inflation, %



	CF		IMF	OECD	ECB	
2023	3.6	↘	4.3	3.9	3.2	↘
2024	2.9	→	3.2	3.9	3.6	→

Netherlands

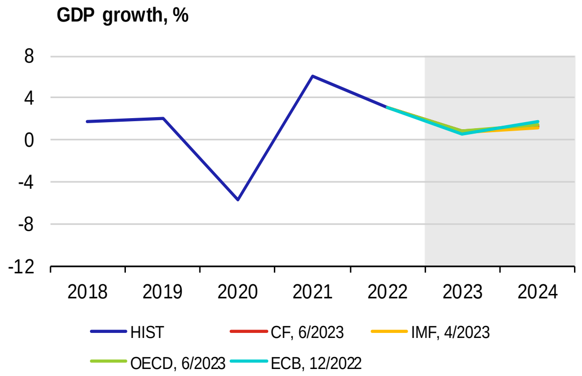


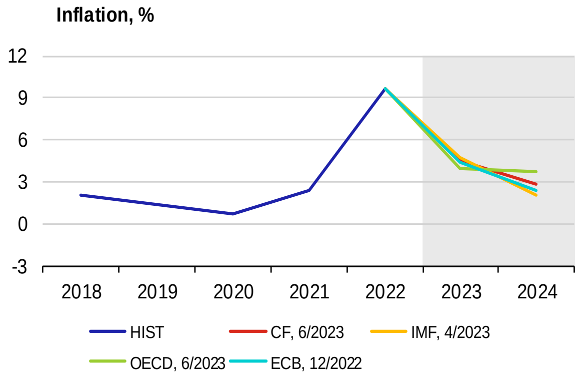


	CF	IMF	OECD	ECB
2023	0.9	1.0	0.9	0.8
2024	1.0	1.2	1.4	1.3

	CF	IMF	OECD	ECB
2023	4.5	3.9	3.2	4.2
2024	2.9	4.2	2.2	3.7

Belgium

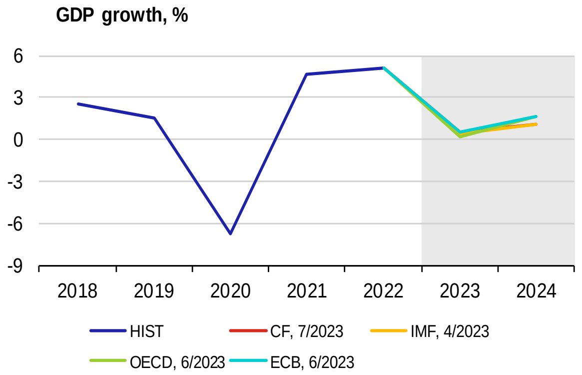


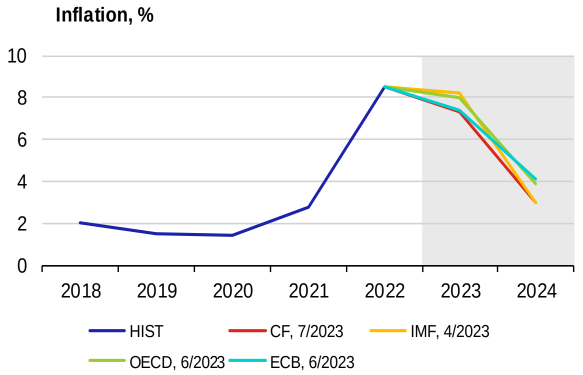


	CF	IMF	OECD	ECB
2023	0.9	0.7	0.9	0.6
2024	1.3	1.1	1.4	1.7

	CF	IMF	OECD	ECB
2023	4.5	4.7	4.0	4.4
2024	2.8	2.1	3.7	2.4

Austria

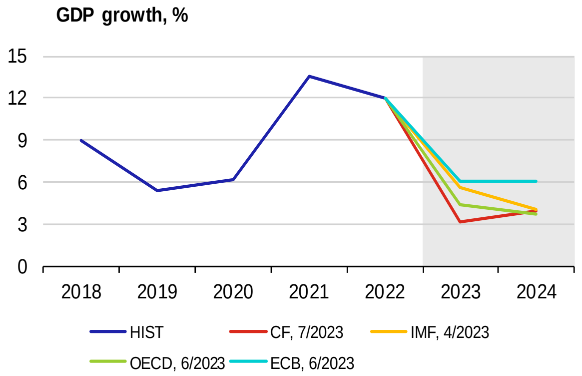




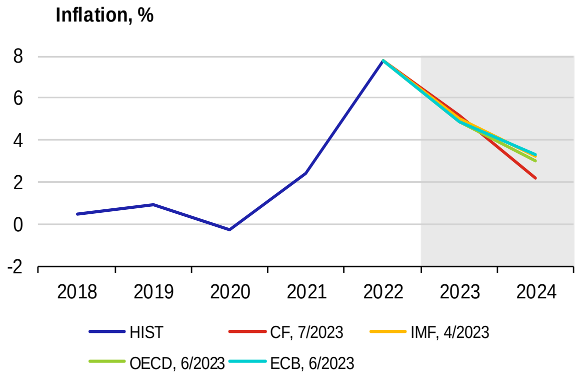
	CF	IMF	OECD	ECB
2023	0.5	0.4	0.2	0.5
2024	1.1	1.1	1.6	1.6

	CF	IMF	OECD	ECB
2023	7.3	8.2	8.0	7.4
2024	3.0	3.0	3.9	4.1

Ireland

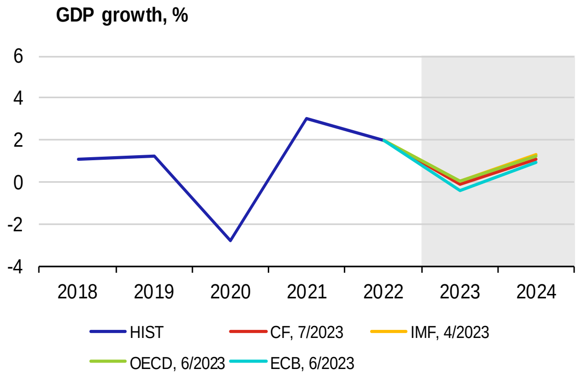


	CF		IMF	OECD	ECB	
2023	3.1	↘	5.6	4.4	6.0	↗
2024	3.9	→	4.0	3.7	6.1	↘

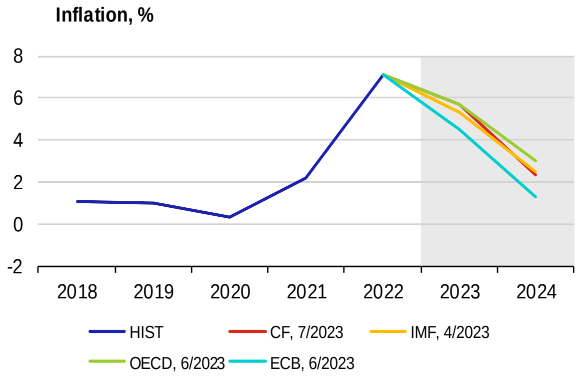


	CF		IMF	OECD	ECB	
2023	5.2	↘	5.0	4.9	4.9	↘
2024	2.2	↘	3.2	3.0	3.3	↘

Finland

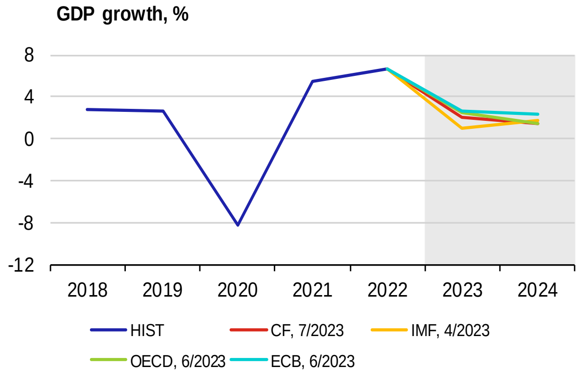


	CF		IMF	OECD	ECB	
2023	-0.1	↗	0.0	0.0	-0.4	↗
2024	1.1	→	1.3	1.2	0.9	↘

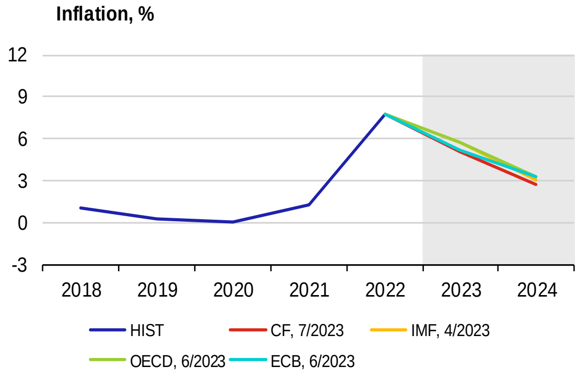


	CF		IMF	OECD	ECB	
2023	5.7	↗	5.3	5.7	4.5	↘
2024	2.3	↗	2.5	3.0	1.3	↘

Portugal



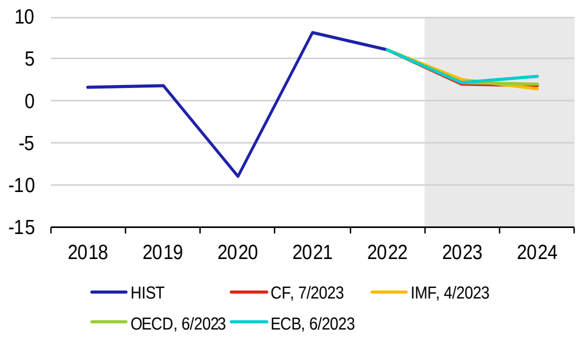
	CF		IMF	OECD	ECB	
2023	2.0	↗	1.0	2.5	2.7	↗
2024	1.5	→	1.7	1.5	2.4	↗



	CF		IMF	OECD	ECB	
2023	5.1	↘	5.7	5.7	5.2	↘
2024	2.7	→	3.1	3.3	3.3	→

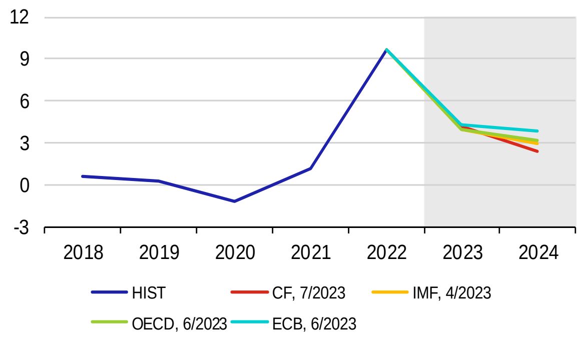
Greece

GDP growth, %



	CF	IMF	OECD	ECB
2023	1.9	2.6	2.2	2.2
2024	1.8	1.5	1.9	3.0

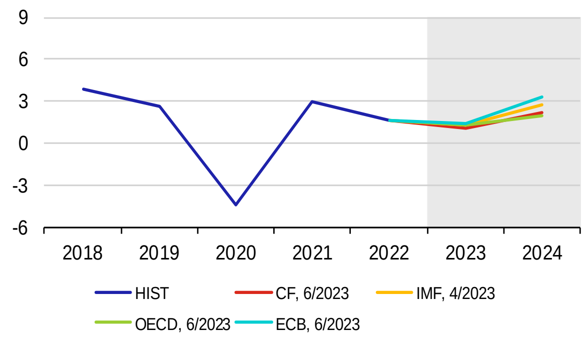
Inflation, %



	CF	IMF	OECD	ECB
2023	4.2	4.0	3.9	4.3
2024	2.4	2.9	3.2	3.8

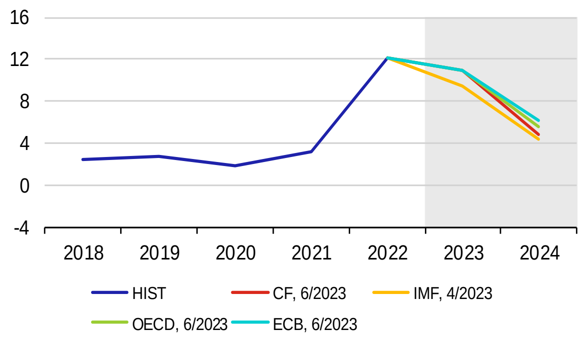
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2023	1.1	1.3	1.3	1.4
2024	2.2	2.7	2.0	3.3

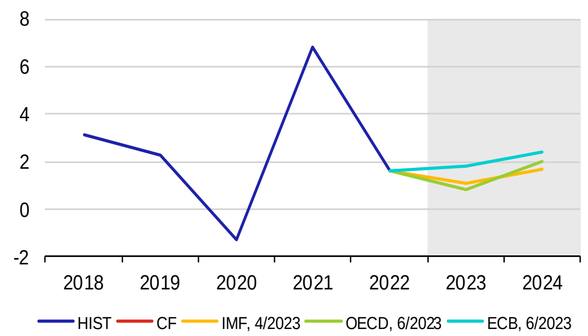
Inflation, %



	CF	IMF	OECD	ECB
2023	11.0	9.5	11.0	11.0
2024	4.8	4.3	5.6	6.2

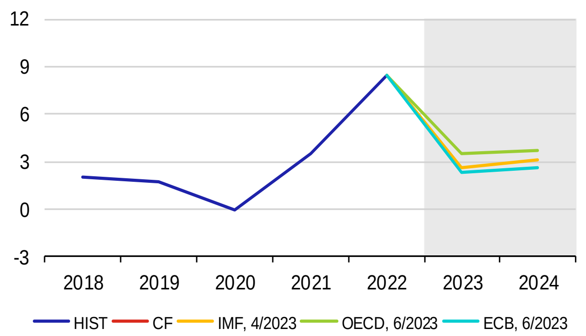
Luxembourg

GDP growth, %



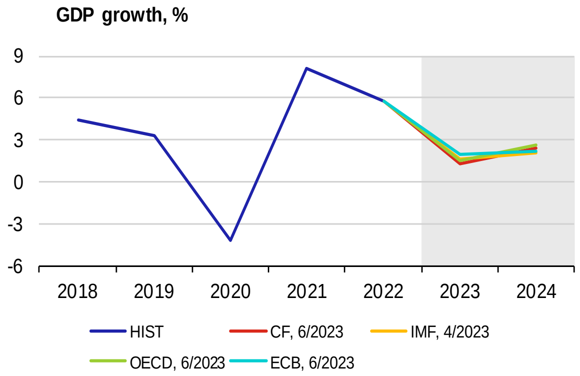
	CF	IMF	OECD	ECB
2023	n. a.	1.1	0.8	1.8
2024	n. a.	1.7	2.0	2.4

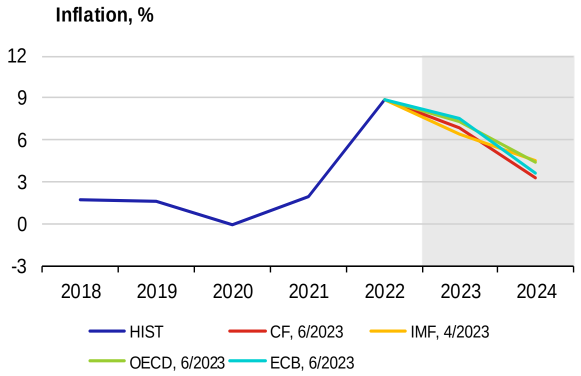
Inflation, %



	CF	IMF	OECD	ECB
2023	n. a.	2.6	3.5	2.3
2024	n. a.	3.1	3.7	2.6

Slovenia





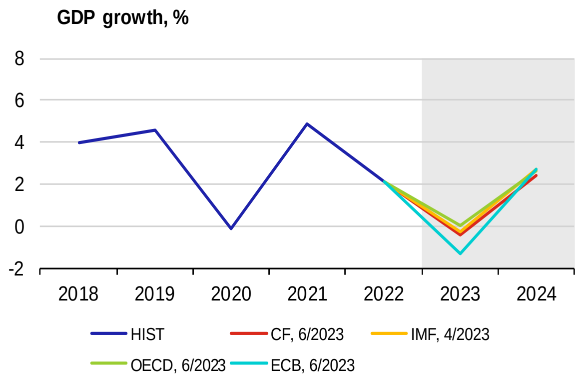
GDP growth, %

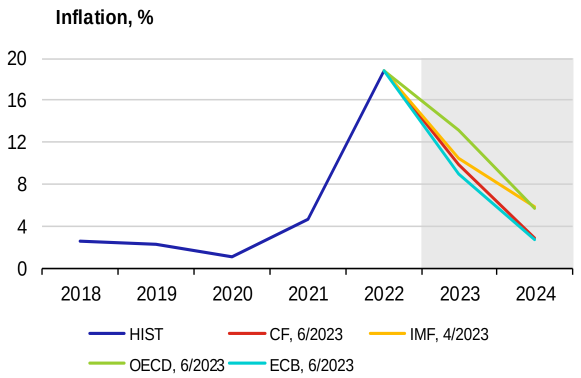
	CF	IMF	OECD	ECB
2023	1.3	1.6	1.5	2.0
2024	2.4	2.1	2.6	2.2

Inflation, %

	CF	IMF	OECD	ECB
2023	6.9	6.4	7.3	7.5
2024	3.3	4.5	4.4	3.6

Lithuania





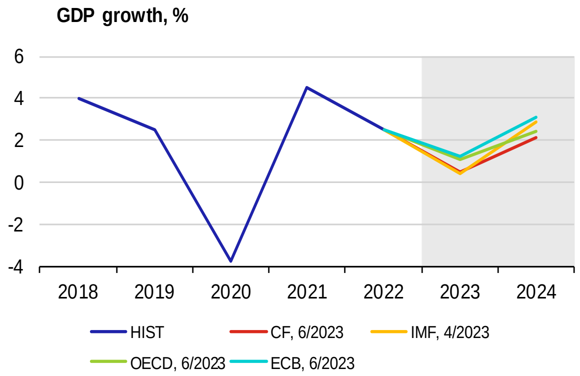
GDP growth, %

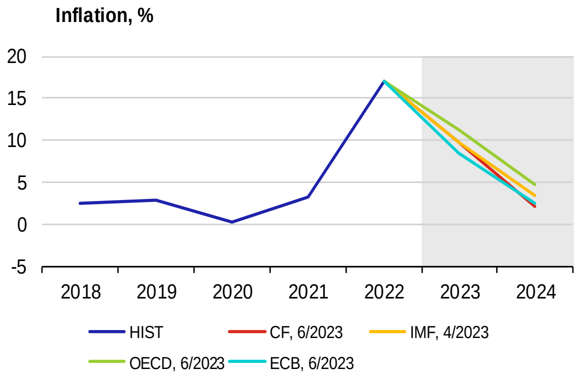
	CF	IMF	OECD	ECB
2023	-0.4	-0.3	0.0	-1.3
2024	2.4	2.7	2.6	2.7

Inflation, %

	CF	IMF	OECD	ECB
2023	9.9	10.5	13.1	8.9
2024	2.9	5.8	5.7	2.7

Latvia





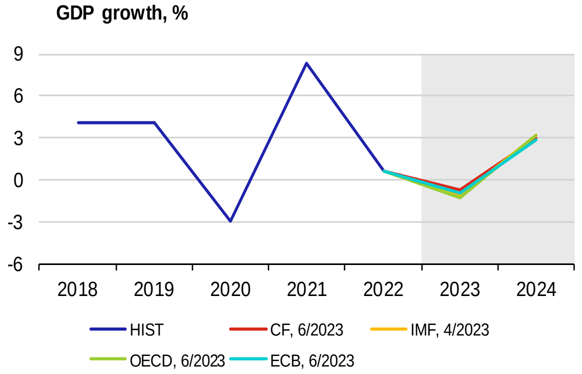
GDP growth, %

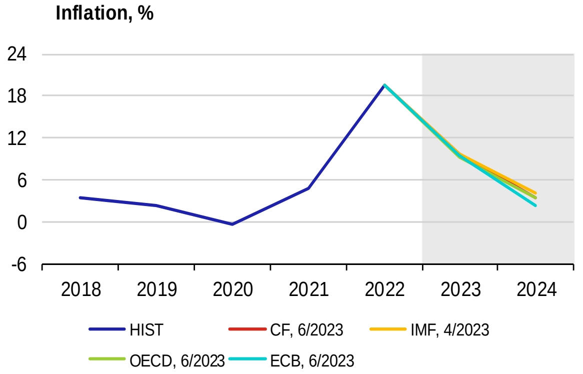
	CF	IMF	OECD	ECB
2023	0.5	0.4	1.1	1.2
2024	2.1	2.9	2.4	3.1

Inflation, %

	CF	IMF	OECD	ECB
2023	9.7	9.7	11.2	8.5
2024	2.2	3.5	4.8	2.4

Estonia

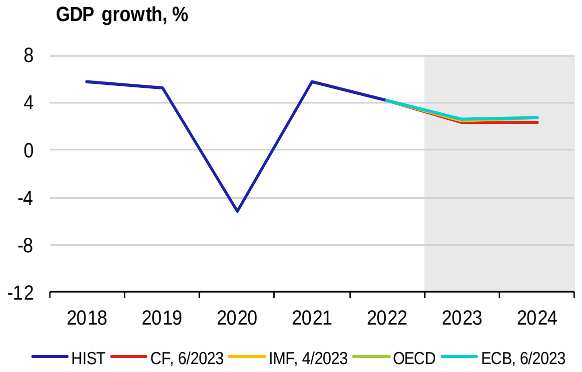


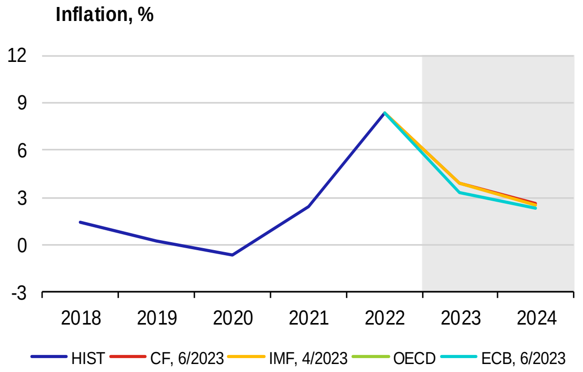


	CF	IMF	OECD	ECB
2023	-0.7	-1.2	-1.3	-1.0
2024	3.0	3.2	3.2	2.8

	CF	IMF	OECD	ECB
2023	9.7	9.7	9.2	9.4
2024	3.4	4.1	3.4	2.3

Cyprus

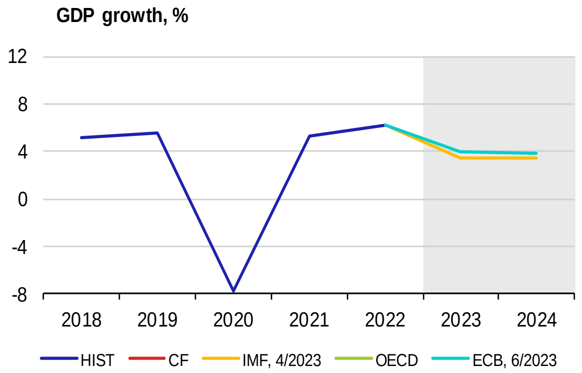


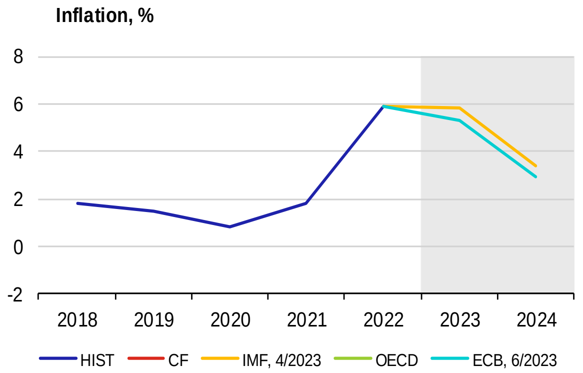


	CF	IMF	OECD	ECB
2023	2.3	2.5	n. a.	2.6
2024	2.4	2.8	n. a.	2.8

	CF	IMF	OECD	ECB
2023	3.9	3.9	n. a.	3.3
2024	2.6	2.5	n. a.	2.3

Malta





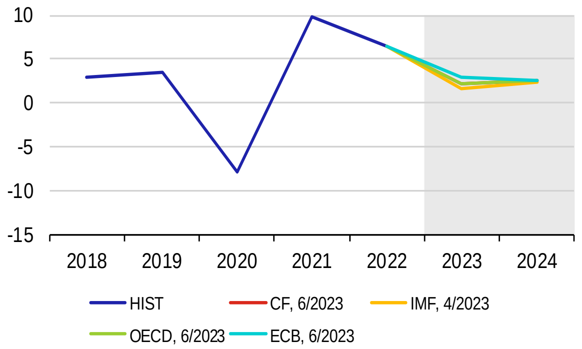
	CF	IMF	OECD	ECB
2023	n. a.	3.5	n. a.	4.0
2024	n. a.	3.5	n. a.	3.8

	CF	IMF	OECD	ECB
2023	n. a.	5.8	n. a.	5.3
2024	n. a.	3.4	n. a.	2.9

Ddd

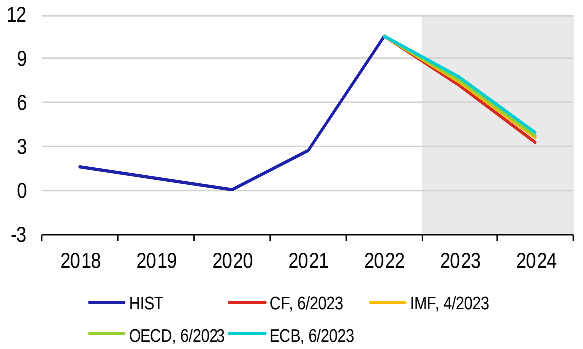
Croatia

GDP growth, %



	CF	IMF	OECD	ECB
2023	2.1	1.7	2.1	2.9
2024	2.5	2.3	2.5	2.6

Inflation, %

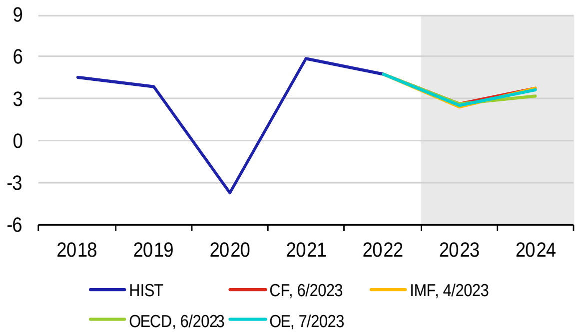


	CF	IMF	OECD	ECB
2023	7.2	7.4	7.5	7.7
2024	3.3	3.6	3.7	3.9

A5. GDP growth and inflation in other selected countries

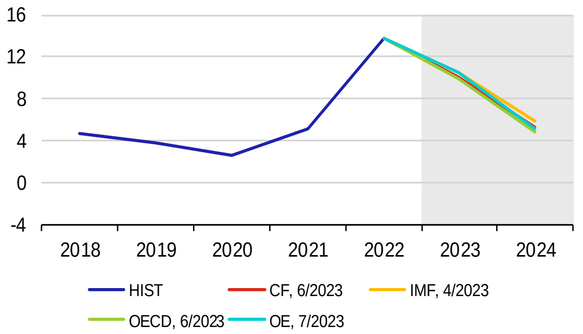
Romania

GDP growth, %



	CF	IMF	OECD	OE
2023	2.6	2.4	2.6	2.5
2024	3.7	3.7	3.2	3.6

Inflation, %



	CF	IMF	OECD	OE
2023	10.1	10.5	9.9	10.5
2024	5.3	5.8	4.8	5.1

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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