Global Economic Outlook

January 2023

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

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Foreword

Dear Readers,

For almost a year now, Europe has been affected by the war in Ukraine which has caused much human suffering and economic problems, especially those associated with the sharp growth in energy prices. The global economy has also been getting used to Covid-19 for the third consecutive year. As we can see from recent developments in China, Covid-19 is by no means over. In addition, generous government policies aimed at mitigating the impacts of these and other events have now become a reality in the vast majority of countries. My previous position was devoted to public finance sustainability and explaining that every debt must be paid off sooner or later. The current unusually high inflation is also a result of all the above, i.e. supply and demand shocks.

However, the good news in these difficult times is that we have all shown a high degree of adaptability to the new situation in the face of these shocks. At times like these, I consider the monitoring of external economic developments to be essential, especially for a small, very open economy like the Czech Republic.

Our perspective on the situation abroad is described both in our regular Monetary Policy Report and in the monthly Global Economic Outlook (GEO) published by our Monetary Department. The focus of the analytical section in this year's first issue of GEO is of particular interest to me. It looks at the potential effects of a too sharp global tightening of monetary policy.

I would also like to mention that this year marks the 30th anniversary of the establishment of the independent Czech Republic and the Czech National Bank. I firmly believe that the next ten years will bring us all more positive news, both domestically and internationally.

I hope you enjoy this January issue of GEO and that it will make for an inspiring read.

Eva Zamrazilová, CNB Deputy Governor

Cut-off date for data
13 January 2023

CF survey date
9 January 2023

GEO publication date
20 January 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 EIU.
Leading indicators are taken from Bloomberg and Refinitiv Datastream.
Forecasts for EURIBOR and LIBOR rates are based on implied rates from interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizons). Forecasts for German and US government bond yields (10Y Bund and 10Y Treasury) are taken from CF.

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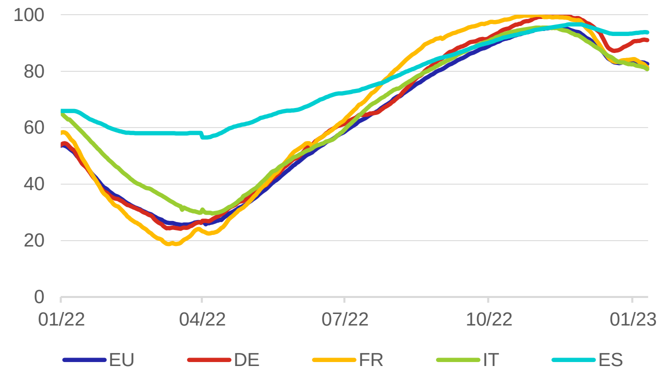
I. Introduction

The war in Ukraine is unfortunately not over, and the vast majority of countries are still grappling with high inflation and tight fiscal budgets. However, positive trends can also be expected in 2023, such as the adjustment of global supply chain relationships, a further shift of European economies towards independence from Russian energy and commodity sources and the perception of Covid-19 as a common viral illness with no major constraints on the functioning of economies (if China withstands the current rise in Covid-19 infections). 2023 will also see several milestones. India will become the world's most populous country, surpassing China. The euro area has welcomed Croatia, where the degree of spontaneous euroisation was already high, as its 20th member. The world also awaits the coronation of Charles III as King of the United Kingdom and the parliamentary elections in Turkey and Thailand, which will be important for developments in these regions.

Many countries are entering the new year with high inflation and economic stagnation or are experiencing a mild recession. The good news is that inflation in advanced countries has already reached its notional peak. We are already reaping the benefits of the monetary policy tightening that has already been implemented and the tightening that is expected in part of this year, both through standard interest rate increases or a balance sheet reduction policy (the ECB's announced policy this year). Despite that, real interest rates remain negative. According to Fed officials, it seems that there will not be another round of rate cuts in 2023. Inflation is not anticipated to reach the notional 2% ideal until 2024 when economies are expected to move to the growth phase of the business cycle. These issues will be the main topics at this year's World Economic Forum in Davos.

Gas storage filling rates in selected EU countries, %



Source: Bloomberg

Growth in energy commodity prices remains visibly higher, due mainly to the war in Ukraine. However, at least the price of oil (at around USD 85/bbl) is not substantially contributing to global inflation. Despite increased volatility and differences in individual food commodities and industrial metals, prices are not expected to grow as dramatically as in summer 2022.

The chart in the current issue shows how the mild winter so far and high storage filling rates before the winter have affected the amount of natural gas which EU countries still have at their disposal. Germany, for example, managed to refill its storage tanks in December. The weather in Europe has helped European countries to maintain high filling rates, allowing the market price of gas to fall. The drop in the price of this energy commodity is a positive signal for Europe and a reason for optimism, not just regarding this winter, but also next winter.

The current issue also contains an analysis: Do the breadth and intensity of the tightening of monetary conditions affect their impact on the global economy? The article examines the potential spillover effects of one of the most across-the-board and abrupt episodes of the tightening of global monetary conditions in history, which occurred in 2022 and 2021. In this article, the authors focus on the exchange rate channel, which is zero-sum in global terms, and the limited transmission speed. They also examine these challenges for central banks.

GEO Barometr for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP	**2023**	0.0	-0.5	0.3	-1.0	1.2	4.6	-2.9
(%)	**2024**	1.2	1.4	1.1	0.6	1.1	5.3	1.3
Inflation	**2023**	5.9	6.4	3.8	7.2	1.9	2.3	6.3
(%)	**2024**	2.4	2.9	2.5	3.1	1.2	2.3	4.9
Unemployment	**2023**	7.1	5.6	4.3	4.4	2.5	3.5	4.2
(%)	**2024**	7.1	5.4	4.7	4.4	2.4	3.4	4.1
Exchange rate	**2023**	1.08	1.08		1.22	128.5	6.84	75.1
(against USD)	**2024**	1.11	1.11		1.26	122.5	6.65	80.8

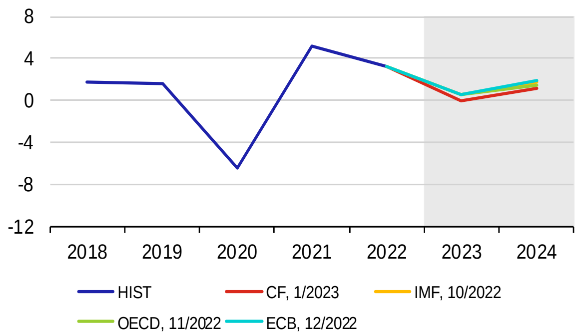
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

II.1 Euro area

The short-term economic outlook for the euro area has improved. The euro area economy is being dampened by high inflation and tighter financing conditions, which are slowing both consumption and production. However, retail sales and industrial production returned to month-on-month growth in November. Unemployment has stayed at its lowest level in the history of the euro area (6.5%) since October and sentiment indicators were signalling a visible improvement in the sentiment of consumers, industrial producers and service providers in late 2022 (although they remain below long-term averages). The composite PMI, for example, approached the 50-point threshold in December. The ZEW index also grew markedly. This was partly due to the positive trend in gas stocks (efficient consumption, mild weather and successful diversification of supplies) and government measures introduced to mitigate the impacts of high energy prices. The ECB's new forecast expects only negligible economic growth for this year as a whole (0.5%, the same as the IMF and the OECD), while CF analysts expect GDP to stay at the 2022 level. Next year, a return to lacklustre growth (of 1–2%) can be expected.

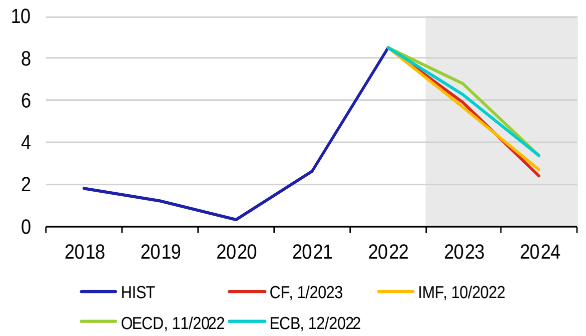
Inflation is continuing to decrease, but monetary policy remains hawkish, due also to core inflation. The continued slowdown in energy price growth is reducing headline inflation (9.2% in December, -0.3% month on month). However, the growth in prices of food, services and industrial goods remains elevated. Core inflation grew to 5.2% in December and the ECB continues to tighten monetary policy. It raised the key interest rate by 50 bp (to 2.5%) at its latest meeting and announced that from March it would no longer be reinvesting all of the principal payments from maturing securities purchased under the APP. The ECB will instead reduce the portfolio by around EUR 15 billion per month until the end of June (the subsequent pace will be determined over time). According to Christine Lagarde, rates will also be raised at the Governing Council meetings in February and March. Inflation will slow only gradually. According to the ECB's new forecast, it will exceed 6% this year. However, the CF respondents lowered their estimates slightly in January. Next year, growth in the HICP will slow to a more acceptable pace (around 3%), but the ECB estimates that it will not reach its target until 2025 H2.

GDP growth, %



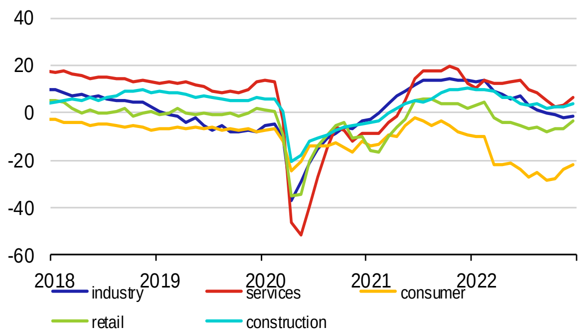
	CF	IMF	OECD	ECB
2023	0.0	0.5	0.5	0.5
2024	1.2	1.8	1.4	1.9

Inflation, %



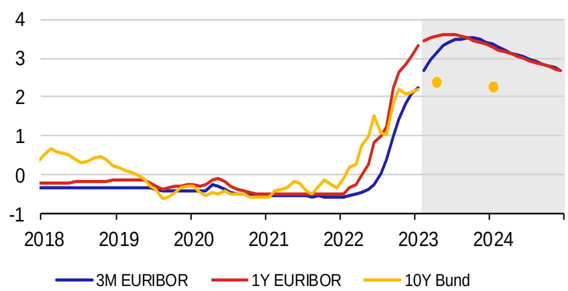
	CF	IMF	OECD	ECB
2023	5.9	5.7	6.8	6.3
2024	2.4	2.7	3.4	3.4

ESI leading indicators



	industry	services	consum.	retail	constr.
10/22	-1.0	2.8	-27.5	-6.5	2.8
11/22	-1.9	3.1	-23.9	-6.6	2.8
12/22	-1.5	6.3	-22.2	-3.6	3.8

Interest Rates, %



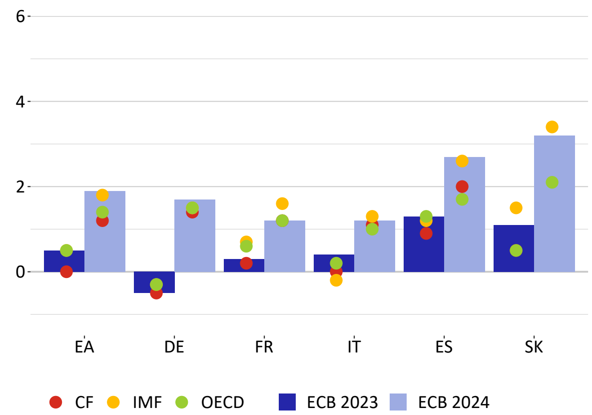
	12/22	1/23	4/23	1/24
3M EURIBOR	2.07	2.24	3.14	3.36
1Y EURIBOR	3.03	3.33	3.58	3.28
10Y Bund	2.13	2.19	2.40	2.30

II.2 Germany

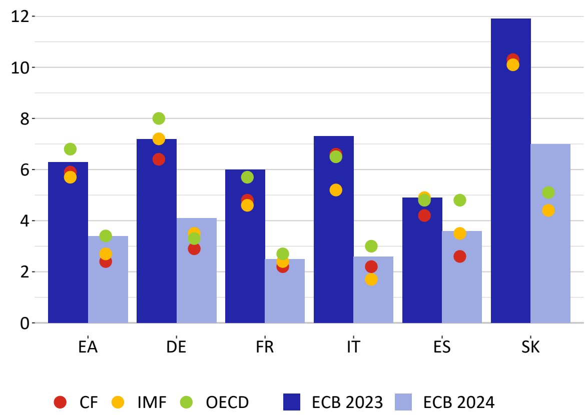
New data from the German economy have strengthened hopes that a recession will be avoided. Despite the energy crisis and high levels of uncertainty, the economy is holding up and should have stagnated in the last quarter of 2022. The slowdown in German economic activity generally reflects low household consumption, subdued corporate investment and weak foreign demand weighing on exports. According to the Bundesbank's new forecast, the economy will start to recover slowly in the second half of this year. Following growth of 1.9% in 2022, GDP is expected to drop by 0.5% this year but return to growth of 1.7% in 2024. CF predicts more or less the same. As for the indicators, industrial production came as a positive surprise, increasing more than expected due mainly to better and smoother functioning of supply chains. The situation has also improved in terms of materials shortages, recorded at the close of 2022. The composite PMI reached a six-month high (49.0) in December. However, it indicated the sixth consecutive drop in activity. Its level mainly reflects a slower decline in services (49.2 as against 46.1 in November) and manufacturing (47.1 as against 46.2). The expectations of businesses increased, and the December data also indicated a further improvement in consumer confidence, which continues to recover cautiously.

Inflation slowed more than expected at the end of last year, due mainly to a one-off energy support payment. According to preliminary data, annual HICP inflation slowed considerably in December last year to below double-digits (9.6%), compared to 11.3% in November. Consumer price growth was thus at its weakest level since August 2022. In month-on-month terms, consumer prices fell by 1.2%, with inflation averaging 8.7% in 2022. German inflation slowed in December (for the second consecutive month) thanks to slowing growth in energy prices and the government's one-off payment to households to help with energy bills. However, inflation remains high for now. In 2023, prices will be affected by government supports in the form of price caps on gas and electricity, among other measures. The Bundesbank now predicts that inflation will drop to 7.2% in 2023 and significantly decline further to 4.1% in 2024. It will probably fall to as low as 2.8% in 2025. The new CF outlook is slightly more optimistic.

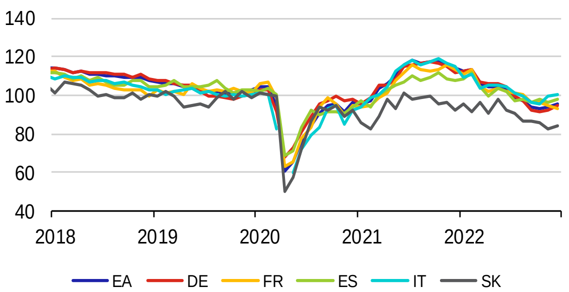
GDP growth in selected euro area countries in 2023 and 2024, %



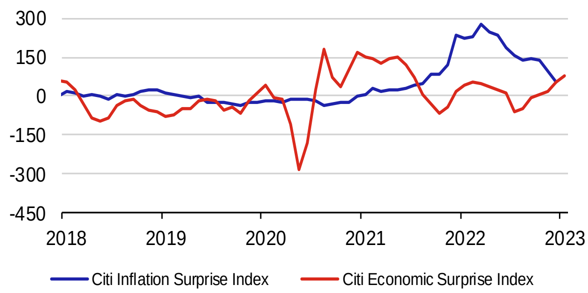
Inflation in selected euro area countries in 2023 and 2024, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
10/22	93.0	91.4	96.2	98.2	95.3	85.7
11/22	94.0	92.6	94.6	96.5	99.4	82.9
12/22	95.8	94.6	93.3	98.4	100.3	84.3

Inflation expectations based on 5year inflation swap and SPF

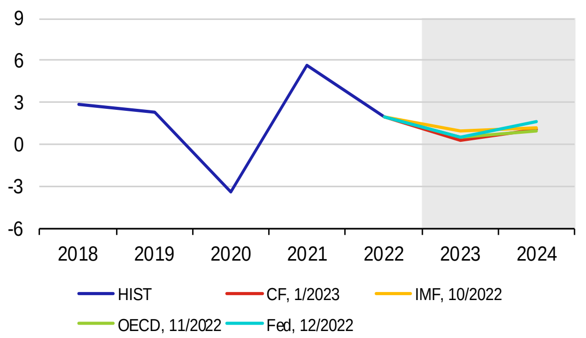
	5y5y	SPF
11/22	2.33	2.18
12/22	2.36	2.18
1/23	2.35	

II.3 United States

The US economy entered 2023 with a still tight labour market, higher inflation and steady household consumption. The new CF outlook expects GDP to grow by 0.3% in 2023 and 1.1% in 2024. The Fed's December outlook is more optimistic for both years. Even before the end of 2022, some analysts were still expecting a recession this year but new outlooks indicate weak growth. In January, the consumer confidence indicator reached the highest level since April for both the current situation and future expectations. The forward-looking PMIs are showing the opposite trend – they have been in the contraction band for several months now in both services and the production sector and continued to fall in December.

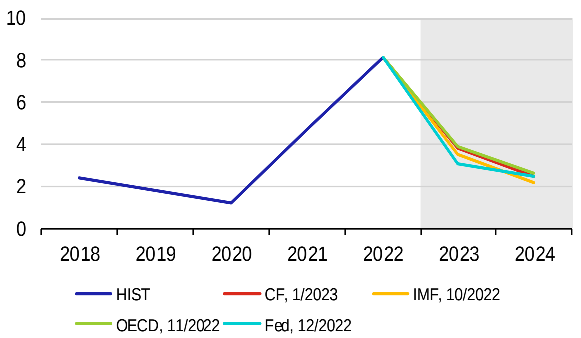
The Fed is facing some tough decisions this year. Data on inflation, which rose to 6.5% year on year in December, are always eagerly awaited by the markets. At its December meeting, the Fed raised rates by 0.5 pp, and they now range from 4.25–4.5%. According to market expectations, rates will grow further and will reach 5% this year. Fed officials have said that rates will remain high for some time and should not be lowered this year. However, markets are more cautious in their rate expectations, anticipating a smaller rise than indicated in the Fed's rate outlook. The Fed is trying to ease inflation pressures while aiming for a "soft landing" to avoid an unnecessarily sharp economic downturn. This is precisely what the markets are betting on, i.e. that the Fed will be more cautious in raising rates. Inflation (including core inflation) is gradually declining but the labour market is still very tight and real household consumption has not started to fall yet. In general, there has been no major cooling of economic activity. Non-farm payrolls rose by 223,000 in December and unemployment fell to the pre-pandemic level of 3.5%. The good news is that there has been no increase in wage growth, thus preventing the emergence of a wage-inflation spiral. Wages rose by 6.2% year on year in November.

GDP growth, %



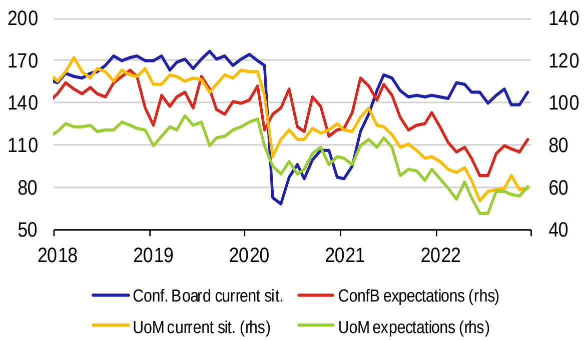
	CF	IMF	OECD	Fed
2023	0.3	1.0	0.5	0.5
2024	1.1	1.2	1.0	1.6

Inflation, %



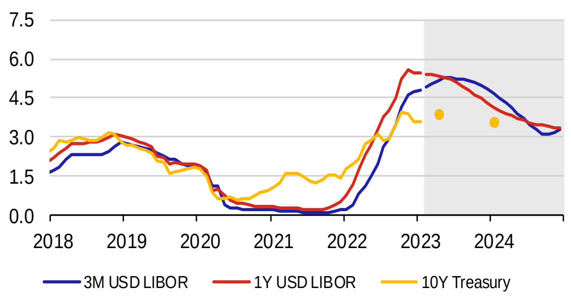
	CF	IMF	OECD	Fed
2023	3.8	3.5	3.9	3.1
2024	2.5	2.2	2.6	2.5

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
10/22	138.7	77.9	65.6	56.2
11/22	138.3	76.7	58.8	55.6
12/22	147.2	82.4	59.4	59.9

Interest Rates, %



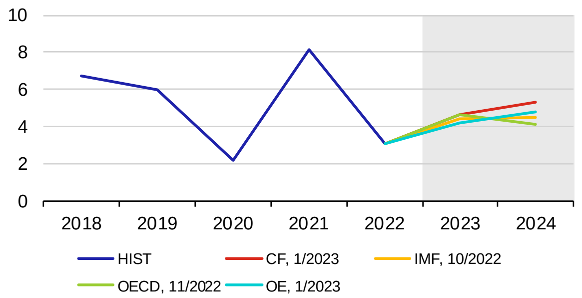
	12/22	1/23	4/23	1/24
USD LIBOR 3M	4.74	4.80	5.15	4.65
USD LIBOR 1R	5.47	5.47	5.33	4.13
Treasury 10R	3.62	3.57	3.90	3.60

II.4 China

Economic growth in 2022 is expected to be lower than a year earlier. The World Bank's forecast expects growth of 2.7%, while some forecasts by non-government analysts predict even lower growth. The Chinese authorities (as noted by President Xi Jinping in his New Year's television address) counted on growth of 4.4%, the eventually confirmed figure wias much lower: just 3%. In 2023, growth is expected to accelerate somewhat (according to the WB to 4.3%, which is a marked revision against the previous 8.1%). The forecasts' reliability is being undermined by the still great uncertainty about the implementation of anti-Covid measures, which differ in terms of strictness at various regional and sectoral levels, and the uncertain ultimate effect of a temporarily high sickness rate. As for non-medical factors, the main downside risks to growth usually mentioned include a global economic recession and problems in the real estate sector amid efforts by the Chinese authorities to reduce risky financing of construction projects. A certain shift has been observed in the focus of investment from residential construction and infrastructure towards the digital and green economy. If this trend persists, investment in 2023 may, unlike last year, better support sustainable growth. Employment has suffered greatly in the past year due to frequent lockdowns. According to official data, unemployment rose from 5.5% of the working population in October to 5.7% in November. Retail was also hit, showing a year-on-year drop in November. However, the recent lifting of many pandemic restrictions has the potential to reverse this trend in the next few months.

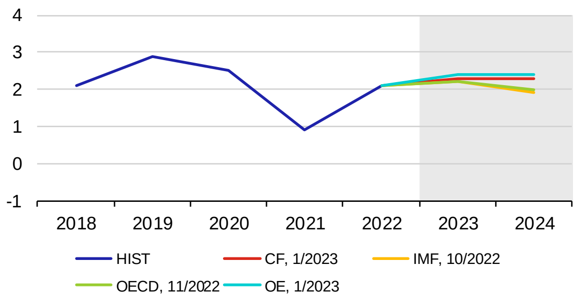
So far, the latest quantitative business and consumer sentiment indicators reflect the damage caused by the recently abandoned zero-Covid policy. The PMI statistics recorded a contraction in both industry (47 in December as against 48 in November) and even more so in services (from 46.7 in November to 41.6 in December – the lowest level in almost three years). Consumer confidence continued to decline or stagnate in autumn (according to the Chinese National Bureau of Statistics, it fell from in 87.2 points in September to 86.8 points in October; later data are not yet available)..

GDP growth, %



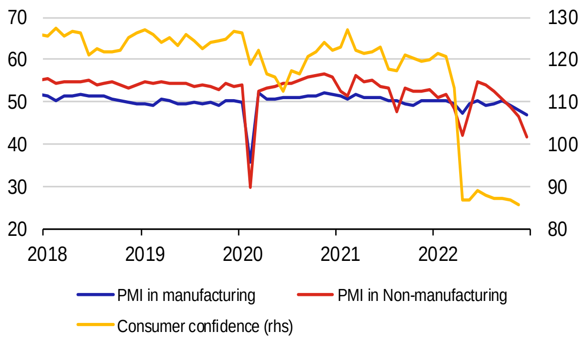
	CF		IMF	OECD	OE	
2023	4.6		4.4	4.6	4.2	
2024	5.3	★	4.5	4.1	4.8	

Inflation, %



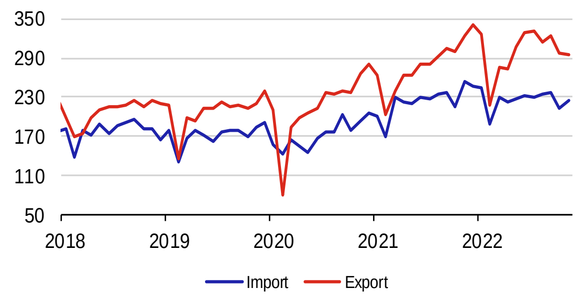
	CF		IMF	OECD	OE	
2023	2.3		2.2	2.2	2.4	
2024	2.3	★	1.9	2.0	2.4	

Leading indicators



	PMI manuf.	-manufacturing	Cons. conf (rhs)
10/22	49.2	48.7	86.8
11/22	48.0	46.7	85.5
12/22	47.0	41.6	

Development of China foreign trade, bil. USD

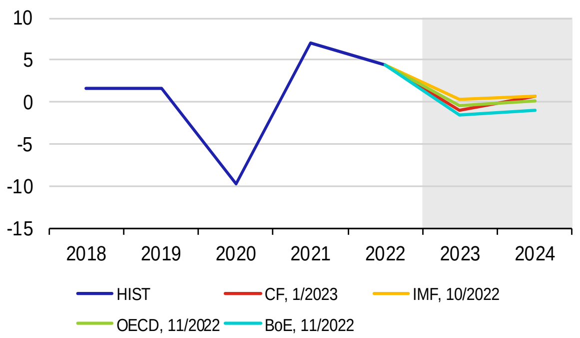


Source: Bloomberg

II.5 United Kingdom

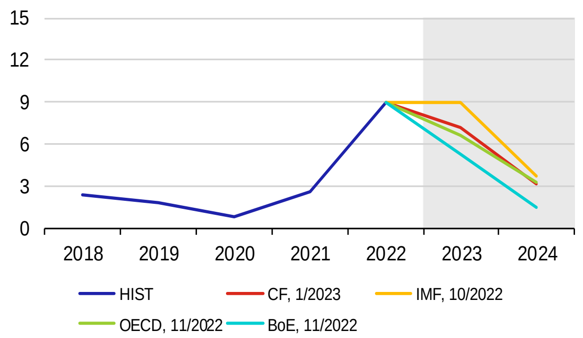
In Q3, the UK economy contracted more than expected (by 0.3%), thus continuing to lag behind other advanced economies. This is partly due to the implications of Brexit, but also to consumer thrift despite high inflation, which could deepen the recession. The new CF outlook predicts a drop in GDP (-1.0%) in 2023, followed by a very weak recovery (0.6%) in 2024. Inflation remains historically high, despite slowing to 10.7% year on year in November (from its 11.1% peak in October). This moderation was primarily due to lower growth in petrol prices. Core inflation also eased marginally (6.3%). CF slightly lowered its inflation estimate to 7.2% for this year. At its December meeting, the BoE took more decisive action against inflation, raising its interest rate again, this time to the highest level in the last 14 years (3.5%). In December, the composite PMI rose slightly (49.0), pointing to a slower decline in the private sector. A further decline in the manufacturing sector was offset by a relative stabilisation of the services sector. Business confidence remained muted.

GDP growth, %



	CF	IMF	OECD	BoE
2023	-1.0	0.3	-0.4	-1.5
2024	0.6	0.6	0.2	-1.0

Inflation, %

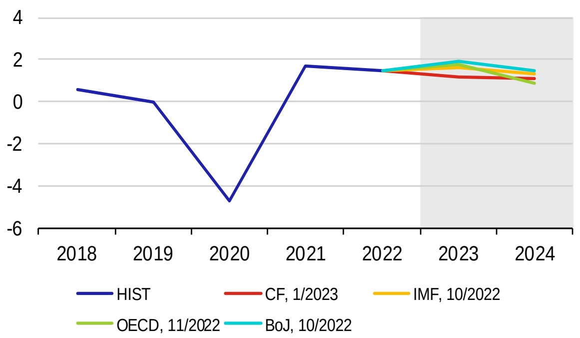


	CF	IMF	OECD	BoE
2023	7.2	9.0	6.6	5.3
2024	3.1	3.7	3.3	1.5

II.6 Japan

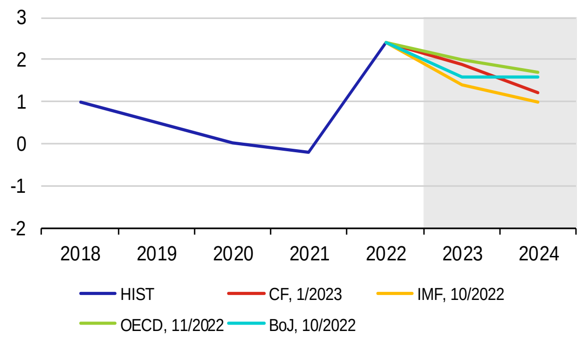
Japan's unexpected monetary policy tightening in December erased the world's last remaining debt with negative yield. Although BoJ Governor Haruhiko Kuroda argues that widening the band for targeting the government bond yield curve did not constitute a change in monetary policy, it led in practice to a rise in interest rates and a sharp appreciation of the yen. What was perceived in the markets as a hawkish pivot by the BoJ sparked a sell-off in 10-year Japanese bonds and compelled the BoJ to buy more of the assets (it already holds over 50% of the assets on its balance sheet). The dwindling liquidity and high sensitivity of the market to the BoJ's actions illustrate the difficulty of potentially ending the Japanese experiment with ultra-easy monetary policy. According to a Bloomberg index, the BoJ's December actions cancelled out the remaining market value of the bonds with negative yields. At their peak in 2020 – when negative rates also prevailed in the euro area, Switzerland, Denmark and Sweden – they accounted for more than USD 18 trillion.

GDP growth, %



	CF	IMF	OECD	BoJ
2023	1.2	1.6	1.8	1.9
2024	1.1	1.3	0.9	1.5

Inflation, %

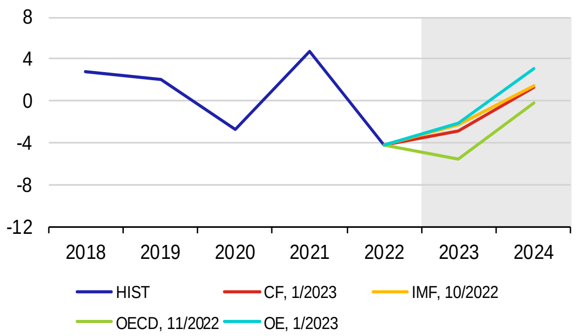


	CF	IMF	OECD	BoJ
2023	1.9	1.4	2.0	1.6
2024	1.2	1.0	1.7	1.6

II.7 Russia

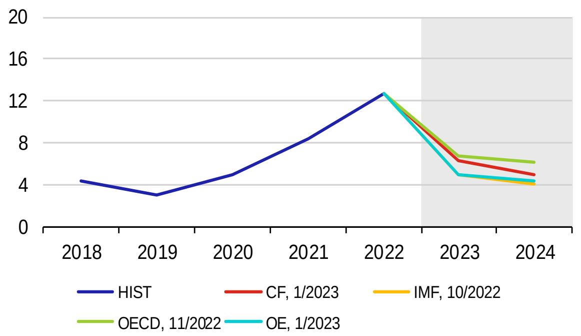
Russia's federal budget recorded a significant deficit in 2022. According to the Ministry of Finance's preliminary estimates, the overall deficit was 2.3% of GDP, despite higher than anticipated growth in revenues owing to high oil and natural gas prices. A deficit of "only" -0.9% was still expected in September. Federal budget expenditure has exceeded revenues twice in the last 5 years: during the Covid-19 pandemic (a deficit of around 4% in 2020) and in 2022. However, one of the largest deficits relative to GDP was recorded in 2009 when it was around 6%. In 2022, consumer prices in Russia rose by 13.8% year on year, with prices of goods growing somewhat faster than prices of services (15.0% versus 10.1%). Some food groups saw the biggest price hikes, with the prices of cereals, pasta, butter and sugar increasing from 23% to 40%. The prices of electrical household appliances rose by 20%. In terms of services, prices rose to record highs mainly for services related to foreign travel (by 54%) and insurance (by 21%). The monetary policy rate remains at the September level of 7.5%..

GDP growth, %



	CF	IMF	OECD	OE
2023	-2.9	-2.3	-5.6	-2.1
2024	1.3	1.5	-0.2	3.1

Inflation, %

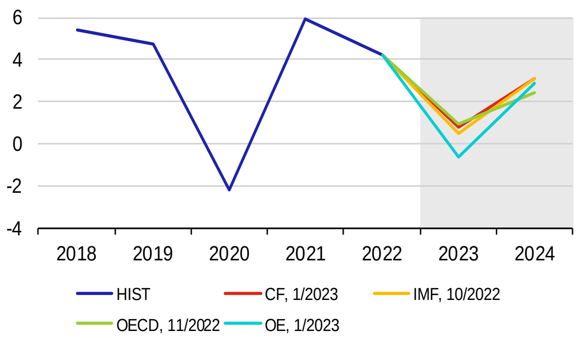


	CF	IMF	OECD	OE
2023	6.3	5.0	6.7	4.9
2024	4.9	4.0	6.1	4.3

II.8 Poland

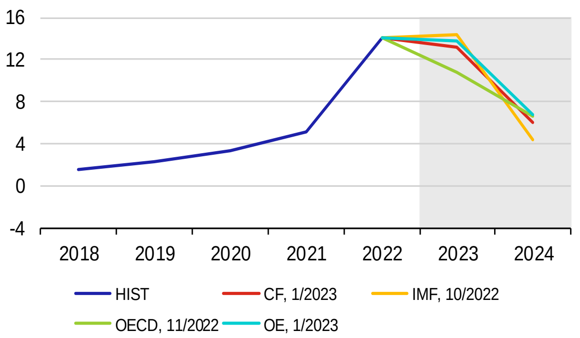
The outlook for the Polish economy this year has deteriorated. This is partly due to the fact that analysts have newly incorporated a positive surprise about GDP growth in 2022 Q3. As a result, they increased their estimates for the 2022 results and, owing to base effects, reduced their forecasts for 2023. The CF thus predicts GDP growth of only 0.8% this year. OE even predicts a decrease of 0.6%. A return to growth of around 3% is expected in 2024. The gradually released macroeconomic data for 2022 Q4 have not brought about any major changes to the narrative. The PMI index in manufacturing is gradually increasing to the 50-point threshold (45.6 in December), suggesting that Poland may avoid a recession. Unemployment remains at a 32-year low (5.1%) and nominal wage growth remains high (only slightly negative in real terms). Inflation is slowing (16.6% in December). The only issue is core inflation, which is accelerating for now (11.4% in November). Despite this, the Polish central bank left interest rates unchanged again at the start of January.

GDP growth, %



	CF	IMF	OECD	OE
2023	0,8	0,5	0,9	-0,6
2024	3,1	3,1	2,4	2,9

Inflation, %

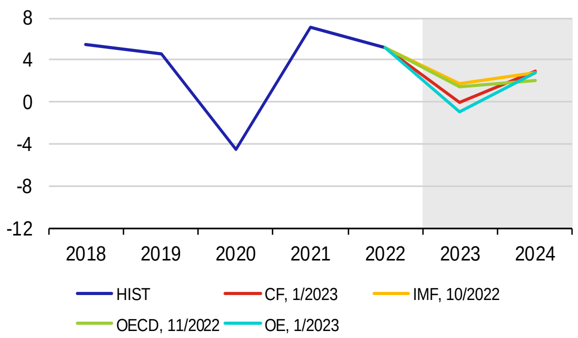


	CF	IMF	OECD	OE
2023	13,2	14,3	10,8	13,7
2024	6,0	4,3	6,6	6,7

II.9 Hungary

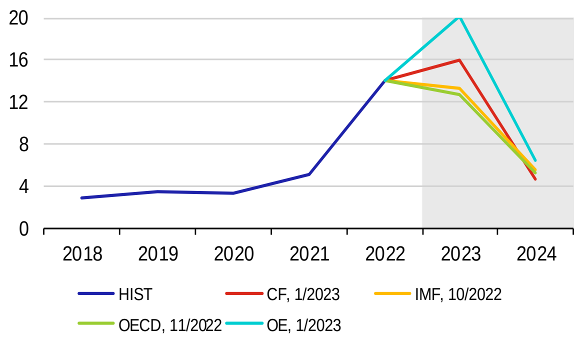
Hungary's very high inflation will last a lot longer. In December, it rose sharply to 24.5% (1.9% month-on-month). This escalation was supported by the sudden lifting of the fuel price cap in December, while the appreciation of the forint after the easing of the dispute with the EU had the opposite effect. However, the problem is much broader, with core inflation reaching an inconceivable 24.8% in December. At the same time, price growth will ease only gradually. CF and OE analysts predict that inflation in 2023 as a whole will be even higher (16% and 20.1% respectively) than in 2022. However, the central bank will not raise its key interest rate (13%) any further, as confirmed at its January meeting. The signals from the real economy are mixed so far. Industrial production is declining month on month, but the PMI index shot up to 63.1 points in December. Unemployment remains low and wage growth very high. However, retail sales (adjusted for the effect of fuel prices) are falling.

GDP growth, %



	CF	IMF	OECD	OE
2023	0,0	1,8	1,5	-0,9
2024	2,9	2,8	2,1	2,8

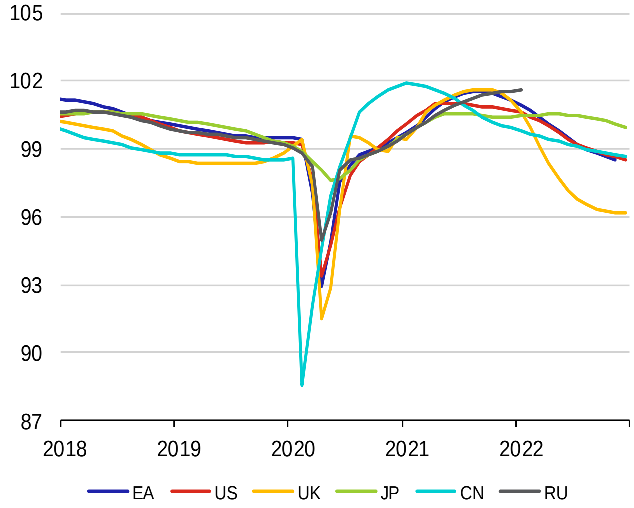
Inflation, %



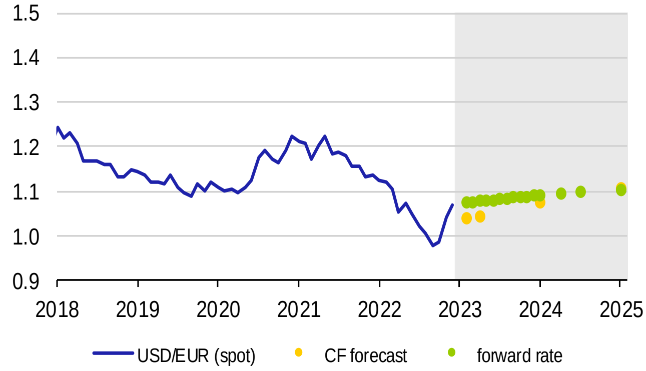
	CF	IMF	OECD	OE
2023	16,0	13,3	12,7	20,1
2024	4,7	5,6	5,2	6,5

III. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

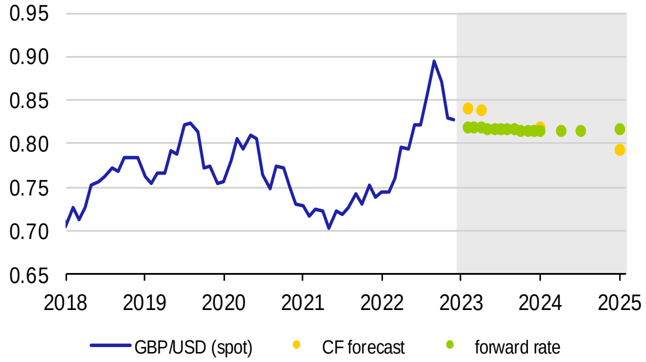


The US dollar (USD/EUR)



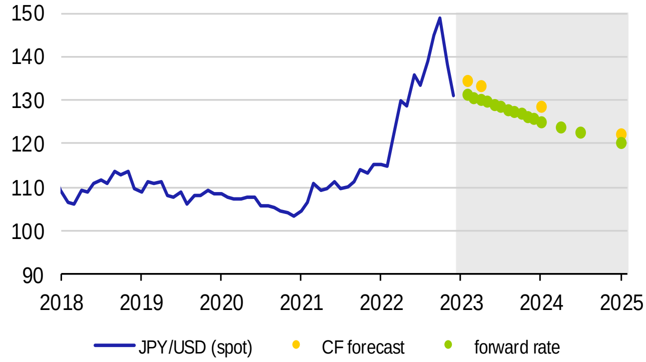
	9/1/23	2/23	4/23	1/24	1/25
spot rate	1.074				
CF forecast		1.041	1.046	1.079	1.108
forward rate		1.075	1.079	1.094	1.104

The British pound (GBP/USD)



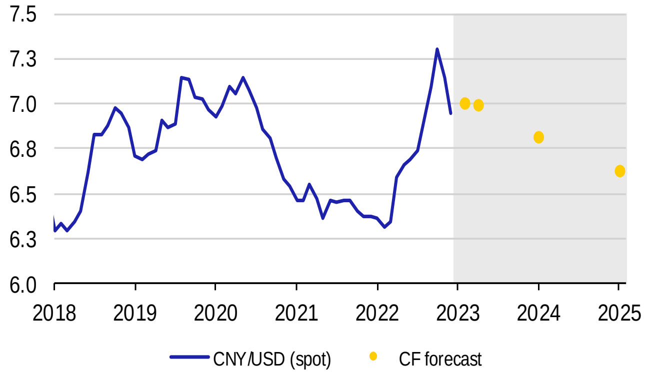
	9/1/23	2/23	4/23	1/24	1/25
spot rate	0.820				
CF forecast		0.841	0.840	0.820	0.793
forward rate		0.820	0.819	0.815	0.818

The Japanese yen (JPY/USD)



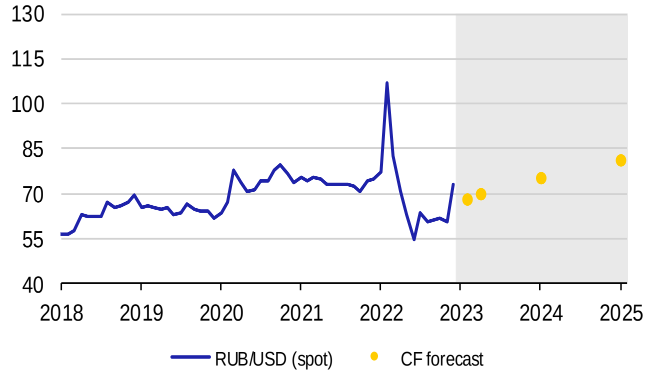
	9/1/23	2/23	4/23	1/24	1/25
spot rate	131.9				
CF forecast		134.5	133.4	128.5	122.5
forward rate		131.3	130.3	125.3	120.5

The Chinese renminbi (CNY/USD)



	9/1/23	2/23	4/23	1/24	1/25
spot rate	6.772				
CF forecast		7.008	6.997	6.819	6.629

The Russian rouble (RUB/USD)



	9/1/23	2/23	4/23	1/24	1/25
spot rate	69.75				
CF forecast		68.22	69.99	75.71	81.25

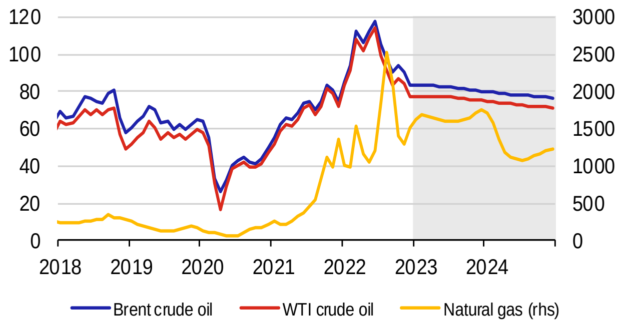
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

IV.1 Oil

In early December, the Brent crude oil price recorded its lowest value in 2022 but has since followed a slight upward trend. However, the outlook is very uncertain. The price of Brent fell in November and at the start of December due to concerns about the worsening outlook for the global economy and was approaching USD 76/bbl in early December. However, market sentiment improved as the Chinese government began to ease strict anti-epidemic measures, and the price of Brent rose by USD 10/bbl by the end of December. At the start of this year, however, it fell sharply again, when the IMF warned that up to a third of the global economy could slip into recession this year. Subsequently, however, the price of Brent rose again above USD 80/bbl after China sharply increased oil import quotas and the number of licenses for the export of refined products. Although the expected rapid recovery of the Chinese economy has been postponed due to the large increase in Covid-19 infections following the easing of restrictions there, and the futures curve continue to signal an oil glut on the market, some traders expect tensions on the oil market will start to gradually increase as the epidemic situation in China returns to normal and Russian exports of oil and refined products become increasingly harder hit by international sanctions. The oil price forecasts for this year, which (even significantly) exceed USD 100/bbl, are no exception.

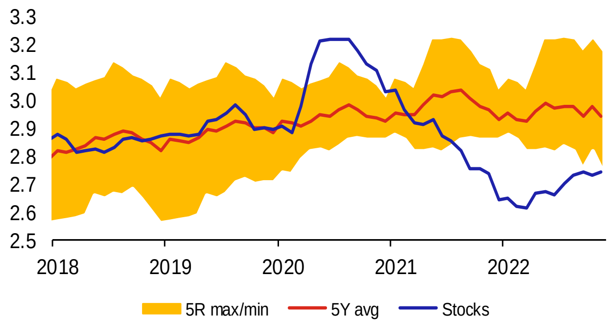
However, the market curve at the start of January is falling slightly and is signalling Brent oil prices of USD 78.5/bbl at the close of 2023 and USD 74.5/bbl at the end of 2024. The current EIA forecast expects similar oil price developments. The January CF expects the Brent price to remain flat at close to USD 85/bbl at both the three-month and one-year horizons. While OPEC+ has the situation relatively under control on the supply side, there are major uncertainties on the demand side. The development of monetary policy in the USA will be important from this perspective.

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

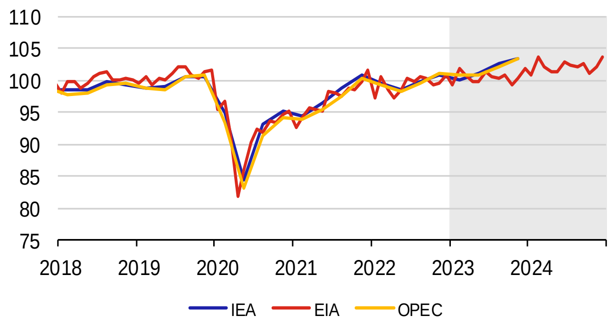


	Brent		WTI		Natural gas	
2023	82.14		76.71		1650.30	
2024	78.18		72.94		1246.85	

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

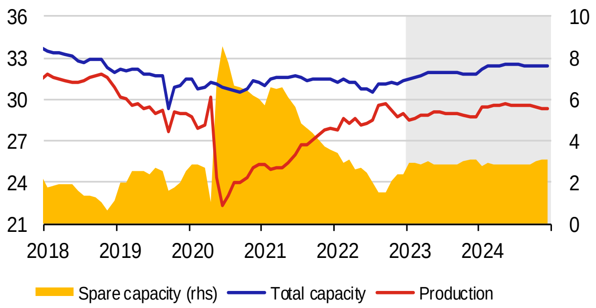


Global consumption of oil and oil products (mil. barrel / day)



	IEA		EIA		OPEC	
2023	101.80		100.49		101.77	
2024			102.21			

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



	Production		Total capacity		Spare capacity	
2023	28.86		31.81		2.95	
2024	29.51		32.42		2.91	

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.

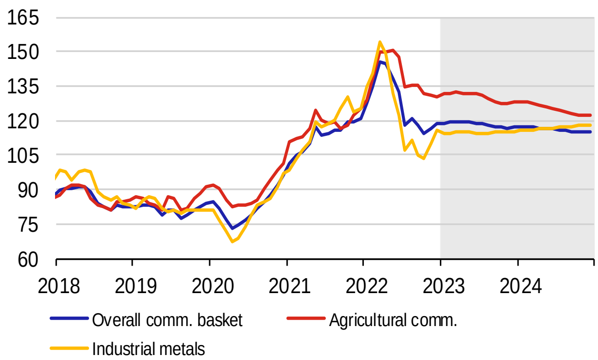
IV.2 Other commodities

Unusually warm weather at the start of the heating season led to a more than 50% drop in natural gas prices in Europe in the second half of December. The outlook for prices for this year and the next has been revised downwards significantly. Underground storage facilities were fuller than usual, even in mid-January, reducing concerns about gas shortages this winter and leading to optimism that higher inventories at the end of the current heating season will reduce market tensions during the replenishment of stocks during the summer. The price of natural gas at the TTF virtual trading hub fell from its December high of EUR 150/MWh to around 65 EUR/MWh in the first half of January. At the same time, the price outlook for this year and the next has also shifted markedly downwards, while prices are expected to remain close to the current level for both years. Conversely, the coal price fell only slightly in December. It has remained high due to the resumption of coal imports from Australia to China.

The food commodity price index last recorded a marked decline in October 2022 and has stayed roughly at the same level since then. Further declines are not expected until the next harvests. Price movements within the index were subdued and offset each other. The price of wheat rose slightly during December due to higher expected demand, but expectations of a large harvest in Russia pushed it lower again.

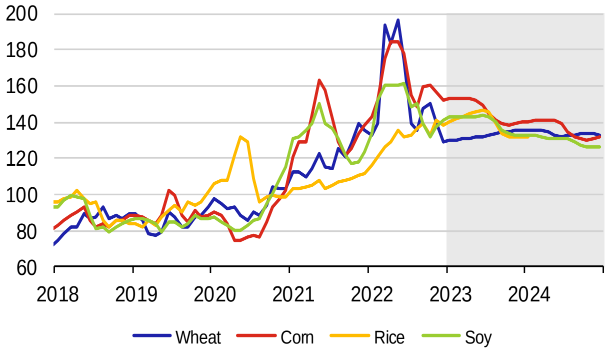
In December, the industrial metal price index rose to its highest level since June, but then its growth halted. The December increase was driven mainly by lead, nickel and tin. The price of copper did not surge until the first half of January due to higher demand, concerns over production shortfalls and low global inventories. The prices of iron ore and iron have surged since November owing to increased government support for China's property market.

Non-energy commodities price indicies



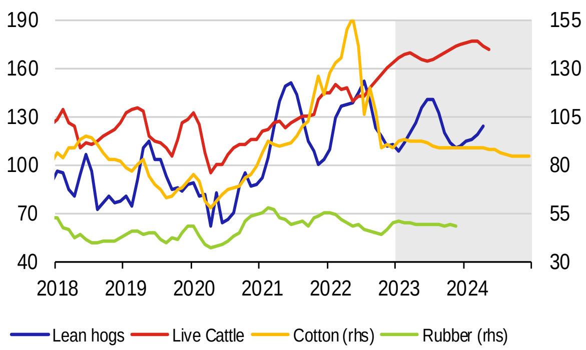
	Overall	Agricultural	Industrial
2023	118.2	130.3	114.8
2024	116.2	125.1	116.9

Food commodities



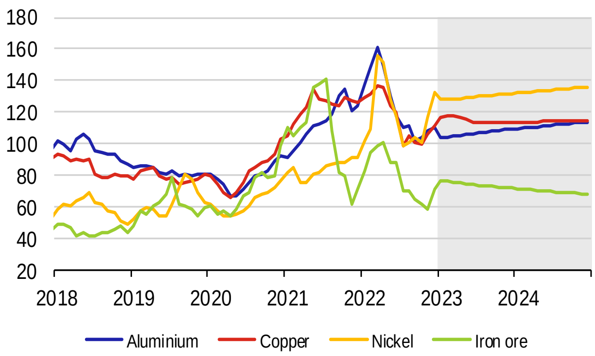
	Wheat	Corn	Rice	Soy
2023	132.5	146.3	139.6	139.7
2024	133.9	136.0	131.8	129.6

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2023	122.7	168.5	90.7	49.2
2024	117.9	174.9	86.6	

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2023	106.9	115.1	129.9	74.4
2024	111.9	114.4	134.1	70.1

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.

Do the breadth and intensity of the tightening of monetary conditions affect their impact on the global economy?[1]

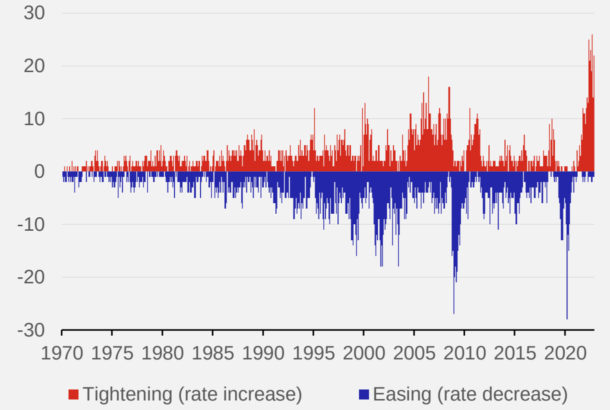
The years 2021 and 2022 saw one of the most broad-based and rapid episodes of tightening of global monetary conditions in history. This article examines the consequences of the sychronised and sharp nature of this tightening. First, synchronisation complicates the reduction of inflation through the exchange rate channel of monetary policy which, unlike other channels, is zero-sum in global terms. In theory, an uncoordinated "competition" for a share of this sum may cause central bankers to engage in excessive global tightening. However, in practice, central banks do not pass on inflation to each other through attempts of strenghtening their own currency , but rather dampen the spillover effects of US monetary policy, which has an outsized effect on global financial conditions. Second, the article demonstrates that the unusual pace of tightening may not pass through to the real economy proportionately quickly. A slower transmission may tempt central banks to intervene again and tighten monetary conditions too much.

"The Great Tightening"

The surge in inflation from the second half of 2021 has led to a sharp tightening of monetary conditions across the global economy. Brazil started the tightening cycle in the early 2021, followed shortly afterwards by other Latin American countries, Central, Southern and Eastern European countries, and not long after that by other economies in Asia and Africa. After discussions on the "transitory" nature of inflation pressures, the major central banks of advanced economies (except Japan) eventually followed suit. Moreover, most central banks did not settle for standard hikes (by 25 basis points), instead tightening in steps at times exceeding 100 bp. In addition, earlier asset purchase programmes allowed central banks to tighten monetary conditions further through asset sales ("quantitative tightening").[2] The central banks of smaller open economies, where the exchange rate is an important parameter of monetary conditions, used the sale of international reserves in a similar way. Overall, this resulted in one of the most broad-based and rapid episodes of global tightening of monetary conditions in modern central banking history (see Chart 1).[3]

Chart 1 – The surge in inflation caused a sharp and synchronised global monetary tightening

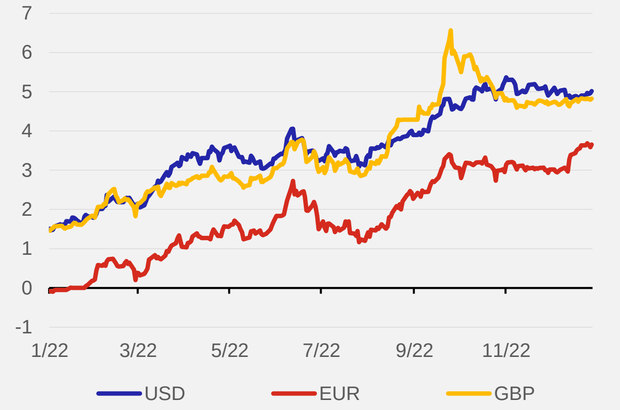
No. of tightening and easing (policy) steps



Source: BIS Policy Rates, data from January 1970 to October 2022; the sample ranges from 8 to 38 central banks, depending on data availability in the given country

Chart 2 – The expected peak of monetary policy rates has roughly stabilised after rapid developments

(Market-implied monetary policy rates for autumn 2023)



Source: Refinitiv
Note: Market expectations derived from Forward Rate Agreement (FRA) rates

The tightening of monetary policy is not over yet, but the approach adopted by central banks is getting more cautious.[4] This is partly because monetary policy decisions of individual central banks also affect other economies through

[1] Written by Soňa Benecká, Martin Kábrt, Luboš Komárek 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] Notably, central banks may only sell part of the assets in selected segments of the financial markets, thus mitigating the risks that a sharp tightening of monetary conditions can create for financial stability.

[3] However, it should be noted that the outbreak of the Covid pandemic at the start of 2020 saw the largest ever wave of global easing of monetary conditions. Many countries thus had the loosest monetary conditions on record at the start of 2022. The ECB, for example, did not end quantitative easing until the second half of 2021.

[4] Many other factors are also contributing to a more cautious approach, including the already observed slowdown in consumer demand, a cooling labour market and a sharp slowdown in the mortgage and real estate markets in most major economies. Cost factors of global inflation have also weakened. Supply chain disruptions are easing, sea transport prices are falling, producer inflation (PPI) is slowing and commodity prices, including energy and agricultural commodities, are declining. In addition, there is no further evidence of a threat of a more significant unanchoring of inflation expectations or the emergence of a wage-inflation spiral. Some central banks are also erring on the side of caution due to concerns about financial vulnerability, be it the risk of an uncontrolled drop in asset prices, the collapse of the

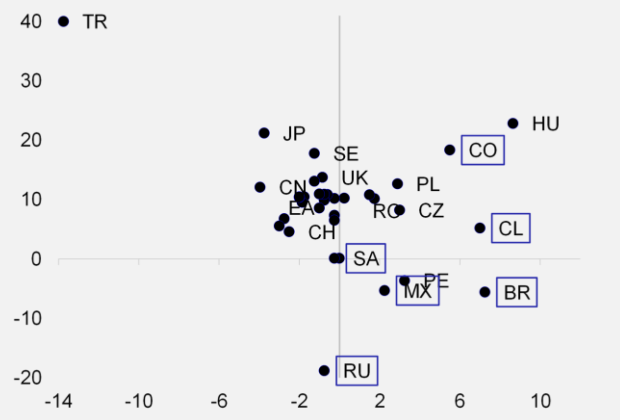
many international spillovers. If the individual central banks underestimate the cumulative global impact of a synchronised tightening of monetary conditions in their models and in their decision-making, excessive tightening may occur (Obstfeld, 2022). Dieppe and Brignone (2022) estimate that this risk could lead to an excessive undermining of global growth by up to 1% of GDP. International institutions, including the World Bank (2022) and UNCTAD (2022), also warn against the risk of excessive tightening due to global spillovers. By contrast, the OECD (2022), BIS (2022) and the IMF (2022a) recommend that central banks continue tightening even at the expense of high costs in the real economy, as they consider the risk of an unanchoring of inflation expectations to be even more costly in the long term. Finding the right balance between the risk of excessive and insufficient tightening is illustrated by the Fed, whose chairman said in November that the Fed was planning to slow the pace of interest rate increases but keep rates at a higher level for longer (Fed, 2022). The ECB intends to stick to its primary mandate of price stability even at the cost of an economic recession (ECB, 2022a).

Reverse currency war?

It is important to distinguish between the individual transmission channels when analysing the international spillovers of monetary policies. While both the interest rate channel and the asset price channel strengthen each other amid a synchronised tightening across economies – i.e. a tightening in one economy tightens the financial conditions in other economies as well – spillovers from the exchange rate channel act in the opposite direction. A strengthening of one currency (and the associated easing of inflation pressures) inevitably means a weakening of another economy's currency (and thus a strengthening of inflation pressures in that economy). For example, Gopinath et al. (2020) estimate that a 10% appreciation of the dollar increases inflation in emerging economies by 1 percentage point.

Chart 3 – Currencies that lagged behind the Fed in tightening or are exposed to higher geopolitical risk depreciated the most against the dollar.

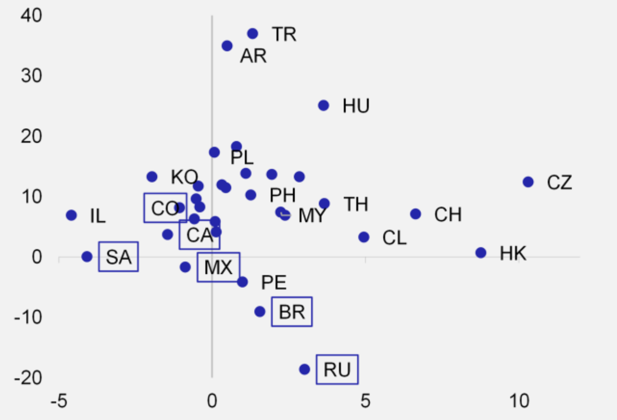
(y-axis: weakening vis-à-vis the dollar from January to November 2022; x-axis: change in the differential vis-à-vis dollar rates from the start of the tightening cycle to October 2022)



Source: Refinitiv, BIS
Note: Important net oil exporters are indicated in the frames.

Chart 4 – For some currencies, the weakening was dampened by large-scale foreign exchange interventions. The currencies of oil exporters also remained resilient

(y-axis: weakening vis-à-vis the dollar from January to August 2022; x-axis: foreign exchange interventions to strengthen the currency from January to August 2022 in % of GDP)



Source: IMF, Refinitiv, authors' calculations.
Note: Interventions are estimated using the methodology described in Adler et al. (2021).

The US dollar, which appreciated sharply against almost all other currencies, had the most pronounced effect on exchange rates in 2022. The euro depreciated below parity against the dollar for the first time in twenty years in summer 2022. In October, the Japanese yen also fell to its weakest level in more than two decades. In September, UK sterling was at an all-time low against the dollar. A weakening vis-à-vis the dollar was particularly pronounced in countries which have lagged behind the Fed in the forcefulness of their monetary policy tightening (see Chart 3).[5] A weakening currency has strengthened inflation pressures in these economies via growth in import prices. A weak currency is mentioned as an inflationary factor in the monetary policy reports of, for example, the Bank of England (November 2022), the Bank of Japan (October 2022), Sweden's Riksbank (November 2022) and the ECB (September 2022). Other central banks typically avoid commenting on the exchange rate, but their actions indicate their concern. According to official and media reports, many countries have used foreign exchange interventions to strengthen their currencies, including the Czech Republic, Switzerland, Japan, South Korea, Poland, Hungary, Chile, India, Thailand, Indonesia, the Philippines and Hong Kong.

property market or the risk of panic sales of government bonds (for example, due to credit risk in overindebted euro area countries or unexpected liquidity vulnerabilities, for instance in the UK gilt and US Treasury markets).

[5] This channel of portfolio balancing in financial markets, which leads to an appreciation of the dollar as the Fed raises rates, may be further strengthened due to uncertainty or a shock which increases demand for safe assets. This type of shock occurred in 2022 with the outbreak of the war in Ukraine and the related energy price crisis.

According to IMF estimates (2022b), the international reserves of emerging economies fell by 6% from January to July 2022 as a result of interventions.

Individual countries can theoretically "pass on" part of inflation to each other through this zero-sum exchange rate game using rate increases and foreign exchange interventions (Obstfeld, 2022). The media has referred to this hypothesis as a "reverse currency war", as it creates a situation opposite to the one in the 1930s when, by contrast, economies competed with one another to weaken their currencies in an effort to improve the competitiveness of their exports. Just like then, a "reverse" currency war may also theoretically result in a situation where all economies raise interest rates or sell foreign exchange to strengthen their currency. However, since everyone is doing it, exchange rates will not change, and thus they will not contribute to moderating inflation. All that will happen is that global monetary conditions will become excessively tight, reducing global economic activity more than is needed to tame inflation. The collective effect of an uncoordinated policy may ultimately be suboptimal for everyone.

However, this hypothesis has several weaknesses. The parallels with traditional depreciation currency wars are inaccurate as the scope for weakening one's own currency through interventions is unlimited, while the scope of strengthening one's currency is limited by the size of the reserves. In addition, the relative strength of individual central banks is extremely unequal, and at the end there can only be one winner in a "war" like this, and that is the Fed, which controls the dominant global reserve currency which investors will always prefer to hold over any other currency at the same return.

This is because global financial conditions are largely determined by US monetary policy. The dominance of the dollar in the global business, finance and payment infrastructure remains undisputed.[6] Therefore, it was not so much a currency war in 2022, where countries competed with one another in terms of raising rates and foreign exchange interventions to shift some of the inflation pressures to others. It was more a spillover of US monetary policy due to the specific role of the dollar which forced other countries to dampen the effect on their currency. At the same time, the "spillback" to the USA is limited (Ca' Zorzi et al., 2021).

Thus, rather than leading to excessive global tightening, exchange rate spillovers may result in excessive tightening in *some* economies only, specifically in those economies for which more relaxed financial conditions than those created by the Fed would be more appropriate. Gopinath and Gourinchas, (2022) claim that emerging markets in particular are traditionally sensitive to the dollar exchange rate. The pass-through of the exchange rate to consumer prices is higher in these markets, as they are more dependent on imports, particularly those invoiced in dollars. Moreover, up to 80% of the public and private external debt of emerging economies is denominated in foreign currency, especially in dollars (Obstfeld and Zhou, 2022). Thus, a strengthening dollar rapidly increases debt service in domestic currency. Last but not least, higher dollar rates increase the attractiveness of safe dollar assets and drive an outflow of capital from emerging markets, further increasing the depreciation of the domestic currency. Local central banks must thus react to the strengthening of the dollar by tightening their own monetary policy, which may not be desirable from the perspective of the domestic economy.

"Our currency, your problem"

There is a long history of US monetary policy spillovers. The tightening of global financial conditions due to the dollar has contributed to many balance of payments, financial, banking and debt crises in emerging markets.[7] Obstfeld and Zhou (2022) identify the effect of the appreciation of the dollar on the decline in GDP, consumption, investment and government spending in the currencies of the less developed economies. Arteta et al. (2022) show that the effect on other economies depends on the nature of the shock triggered by the tightening of dollar monetary conditions. They warn that the nature of the current shock, where the Fed is tightening despite an expected recession, typically leads to particularly negative spillovers into emerging markets, a tightening of financial conditions and a decline in economic activity.

In the second half of the 20th century, internationally coordinated interventions partially managed to address the global spillovers of US monetary policy. After the collapse of the Bretton Woods monetary system and the fixed gold/dollar convertibility in the early 1970s, situations arose in the global economy where a weak dollar (1976-1980) and later a strong dollar (1980-1985) gave rise to problems not only for the USA itself but also for their main trading partners. Coordinated interventions by central banks, which are by no means the norm, became a reality in September 1985 when representatives of the then G5 (US, UK, France, Germany and Japan) met at the Plaza hotel in New York and agreed to jointly intervene on the foreign exchange markets against a strong dollar. Similar agreements are almost out of the question today.

[6] The share of international reserves in US dollars in total global international reserves is almost 60%, i.e. three times higher than the share of reserves denominated in euro (ECB, 2022b). The share of global trade invoiced in US dollars is around 40% (Gopinath and Gourinchas, 2022), with the prices of oil and other key commodities quoted in dollars. The dollar accounts for 45% of turnover on the foreign exchange market, 65% of international debt liabilities and more than 40% of international payments; in all the indicators, the dollar is well ahead of the euro (ECB, 2022b). US government bonds have long been considered the largest and most liquid global safe asset.

[7] For example, there was a wave of country bankruptcies in Latin America after a sharp increase in rates by the Fed in the 1980s under former Fed Chair Paul Volcker. The sharp monetary policy tightening by the Fed in 1994 had similar effects on emerging markets (including the crises in Mexico and Argentina), as did the announced scaling down of quantitative easing in 2013 (the "taper tantrum" led to a sharp flight of capital from developing markets).

However, the "victims" of US monetary policy may be different this time than in the 1980s. Some emerging economies, especially in Latin America, are benefiting from high commodity prices. The Mexican peso, Brazilian real and Peruvian sol even strengthened against the dollar in 2022. High international reserves, accumulated over the past decade, and a lower share of foreign currency external debt across developing economies, may also lead to more moderate impacts than in previous episodes. By contrast, some of the relatively more advanced economies in Europe, which are major energy importers and are geographically exposed to the war in Ukraine, may find themselves in a more complicated situation.

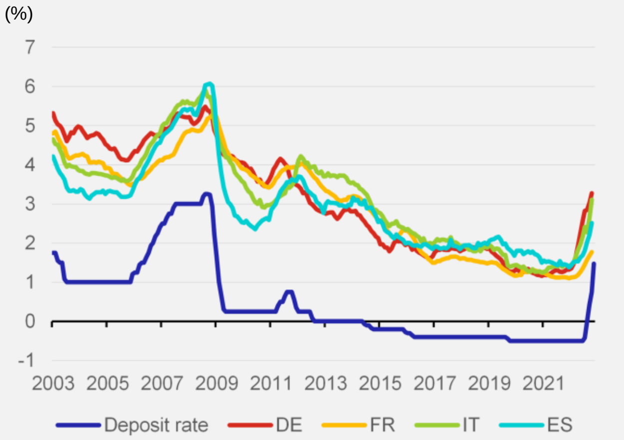
It all takes time

Interest rate increases in advanced economies were not only notable for their synchronicity, but also for their forcefulness. The monetary policy of the euro area is a good example of this. Historically, (not only) the ECB's traditional approach has been to raise key interest rates by 25 bp, intensively communicate the future interest rate path and effortlessly shape expectations about future monetary policy. However, the situation in 2022 required more radical measures to tighten monetary policy when the deposit rate went from negative values to 2% within six months.

The ECB, like other central banks, bases its decisions on the standard functioning of monetary policy transmission, i.e. the link between monetary policy instruments (monetary policy rates, balance sheet of central bank and its communications policies) and the financial conditions in the economy. Tighter financial conditions will then be reflected with a time gap in a cooling of the economy, which will reduce inflation with a further lag. This is the reason why central banks have their own monetary policy horizon, which is usually several quarters or even years in the future.

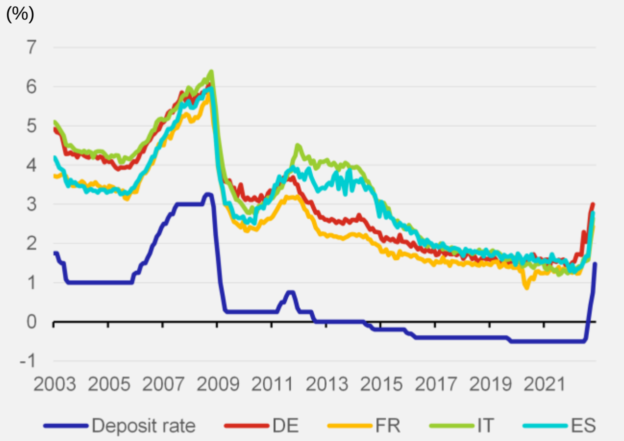
However, standard transmission links may work differently amid sharp interest rate increases. The transmission from the key interest rates to the client lending rates for firms and households can be illustrated using the composite cost-

Chart 5 – Composite cost-of-borrowing indicator for households



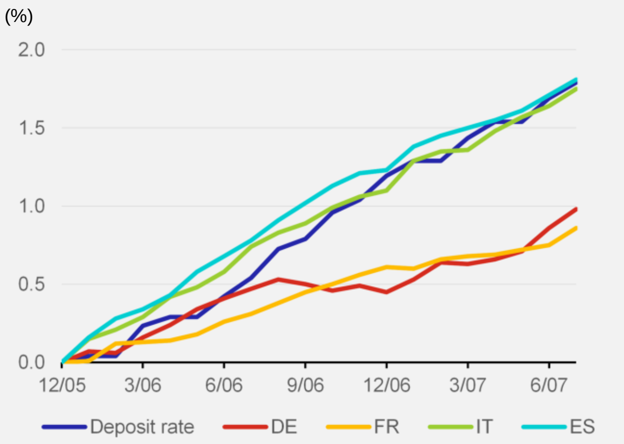
Source: ECB, CNB calculations.

Chart 6 – Composite cost-of-borrowing indicator for companies



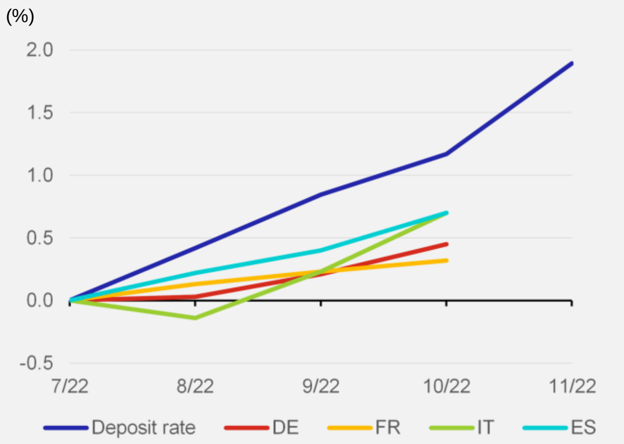
Source: ECB, CNB calculations, EC.

Chart 7a – Cumulative changes in the deposit rate and the composite cost-of-borrowing indicator: households in 2005–2007



Source: ECB, CNB calculations.

Chart 7b – Cumulative changes in the deposit rate and the composite cost-of-borrowing indicator: households in 2022

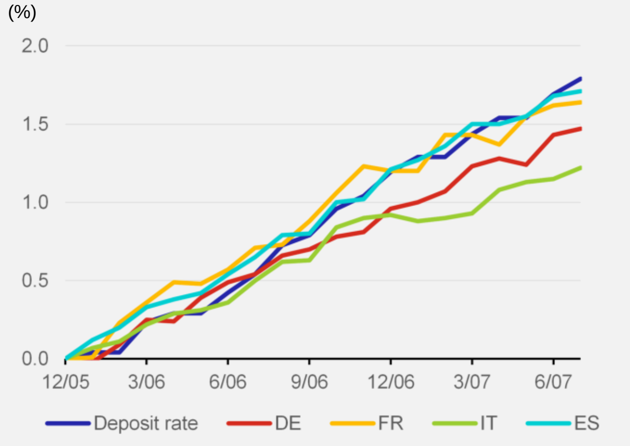


Source: ECB, CNB calculations.

of-borrowing indicator. The ECB considers this to be a comparable measure of the cost of borrowing across countries and maturities. Charts 5 and 6 show its long-term development for companies and households, while confirming the smooth pass-through of key interest rates to the cost of borrowing. The exception was the period after the financial and debt crisis, when there was significant financial fragmentation. The cost of borrowing in some countries (Italy, Spain) did not respond to the easing of monetary conditions and remained high.

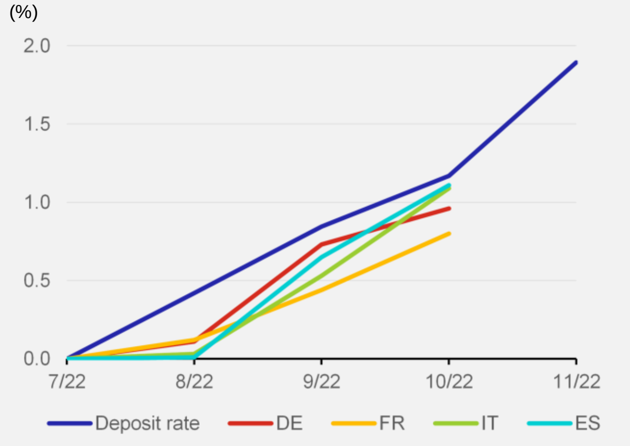
In the current tightening cycle, borrowing costs are clearly lagging behind monetary policy rates. Charts 7 and 8 compare the cumulative changes in the ECB deposit rate with the cumulative changes in the composite cost-of-borrowing indicator for households and companies in different countries. For the sake of simplicity, we use the period from 2005 to 2007 before the Global Financial Crisis (GFC), which was characterised by regular small changes in key rates, for the comparison. The chart on the left confirms that changes in lending rates more or less mirrored changes in the deposit rate of the ECB, at least until mid-2006. In the case of companies, this largely continued until the end of the rate-raising cycle. The chart on the right illustrates the current cycle of sharp rate increases which started in summer 2022. It shows a lag in the increase in costs in the case of lending rates for both households and companies. However, the lag is much smaller for corporate loans.

Chart 8a – Cumulative changes in the deposit rate and the composite cost-of-borrowing indicator: companies in 2005–2007



Source: ECB, CNB calculations.

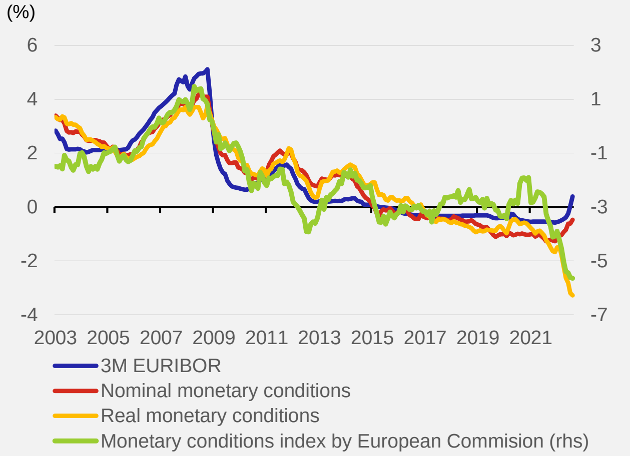
Chart 8b – Cumulative changes in the deposit rate and the composite cost-of-borrowing indicator: companies in 2022



Source: ECB, CNB calculations, EC.

More comprehensive views on transmission mechanisms also confirm a slower response of financial conditions to ECB policy. The borrowing costs of households and companies capture only part of the financial conditions in the euro area. The Monetary Conditions Index (MCI) can provide us with a more detailed picture. This takes into account, for example, bond yields and the effective exchange rate of the euro. Chart 9 shows the index in nominal and real terms compared to the 3M EURIBOR market interest rate. While the market interest rate turned positive owing to an increase in interest rates in July 2022, the MCI fell further in real terms. Even nominal monetary conditions are only slowly returning to the 2015–2016 level. Monetary conditions in the euro area tightened further in autumn 2022, but are still very far from the restrictive stance taken in the period before the GFC. The European Commission's index of real monetary conditions in the euro area, which is calculated differently, has also indicated a roughly similar story (see Chart 10).[8]

Chart 9 – Nominal and real monetary conditions indices in the euro area



Source: ECB, EC, CNB calculations.
Note: the indices are constructed as the main component of interest rates for households, companies, the 3M EURIBOR, bond yields and the effective exchange rate of the euro. Real terms data have been deflated by inflation expectations from the Survey of Professional Forecasters (SPF). The European Commission's MCI is calculated as a weighted average of the real short-term interest rate and the real effective exchange rate in relation to their value in a base period. These weights reflect the relative effect of each variable on GDP after two years and are derived from simulations in the OECD Interlink model.

[8] https://economy-finance.ec.europa.eu/economic-research-and-databases/economic-databases/monetary-conditions-index_en

Summary

The extraordinary breadth and intensity of the current monetary policy tightening cycle creates new challenges for central banks. Global synchronisation complicates a reduction in inflation through the exchange rate channel which, unlike other channels, is zero-sum in global terms. In 2022, a key role was played by the tightening of US Fed policy in particular, which strengthened inflation pressures in other economies through a stronger dollar. “Keeping pace” with US rates may represent too much of a drag on the domestic economy for those economies for which the exchange rate is a key component of monetary conditions. A partial solution for smaller economies with sufficient reserves may be a cautious use of foreign exchange interventions to dampen the impacts of a strong dollar.

The tightening of financial conditions may not occur to an appropriate extent and as rapidly as rate increases. The financial markets respond to central bank interventions with a certain lag, which may be more noticeable in times of sharp rate increases. Slower than usual transmission may tempt central banks to intervene again so that they achieve their objective faster or signal their stance. However, this may lead to excessive tightening.

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Keywords

central banks, monetary policy, monetary conditions

JEL Classification

E52, E43, F45

A1. Change in predictions for 2023

GDP growth, %

	CF		IMF		OECD		CB / EIU	
EA	+0.1	2023/1 2022/12	-0.7	2022/10 2022/7	+0.2	2022/11 2022/9	-0.4	2022/12 2022/9
US	+0.1	2023/1 2022/12	0	2022/10 2022/7	0	2022/11 2022/9	-0.7	2022/12 2022/9
UK	0	2023/1 2022/12	-0.2	2022/10 2022/7	-0.4	2022/11 2022/9	0	2022/11 2022/8
JP	-0.1	2023/1 2022/12	-0.1	2022/10 2022/7	+0.4	2022/11 2022/9	-0.1	2022/10 2022/7
CN	+0.1	2023/1 2022/12	-0.2	2022/10 2022/7	-0.1	2022/11 2022/9	0	2023/1 2022/12
RU	0	2023/1 2022/12	+1.2	2022/10 2022/7	-1.1	2022/11 2022/9	+0.1	2023/1 2022/12

Inflation, %

	CF		IMF		OECD		CB / OE	
EA	-0.4	2023/1 2022/12	+3.4	2022/10 2022/4	+0.6	2022/11 2022/9	+0.8	2022/12 2022/9
US	-0.3	2023/1 2022/12	+0.6	2022/10 2022/4	+0.5	2022/11 2022/9	+0.3	2022/12 2022/9
UK	-0.1	2023/1 2022/12	+3.7	2022/10 2022/4	+0.7	2022/11 2022/9	-0.2	2022/11 2022/8
JP	+0.1	2023/1 2022/12	+0.6	2022/10 2022/4	0	2022/11 2022/9	+0.2	2022/10 2022/7
CN	-0.1	2023/1 2022/12	+0.4	2022/10 2022/4	-0.9	2022/11 2022/9	0	2023/1 2022/12
RU	0	2023/1 2022/12	-9.3	2022/10 2022/4	-0.1	2022/11 2022/9	0	2023/1 2022/12

A2. Change in predictions for 2024

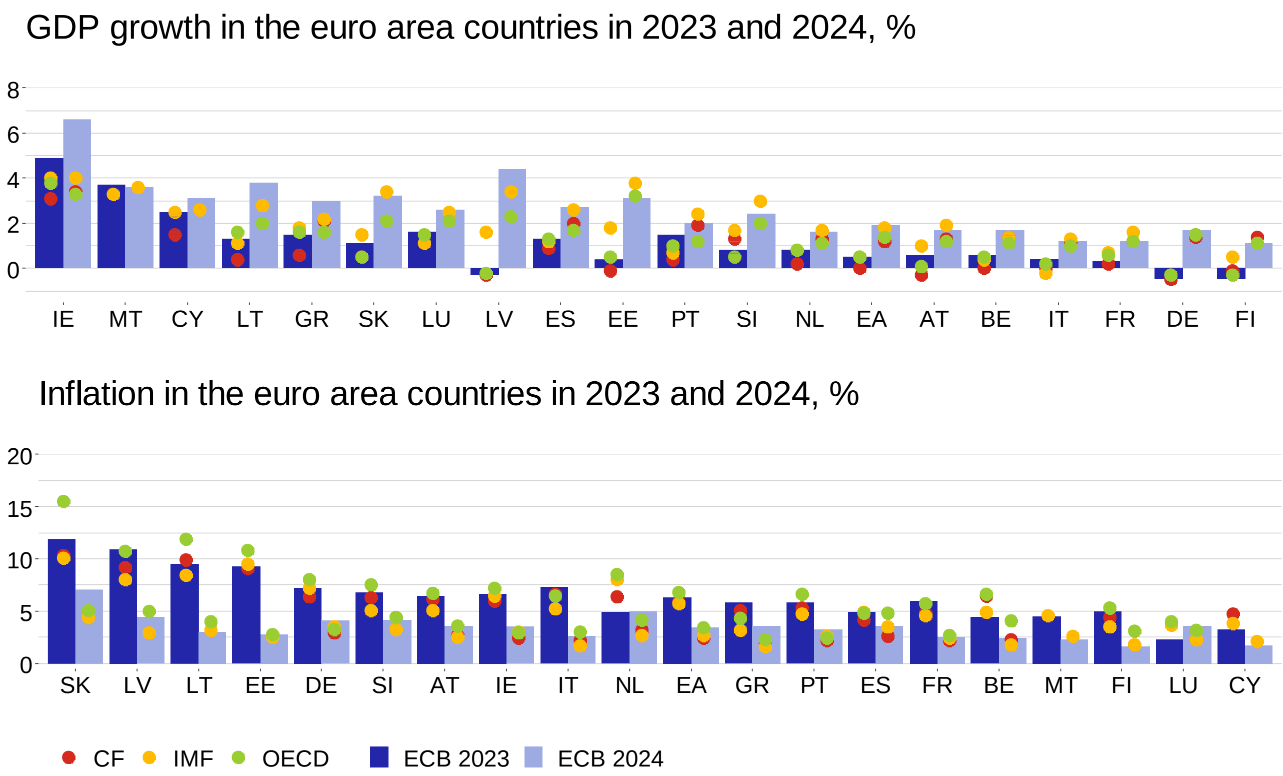
GDP growth, %

	CF		IMF		OECD		CB / OE	
EA	---	2023/1 ---	0	2022/10 2022/4	---	2022/11 ---	0	2022/12 2022/9
US	---	2023/1 ---	-0.2	2022/10 2022/4	---	2022/11 ---	-0.1	2022/12 2022/9
UK	---	2023/1 ---	-0.9	2022/10 2022/4	---	2022/11 ---	-0.7	2022/11 2022/8
JP	---	2023/1 ---	+0.5	2022/10 2022/4	---	2022/11 ---	+0.2	2022/10 2022/7
CN	---	2023/1 ---	-0.6	2022/10 2022/4	---	2022/11 ---	+0.2	2023/1 2022/12
RU	---	2023/1 ---	0	2022/10 2022/4	---	2022/11 ---	-0.6	2023/1 2022/12

Inflation, %

	CF		IMF		OECD		CB / OE	
EA	---	2023/1 ---	+0.9	2022/10 2022/4	---	2022/11 ---	+1.1	2022/12 2022/9
US	---	2023/1 ---	-0.1	2022/10 2022/4	---	2022/11 ---	+0.2	2022/12 2022/9
UK	---	2023/1 ---	+1.1	2022/10 2022/4	---	2022/11 ---	0	2022/11 2022/8
JP	---	2023/1 ---	+0.1	2022/10 2022/4	---	2022/11 ---	+0.3	2022/10 2022/7
CN	---	2023/1 ---	-0.1	2022/10 2022/4	---	2022/11 ---	+0.3	2023/1 2022/12
RU	---	2023/1 ---	-5.0	2022/10 2022/4	---	2022/11 ---	0	2023/1 2022/12

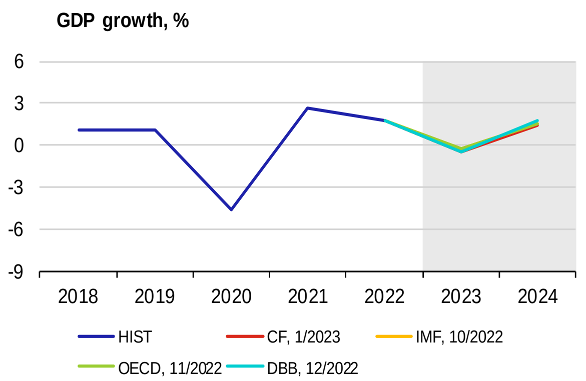
A3. GDP growth and inflation outlooks in the euro area countries

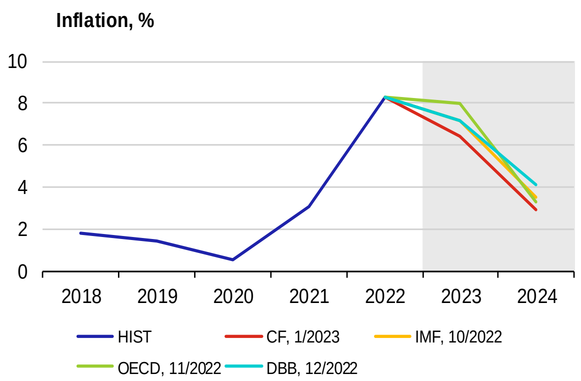


Note: Charts show institutions' latest available outlooks of for the given country.

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

Germany



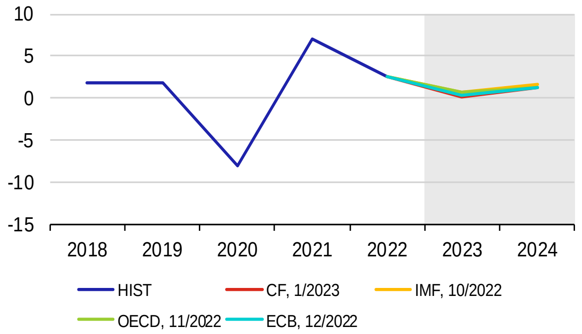


	CF	IMF	OECD	DBB
2023	-0.5	-0.3	-0.3	-0.5
2024	1.4	1.5	1.5	1.7

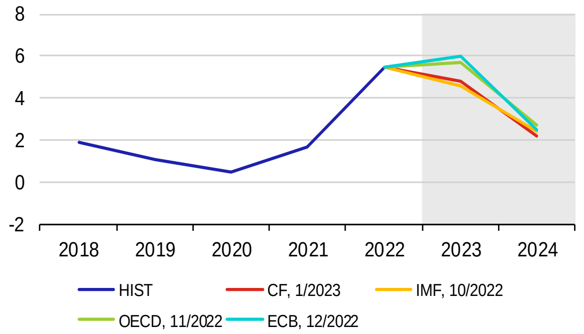
	CF	IMF	OECD	DBB
2023	6.4	7.2	8.0	7.2
2024	2.9	3.5	3.3	4.1

France

GDP growth, %



Inflation, %

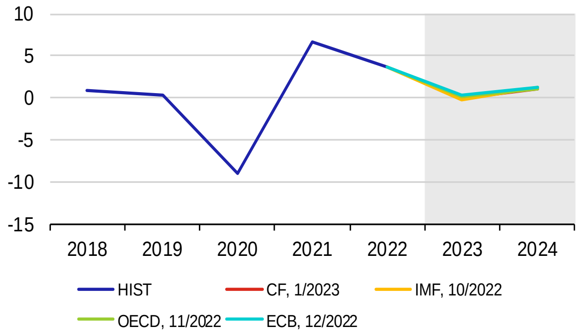


	CF	IMF	OECD	ECB
2023	0.2	0.7	0.6	0.3
2024	1.2	1.6	1.2	1.2

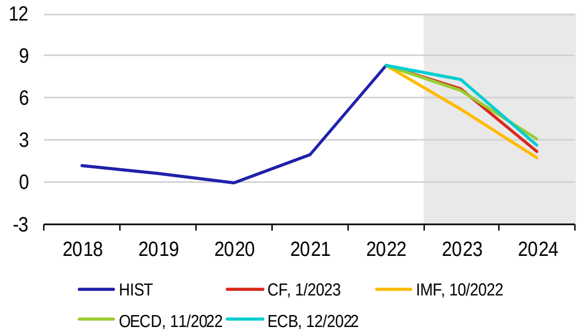
	CF	IMF	OECD	ECB
2023	4.8	4.6	5.7	6.0
2024	2.2	2.4	2.7	2.5

Italy

GDP growth, %



Inflation, %

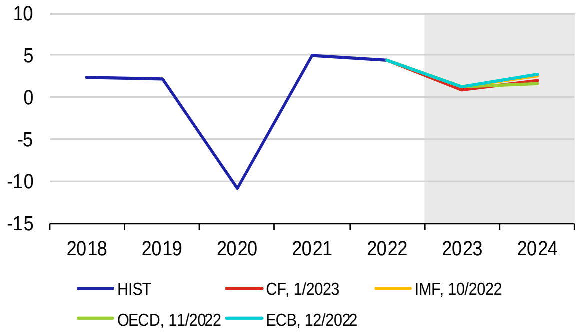


	CF	IMF	OECD	ECB
2023	0.0	-0.2	0.2	0.4
2024	1.1	1.3	1.0	1.2

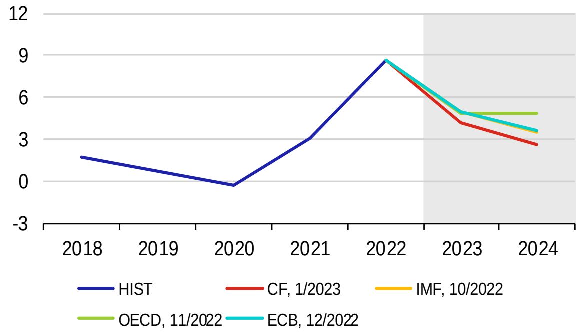
	CF	IMF	OECD	ECB
2023	6.6	5.2	6.5	7.3
2024	2.2	1.7	3.0	2.6

Spain

GDP growth, %



Inflation, %

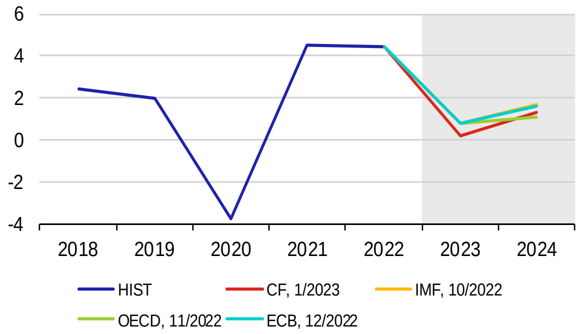


	CF	IMF	OECD	ECB
2023	0.9	1.2	1.3	1.3
2024	2.0	2.6	1.7	2.7

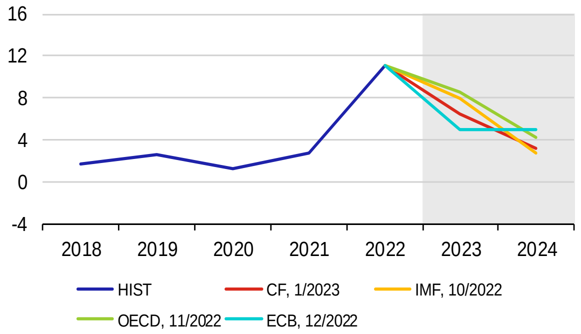
	CF	IMF	OECD	ECB
2023	4.2	4.9	4.8	4.9
2024	2.6	3.5	4.8	3.6

Netherlands

GDP growth, %



Inflation, %



GDP growth, %

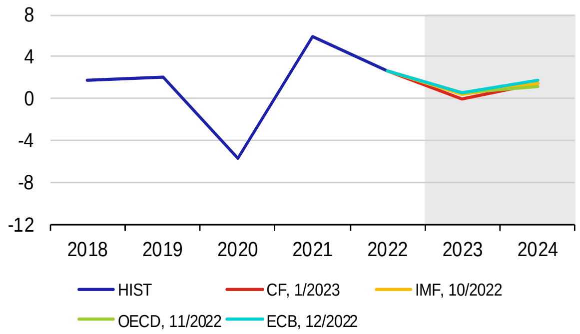
	CF	IMF	OECD	ECB
2023	0.2	0.8	0.8	0.8
2024	1.3	1.7	1.1	1.6

Inflation, %

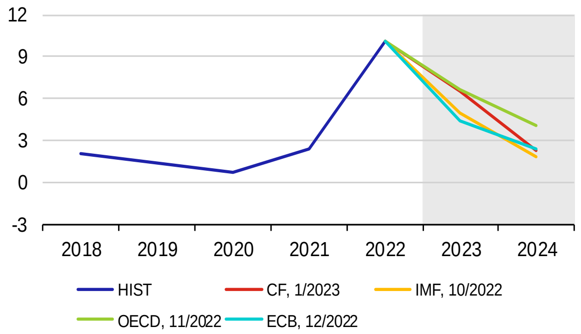
	CF	IMF	OECD	ECB
2023	6.4	8.0	8.5	4.9
2024	3.2	2.7	4.2	5.0

Belgium

GDP growth, %



Inflation, %



GDP growth, %

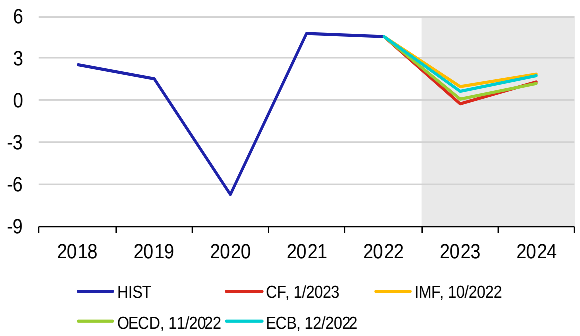
	CF	IMF	OECD	ECB
2023	0.0	0.4	0.5	0.6
2024	1.4	1.4	1.1	1.7

Inflation, %

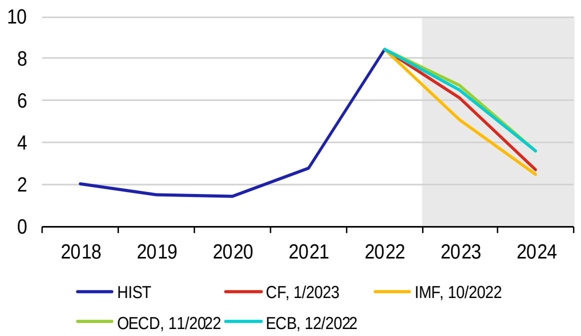
	CF	IMF	OECD	ECB
2023	6.5	4.9	6.6	4.4
2024	2.3	1.8	4.1	2.4

Austria

GDP growth, %



Inflation, %



GDP growth, %

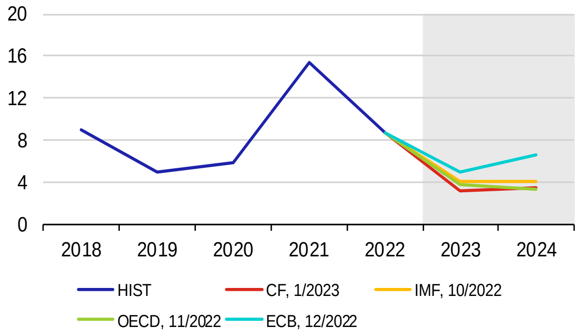
	CF	IMF	OECD	ECB
2023	-0.3	1.0	0.1	0.6
2024	1.3	1.9	1.2	1.7

Inflation, %

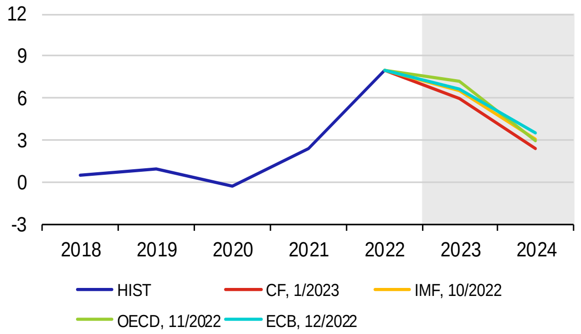
	CF	IMF	OECD	ECB
2023	6.1	5.1	6.7	6.5
2024	2.7	2.5	3.6	3.6

Ireland

GDP growth, %



Inflation, %

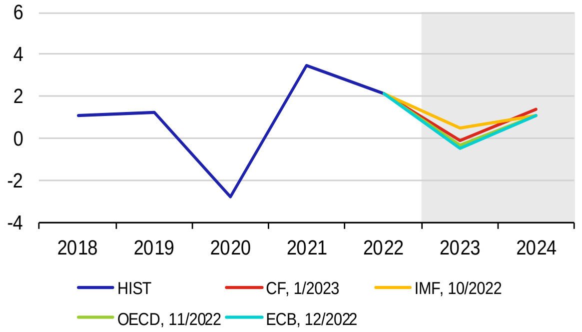


	CF	IMF	OECD	ECB
2023	3.1	4.0	3.8	4.9
2024	3.4	4.0	3.3	6.6

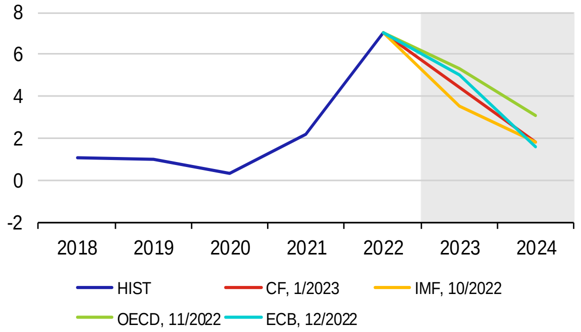
	CF	IMF	OECD	ECB
2023	6.0	6.5	7.2	6.6
2024	2.4	3.0	2.9	3.5

Finland

GDP growth, %



Inflation, %

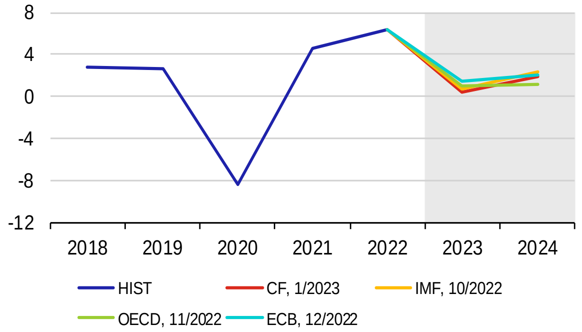


	CF	IMF	OECD	ECB
2023	-0.1	0.5	-0.3	-0.5
2024	1.4	1.1	1.1	1.1

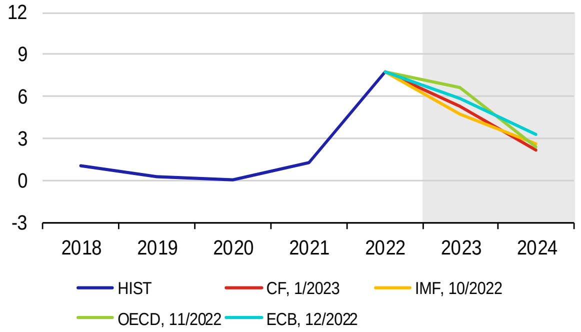
	CF	IMF	OECD	ECB
2023	4.4	3.5	5.3	5.0
2024	1.8	1.8	3.1	1.6

Portugal

GDP growth, %



Inflation, %

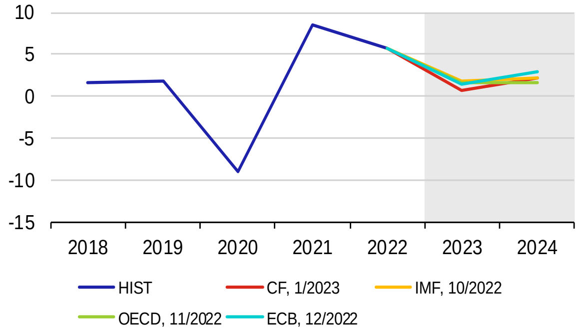


	CF	IMF	OECD	ECB
2023	0.4	0.7	1.0	1.5
2024	1.9	2.4	1.2	2.0

	CF	IMF	OECD	ECB
2023	5.3	4.7	6.6	5.8
2024	2.2	2.6	2.4	3.3

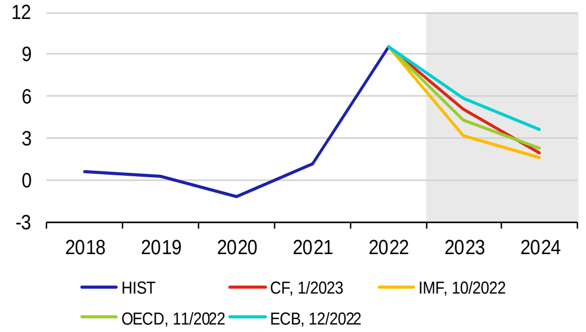
Greece

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.6	1.8	1.6	1.5
2024	2.1	2.2	1.6	3.0

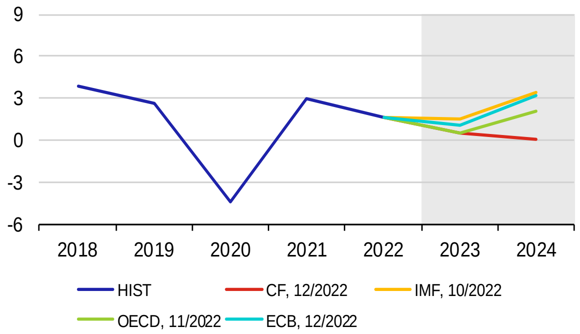
Inflation, %



	CF	IMF	OECD	ECB
2023	5.1	3.2	4.3	5.8
2024	1.9	1.6	2.3	3.6

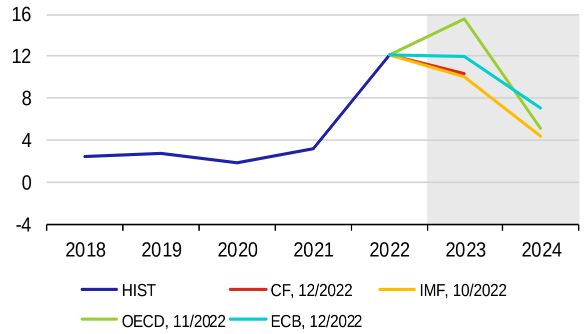
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.5	1.5	0.5	1.1
2024	0.0	3.4	2.1	3.2

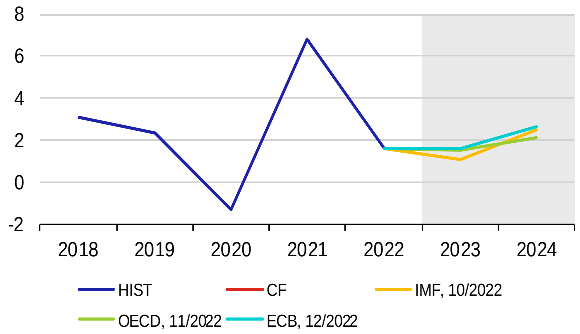
Inflation, %



	CF	IMF	OECD	ECB
2023	10.3	10.1	15.5	11.9
2024		4.4	5.1	7.0

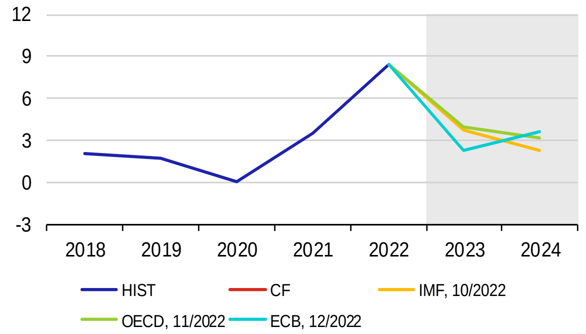
Luxembourg

GDP growth, %



	CF	IMF	OECD	ECB
2023	n. a.	1.1	1.5	1.6
2024	n. a.	2.5	2.1	2.6

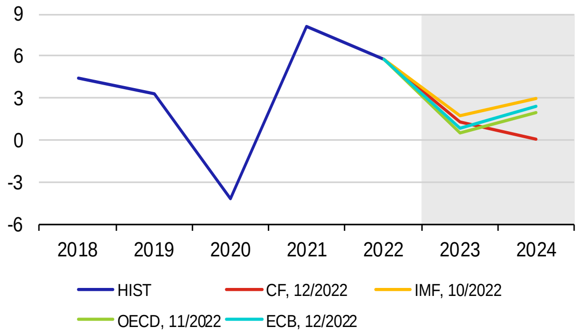
Inflation, %



	CF	IMF	OECD	ECB
2023	n. a.	3.7	4.0	2.3
2024	n. a.	2.3	3.2	3.6

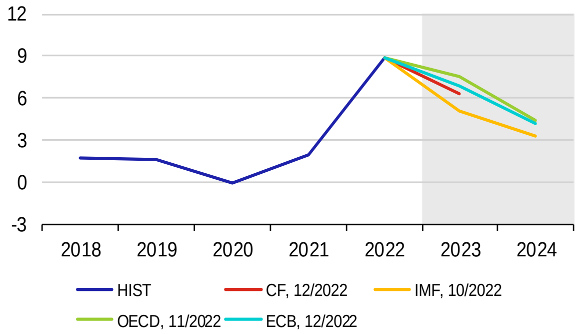
Slovenia

GDP growth, %



	CF	IMF	OECD	ECB
2023	1.3	1.7	0.5	0.8
2024	0.0	3.0	2.0	2.4

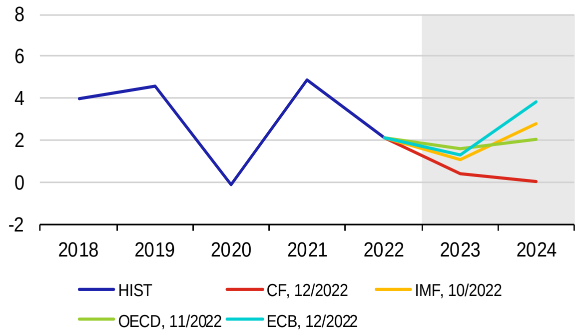
Inflation, %



	CF	IMF	OECD	ECB
2023	6.3	5.1	7.5	6.8
2024		3.3	4.4	4.2

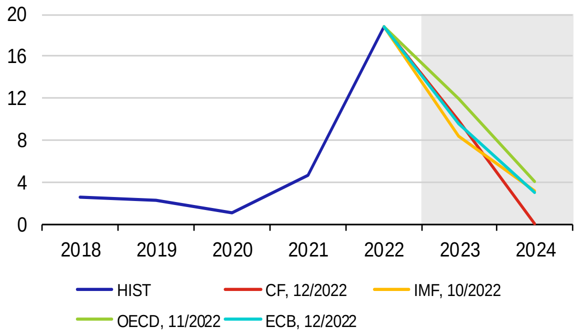
Lithuania

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.4	1.1	1.6	1.3
2024		2.8	2.0	3.8

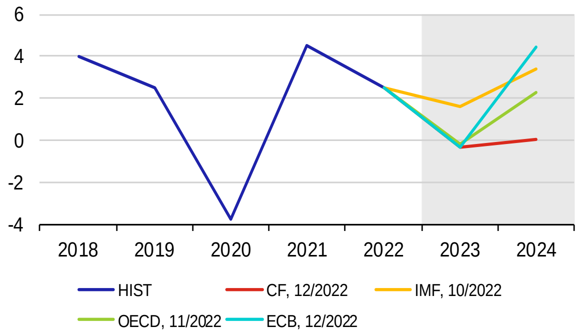
Inflation, %



	CF	IMF	OECD	ECB
2023	9.9	8.4	11.9	9.5
2024		3.2	4.0	3.0

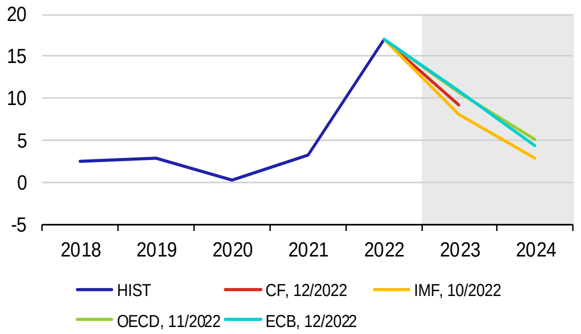
Latvia

GDP growth, %



	CF	IMF	OECD	ECB
2023	-0.3	1.6	-0.2	-0.3
2024		3.4	2.3	4.4

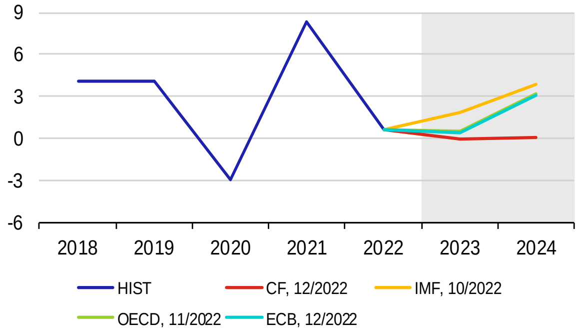
Inflation, %



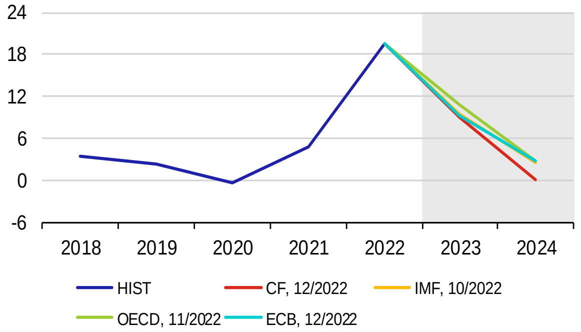
	CF	IMF	OECD	ECB
2023	9.2	8.0	10.7	10.9
2024		2.9	5.0	4.4

Estonia

GDP growth, %



Inflation, %

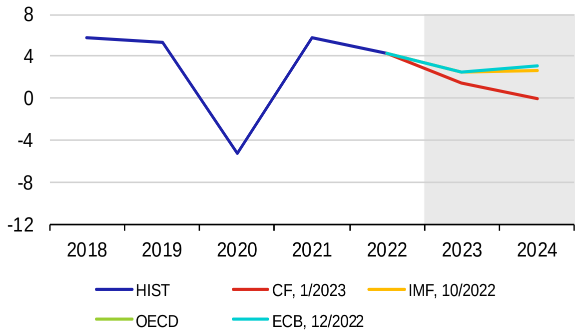


	CF	IMF	OECD	ECB
2023	-0.1	1.8	0.5	0.4
2024		3.8	3.2	3.1

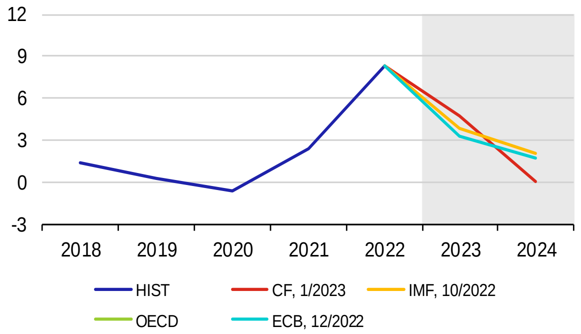
	CF	IMF	OECD	ECB
2023	9.1	9.5	10.8	9.3
2024		2.5	2.8	2.8

Cyprus

GDP growth, %



Inflation, %

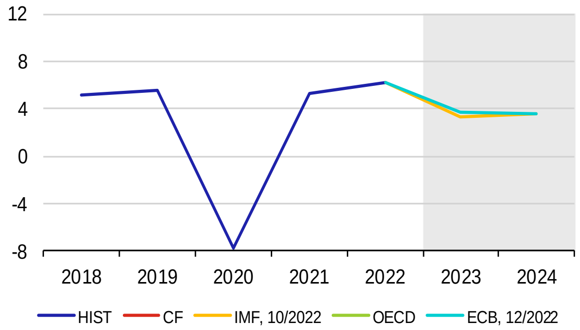


	CF	IMF	OECD	ECB
2023	1.5	2.5	n. a.	2.5
2024		2.6	n. a.	3.1

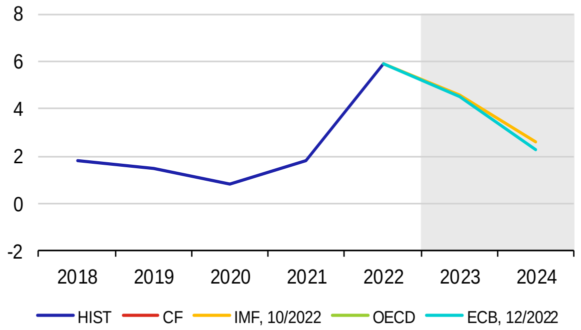
	CF	IMF	OECD	ECB
2023	4.7	3.8	n. a.	3.3
2024		2.1	n. a.	1.7

Malta

GDP growth, %



Inflation, %

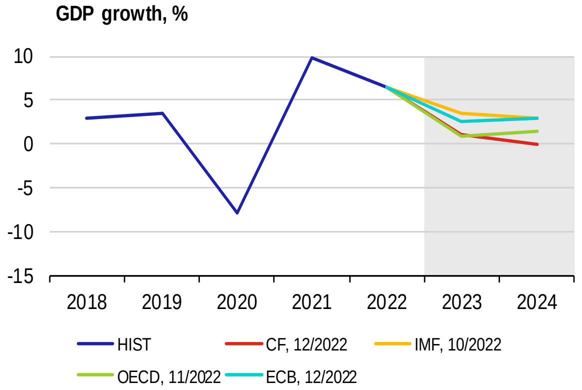


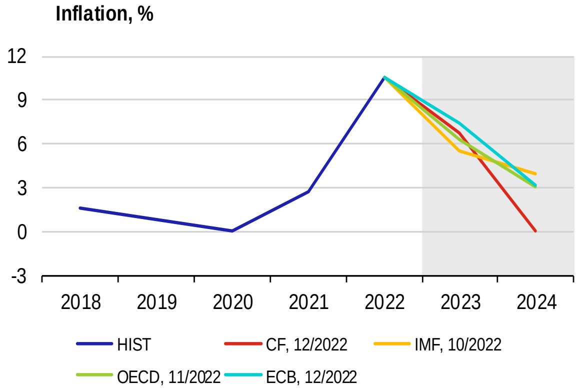
	CF	IMF	OECD	ECB
2023	n. a.	3.3	n. a.	3.7
2024	n. a.	3.6	n. a.	3.6

	CF	IMF	OECD	ECB
2023	n. a.	4.6	n. a.	4.5
2024	n. a.	2.6	n. a.	2.3

Ddd

Croatia



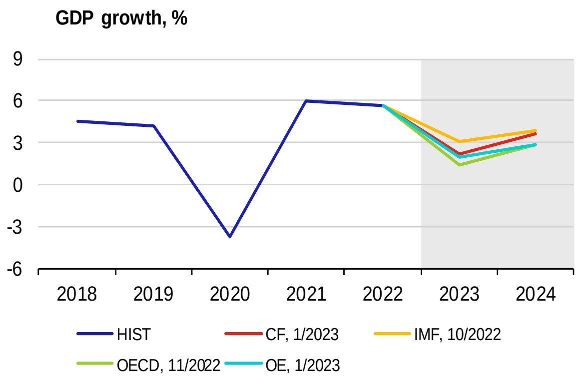


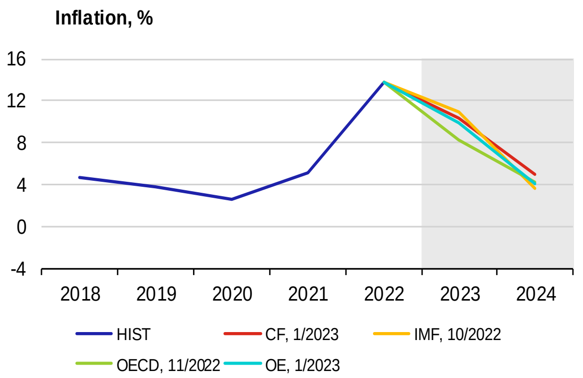
	CF		IMF	OECD	ECB	
2023	1.1		3.5	0.8	2.5	
2024	0.0		3.0	1.5	3.0	

	CF		IMF	OECD	ECB	
2023	6.7		5.5	6.3	7.4	
2024	0.0		3.9	3.1	3.2	

A5. GDP growth and inflation in other selected countries

Romania





	CF		IMF	OECD	OE	
2023	2,2		3,1	1,4	2,0	
2024	3,6		3,8	2,8	2,9	

	CF		IMF	OECD	OE	
2023	10,4		11,0	8,3	9,9	
2024	4,9		3,6	4,2	4,0	

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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