Global Economic Outlook

June 2023

CNB CZECH NATIONAL BANK

Cut-off date for data
16 June 2023

CF survey date
12 June 2023

GEO publication date
23 June 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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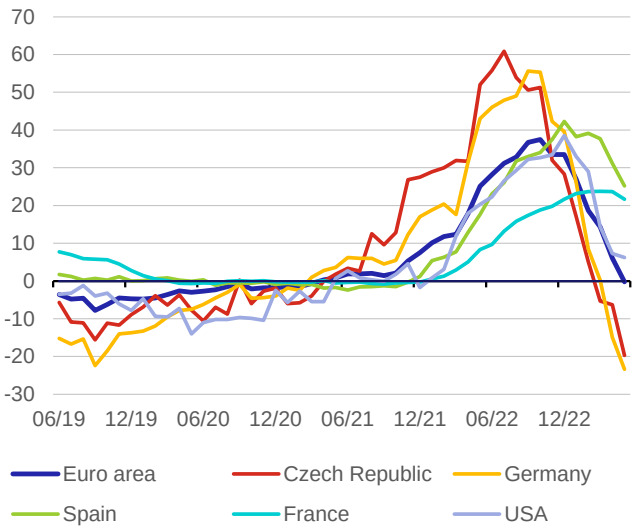
I. Introduction

Welcome to the 150th issue of Global Economic Outlook, brought to you every month since 2011. In addition to providing updated monitoring of the economic situation abroad, readers can access a "library" of our analyses. The start of this decade was hugely disrupted by shocks, especially the pandemic crisis and the war in Ukraine, with the related rise in international tensions and sharp growth in energy prices. During this period, we focused mainly on analyses of external (im)balances (11 articles) and commodity markets (9 articles), followed by exchange rates and interest rates (5 articles) and inflation (4 articles). The success of the forecasts presented in the GEO was also assessed on an annual basis. Several less conventional topics and trends of global importance also featured. We hope you enjoy this and future issues of the GEO.

Key central banks sent different signals in June, but their rate level is quite different. The June meetings saw the expected rise in ECB rates, a pause in tightening by the Fed and an extension in the period of unchanged rates by the BoJ. The Fed and ECB have thus approached their notional rate peak. In 2024, we can expect discussions on their moderate easing. Euro area interest rates thus reached 4%, which is still noticeably lower than the Fed's monetary policy settings (5–5.25%). June also saw other, at time somewhat surprising rate increases, for example by the central banks of Canada and Australia. Interest rates were left unchanged in Central Europe, but they are visibly higher than those of the aforementioned central banks.

Oil versus gas – also different signals in June. The price of gas on the Rotterdam commodity exchange, which is decisive for the European market, has risen from a two-year low since the end of May. The previous downward trend in the Brent price has somewhat halted, with prices expected to remain broadly stable at around USD 75/bbl.

Y-o-y changes in butter prices in selected countries, %



Source: Eurostat

Inflation is falling; when will it approach the ideal 2% level? The disinflation process is continuing across countries. Inflation is expected to be in single digits again in the vast majority of European countries this summer. However, its return to close to the inflation targets will still require maintaining tightened monetary conditions, with the predominance of either the exchange-rate or interest-rate component.

The chart in the current issue shows growth in butter prices in selected countries. Butter prices which, according to the Economist, often determine supermarket price trends, have decreased in many countries. This is good news for future inflation. If the drop in prices becomes more broad-based, other items in the consumer basket should follow suit, which will subsequently lead to a decline in the inflation expectations of consumers. These remain elevated, but are falling. Their drop in euro area countries has also been confirmed by the latest ECB survey. The situation is similar in many advanced countries.

The current issue also contains an analysis: "Cross-border payments at a crossroads between SWIFT and DLT", which examines decentralised ledger technologies. The article describes how, thanks to Bitcoin and blockchain technology, even traditional banks have developed technologies which enable the settlement of international transactions.

GEO barometer for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP	**2023**	0.6 ↘	-0.2 ↘	1.3 ↗	0.1 ↗	1.1 ↗	5.7 ↘	-0.3 ↗
(%)	**2024**	0.9 →	1.1 →	0.5 ↘	0.8 →	1.0 ↘	4.9 →	1.3 →
Inflation	**2023**	5.4 ↘	6.0 ↘	4.1 ↘	7.3 ↗	2.8 ↗	1.3 ↘	5.5 ↘
(%)	**2024**	2.4 →	2.5 ↘	2.6 →	3.2 ↗	1.5 ↗	2.3 ↘	4.8 ↗
Unemployment	**2023**	6.7 ↘	5.6 ↗	3.8 →	4.1 →	2.6 ↗	3.5 →	3.5 →
(%)	**2024**	6.8 ↘	5.5 →	4.6 →	4.1 →	2.4 →	3.4 →	3.6 →
Exchange rate	**2023**	1.12 ↗	1.12 ↗		1.27 ↗	127.1 ↗	6.85 ↗	79.9 ↘
(against USD)	**2024**	1.15 ↗	1.15 ↗		1.30 ↗	121.8 ↗	6.69 ↗	81.8 ↗

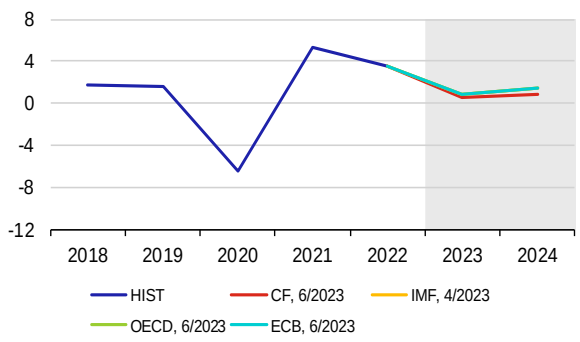
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

II.1 Euro area

The euro area has entered a technical recession, but the services sector should help it in the summer months. According to a revised estimate, GDP fell by 0.1% at the start of this year (the result for 2022 Q4 was also corrected to -0.1%). The decline in economic output is mainly due to a drop in public expenditure as governments phase out programmes to help with the high energy prices. However, household consumption also declined again. By contrast, investment returned to growth. A much larger decline in GDP was prevented by the continued strong growth in net exports (albeit this time partially offset by a fall in inventories). Of the large countries, the southern periphery fared best, while the German economy recorded a decline. There is still a certain dichotomy, with manufacturing remaining flat, while the services sector grows. Industrial production fell by 3.8% in March. April saw a partial correction, but the PMI in manufacturing declined again in May due to falling orders and remains well below the 50-point threshold. The composite PMI is kept in the expansion band (52.8) by the services sector alone, which is conversely reporting growing demand. The labour market is in better shape than ever. Unemployment is at a historical low, employment growth accelerated in 2023 Q1 and there is still brisk wage growth. Consumer sentiment was the only component of the ESI index not to decline in May. However, the recession and still high inflation are not good for sentiment in the production sector. According to the ECB and the OECD, economic growth will remain below 1% this year and accelerate in 2024 (to 1.5%). CF analysts are much more sceptical.

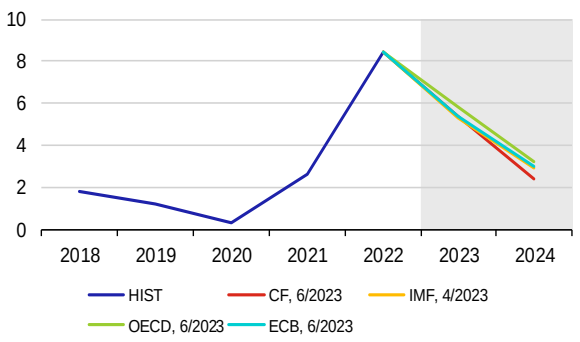
The disinflation process in the euro area has become more evident, but the target is still a long way off. Inflation slowed to 6.1% in May (prices were flat month on month). However, this is due mainly to volatile items, i.e. a fall in energy prices and slower growth in food prices. Core inflation slowed only slightly to 5.3%. The ECB again raised interest rates by 0.25 percentage point at its June meeting. This brings the key interest rate to 4%. President Christine Lagarde has stated that we can expect another rate hike in July. Based on the new outlooks, average inflation is expected to be around 5.5% this year and roughly 3% next year. According to the ECB, the inflation target will not even be reached in 2025.

GDP growth, %



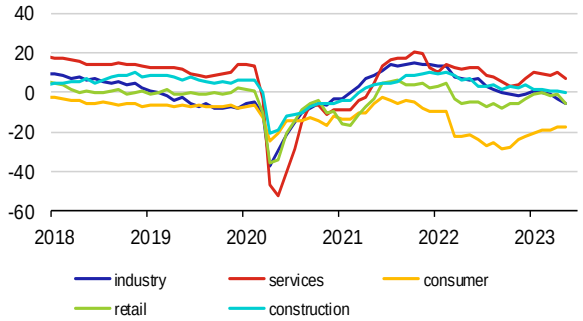
	CF	IMF	OECD	ECB
2023	0.6	0.8	0.9	0.9
2024	0.9	1.4	1.5	1.5

Inflation, %



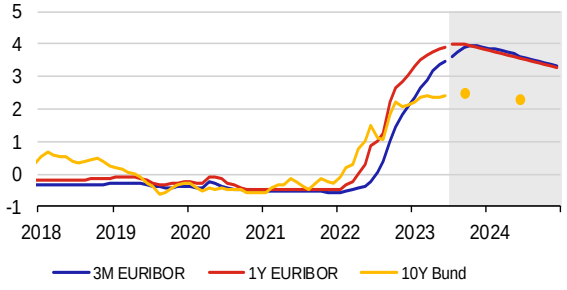
	CF	IMF	OECD	ECB
2023	5.4	5.3	5.8	5.4
2024	2.4	2.9	3.2	3.0

ESI leading indicators



	industry	services	consum.	retail	constr.
3/23	-0.7	9.0	-19.1	-1.8	0.9
4/23	-2.8	9.9	-17.5	-0.9	0.9
5/23	-5.2	7.0	-17.4	-5.3	0.2

Interest Rates, %



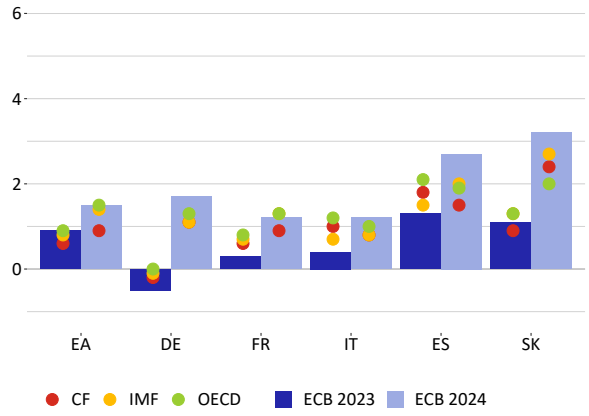
	5/23	6/23	9/23	6/24
3M EURIBOR	3.37	3.49	3.88	3.63
1Y EURIBOR	3.86	3.92	3.97	3.56
10Y Bund	2.35	2.42	2.50	2.30

II.2 Germany

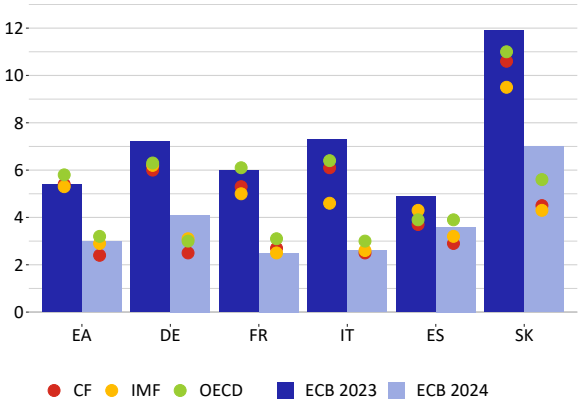
The decline in the German economy for two consecutive quarters has triggered concerns about a long-lasting recession. The revised data has ultimately shown that after a quarter-on-quarter drop in GDP by 0.5% in 2022 Q4, GDP also fell in 2023 Q1 (by 0.3%), while it was originally expected to remain flat. The decline in the economy was due to weak consumer demand and industrial activity. However, the downward revision was not too surprising given the significant fall in industrial production and retail sales. In addition, the economy is expected to remain in a downturn, with only weak growth expected in 2023 as a whole. The OECD and CF now predict that the economy will be broadly flat or decline slightly in 2023 and forecast growth of above 1% in 2024. However, a substantial improvement is evidently far off due to the worsening indicators. According to the Ifo index, business confidence has deteriorated after several increases in a row, driven mainly by much more pessimistic expectations for next year and beyond. The ZEW index also confirms weak business sentiment. Consumer sentiment as measured by GfK is continuing to recover, but is not showing an entirely clear upward trend. The composite PMI fell slightly from 54.2 in April to 53.9 in May. However, it has been in the expansion band for the fourth consecutive month and private sector growth is therefore still solid. This was due exclusively to the services sector (57.2), while manufacturing sector continues to decline (43.2).

In May, annual inflation slowed again to its lowest level in the past year. HICP inflation slowed more than expected (to 6.3% from 7.6% in April) owing to slower growth in energy prices. In month-on-month terms, consumer prices even fell by 0.2%. The main driver of inflation is still food prices, whose growth stayed in double figures. Core inflation, excluding energy and food prices, has stood above 5% since the end of 2022. The OECD and CF are now forecasting that inflation will reach 6% this year and will slow to about 3% next year. Year-on-year growth in industrial producer prices also slowed significantly for several consecutive months, reaching 4.1% in April. This is the lowest increase since April 2021 (5.2%). Industrial prices rose by 0.3% month on month.

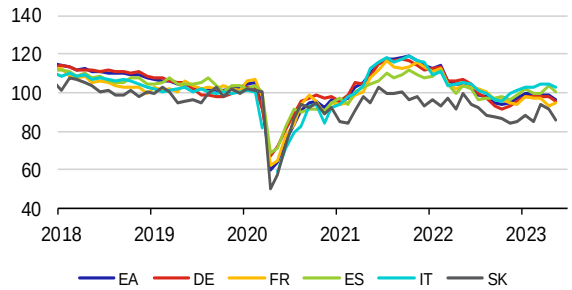
GDP growth in selected euro area countries in 2023 and 2024, %



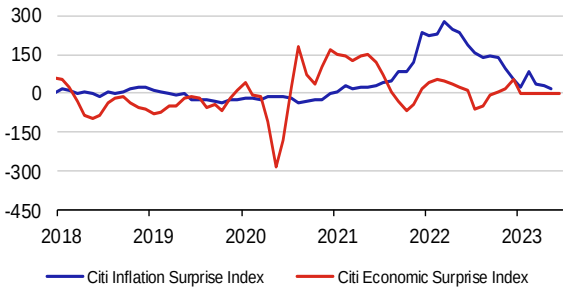
Inflation in selected euro area countries in 2023 and 2024, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
3/23	98.9	97.7	97.4	99.9	104.5	93.6
4/23	99.0	98.4	93.4	103.5	104.8	91.8
5/23	96.5	95.5	94.9	100.5	102.5	86.1

Inflation expectations based on 5year inflation swap and SPF

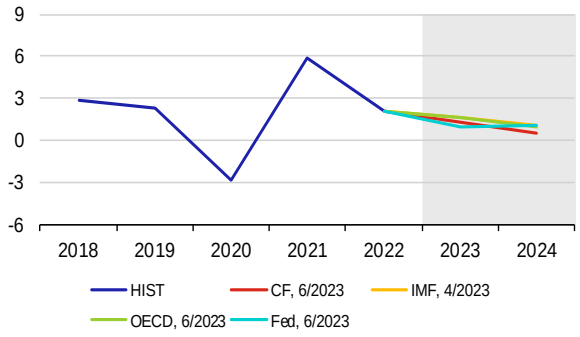
	5y5y	SPF
4/23	2.44	2.13
5/23	2.46	2.13
6/23	2.49	2.13

II.3 United States

The new US economic growth outlooks have moved upwards, despite an expected recession in the second half of this year. The new OECD outlook predicts real GDP growth of 1.6% this year, the same as the IMF's April forecast. The OECD outlook has also shifted upwards for next year, but it is alone in this move. The Fed increased the GDP growth estimate by 0.6 pp to 1% this year relative to its March outlook, but it also lowered its outlook for both 2024 and 2025 by 0.1 pp. CF analysts expect growth of 1.3% this year (as does Oxford Economics). Like the analysts, OE expects a quarter-on-quarter decline in GDP growth in 2023 Q3 and Q4. Exports deteriorated markedly, falling to their lowest level in more than a year in April, with the decline mainly in goods, while services exports increased. The labour market remains tight. Non-farm payrolls rose by 339,000 in May, but the number of unemployed persons increased by 440,000 to 6.1 million, bringing the unemployment rate to 3.7%, the highest level this year.

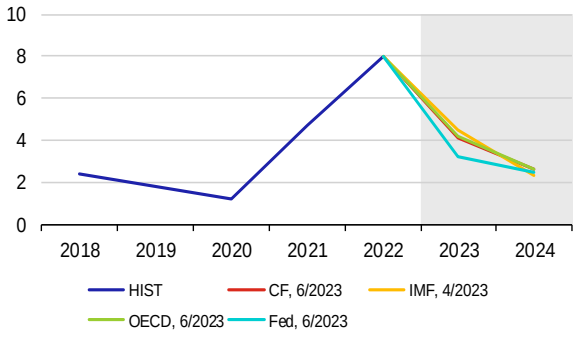
In line with analysts' and market expectations, the Fed left rates unchanged at a range of 5–5.25% at its meeting in June. The Fed's new outlook for both expected GDP growth and inflation, especially core inflation, has shifted to higher levels. Fed Chairman Jerome Powell explained at the press conference why the Fed is now taking a break from raising rates after doing so at ten consecutive meetings, and it is currently likely that rates will rise even further, most likely as early as July. The main reason is to allow the economy to adapt to higher rates. The path of inflation is currently favourable, but core inflation is still high. Despite some signs of cooling, markets currently expect rate cuts in 2024 Q3 at the earliest. At the same time, markets are still distrustful of the "dot plot" as they expect rates to be ultimately lower than communicated by the Fed.

GDP growth, %



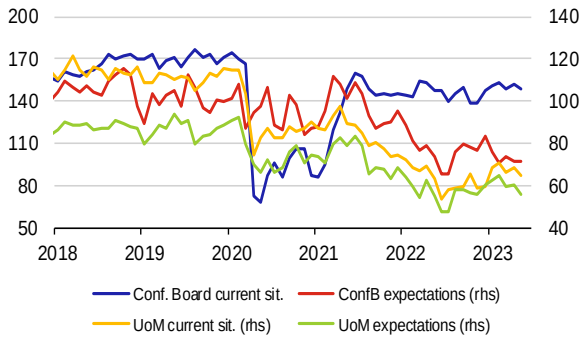
	CF	IMF	OECD	Fed
2023	1.3	1.6	1.6	1.0
2024	0.5	1.1	1.0	1.1

Inflation, %



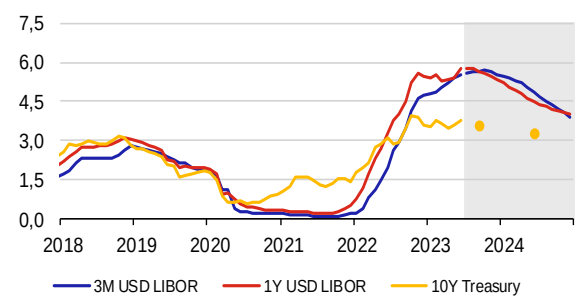
	CF	IMF	OECD	Fed
2023	4.1	4.5	4.2	3.2
2024	2.6	2.3	2.6	2.5

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
3/23	148.9	74.0	66.3	59.2
4/23	151.8	71.7	68.2	60.5
5/23	148.6	71.5	64.9	55.4

Interest Rates, %



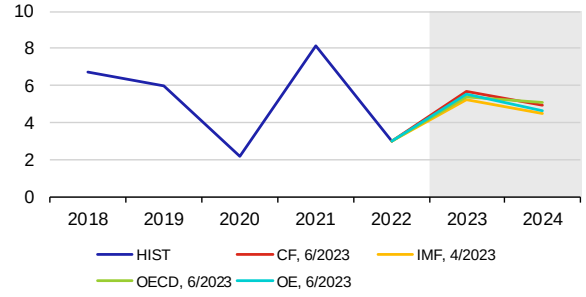
	5/23	6/23	9/23	6/24
USD LIBOR 3M	5.38	5.53	5.65	4.88
USD LIBOR 1R	5.42	5.42	5.64	4.50
Treasury 10R	3.59	3.77	3.60	3.30

II.4 China

After a relatively strong recovery of the Chinese economy at the start of 2023, signs of a slowdown in economic activity are beginning to show in Q2 after a fading of pent-up demand. Data on retail sales, industrial production and loans lagged behind market expectations in May. Year-on-year retail sales growth, which is significantly affected by last year's low base, reached 12.7% in May, a substantial drop from 18.4% in April. Sales in construction have fallen the most, reflecting the continuing slowdown in the property sector even following the easing of restrictions. Subdued consumer spending is another sign that the post-pandemic recovery is losing steam. Industrial production also slowed in May compared to April, increasing by just 3.5% year on year. In response to weak May data on loans and the real economy, China's central bank lowered its seven-day reverse repo rate from 2% to 1.9%. It also lowered the one-year medium-term lending facility rate by the same amount to 2.65%, while large state-owned banks cut their deposit rates. According to the CF analysts' June outlook, the Chinese economy will grow by 5.7% year on year in 2023 and will slow to 4.9% in 2024.

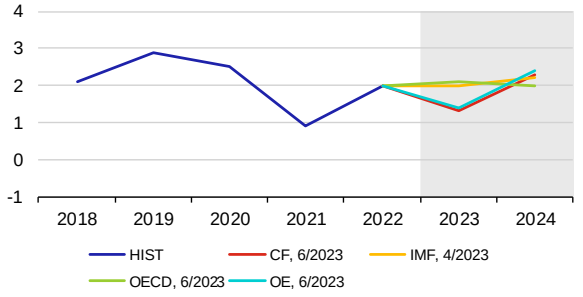
Consumer price inflation remained subdued in May, while producer prices fell sharply. There is thus still relatively deep deflation in producer prices. As in the previous month, consumer price inflation reached only 0.2% year on year in May, as growth in food prices was largely offset by lower prices of transport and housing. Producer prices meanwhile dropped by 4.6% year on year in May. The drop was due to lower global commodity prices, a faster unwinding of supply chain problems and moderate domestic industrial activity. In addition to a stronger renminbi to the dollar, subdued inflation also reflected a marked increase in inventories and a recovery in supply. However, this significant excess of supply over insufficient demand is expected to disappear gradually over the rest of the year, due also to monetary and fiscal policy support. According to the CF outlook, consumer prices will rise by 1.3 % this year, picking up to 2.3% next year.

GDP growth, %



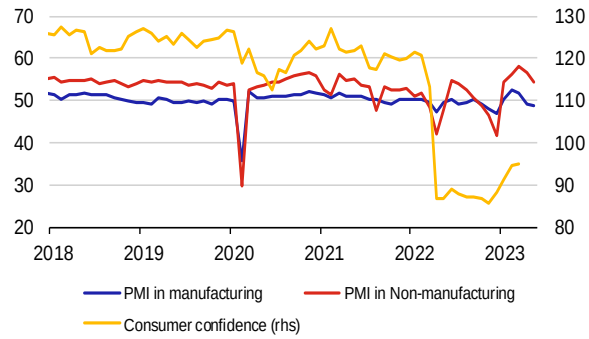
	CF	IMF	OECD	OE
2023	5.7	5.2	5.4	5.5
2024	4.9	4.5	5.1	4.6

Inflation, %



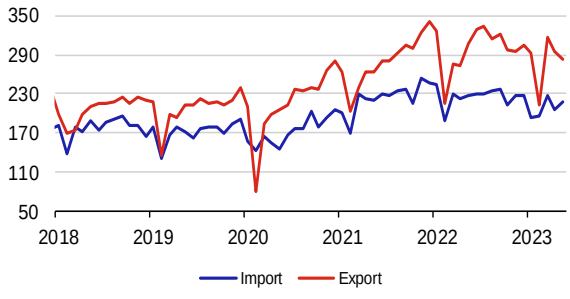
	CF	IMF	OECD	OE
2023	1.3	2.0	2.1	1.4
2024	2.3	2.2	2.0	2.4

Leading indicators



	PMI manuf.	PMI non-manufacturing	Cons. conf (rhs)
3/23	51.9	58.2	94.9
4/23	49.2	56.4	
5/23	48.8	54.5	

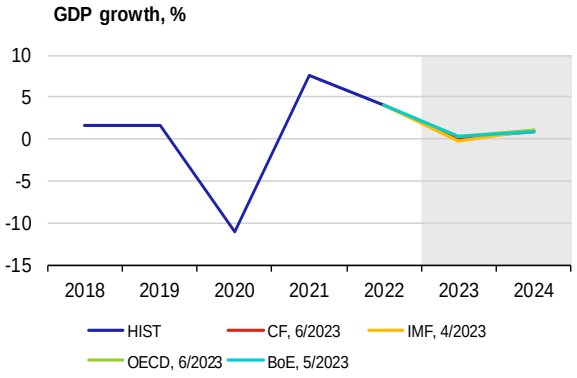
Development of China foreign trade, bil. USD



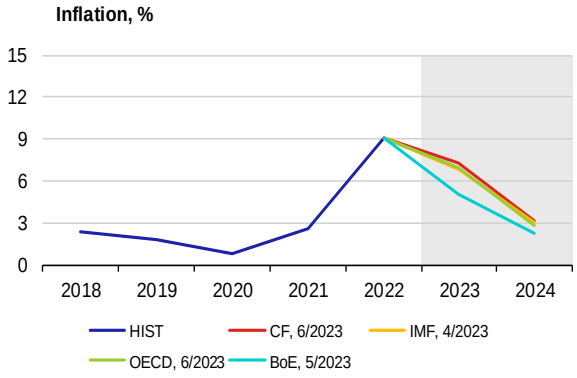
Source: Bloomberg

II.5 United Kingdom

The UK economy is lagging behind the other G7 countries despite growing in Q1, with inflation slowing further. The first estimate for Q1 confirmed the resilience of the economy, showing a second consecutive GDP growth of 0.1%. Outlooks are also improving owing to lower energy prices, stronger global growth and stronger consumer and business confidence, although they remain subdued. CF and the OECD now predict growth of up to 0.3% for this year and around 1% for 2024. Consumer price inflation reached 8.7% year on year in April (as against 10.1% in March). However, it remains high despite falling to single figures, owing mainly to food prices. New forecasts expect prices to grow by around 7% this year and around 3% next year. Core inflation also remains high. It reached almost 7%, its highest level since 1992. In addition, wage growth is accelerating, which is a problem for a return of inflation to the 2% target and supports a further increase in the BoE's rates. Markets expect rates to peak above 5% by the end of the year. The composite PMI decreased slightly in May (54.0) from its one-year high in April. The services sector continues to fuel private sector growth, while manufacturing sector is falling again.



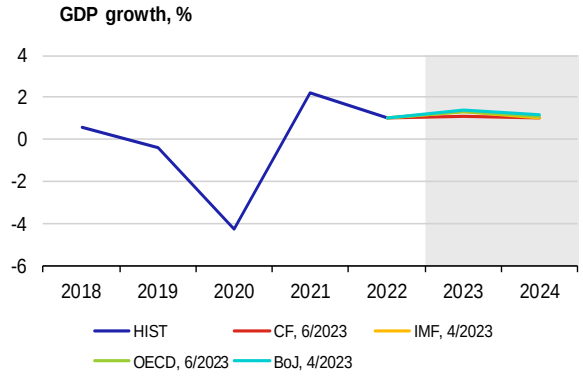
	CF	IMF	OECD	BoE
2023	0.1	-0.3	0.3	0.3
2024	0.8	1.0	1.0	0.8



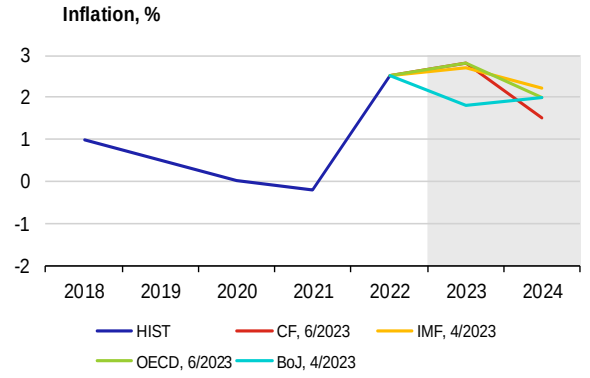
	CF	IMF	OECD	BoE
2023	7.3	6.8	6.9	5.0
2024	3.2	3.0	2.8	2.3

II.6 Japan

Japan's growth exceeded expectations in Q1 but domestic inflation pressures continue to strengthen and increase the likelihood that monetary policy will be tightened. Revised data for Q1 showed that GDP grew by 0.7% quarter on quarter (1.9% year on year), which was 0.2 pp more than expected. However, domestic price pressures in the economy continue to strengthen. Core inflation, which is monitored by the BoJ (and which excludes fresh food and energy), exceeded 4% for the first time in 42 years in April. The share of basket items whose prices grew is also record-high (84%). In his recent speech, BoJ Governor Kazuo Ueda mentioned the possibility of a structural change in pricing in the economy as a key risk to the central bank's forecast and a potential source of a monetary policy error. The behaviour of investors, whose purchases have pushed Japanese stock prices to the highest levels since 1990, is also indicating a change.



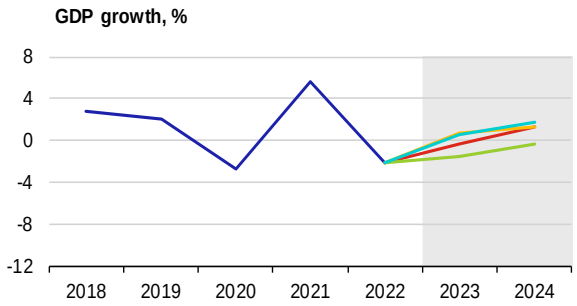
	CF	IMF	OECD	BoJ
2023	1.1	1.3	1.3	1.4
2024	1.0	1.0	1.1	1.2



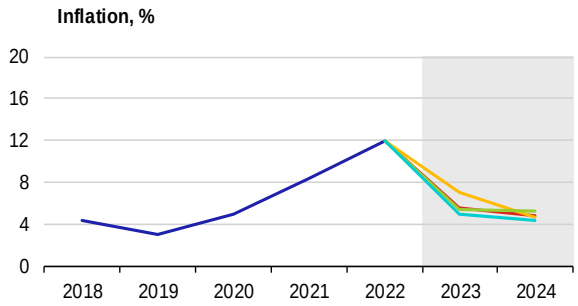
	CF	IMF	OECD	BoJ
2023	2.8	2.7	2.8	1.8
2024	1.5	2.2	2.0	2.0

II.7 Russia

A year-on-year decline in GDP is indicating a drop in economic activity. The Russian economy contracted by 1.8% year on year in 2023 Q1. An above-average drop was recorded by the mining industry, retail trade and activities in the area of information technology, for example. By contrast, construction, financial and insurance activities, hotels and catering providers performed well. The growth in these sectors was higher compared to the same quarter a year earlier. Inflation accelerated slightly (to 2.5%) in May, due mainly to prices of tourism-related services, whose growth was supported by a seasonal increase in demand. Even so, headline inflation remained low due to base effects. These effects will gradually fade away in the course of the year and inflation will probably reach its 4% target or even exceed it at the year-end. The Russian rouble continued to weaken gradually to around RUB 84/USD in June, due both to oil prices and restrictions caused by sanctions. The Russian central bank's monetary policy rate has been at 7.5% since September.



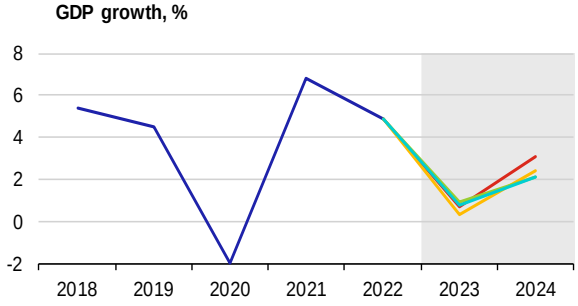
	CF	IMF	OECD	OE
2023	-0.3	0.7	-1.5	0.6
2024	1.3	1.3	-0.4	1.7



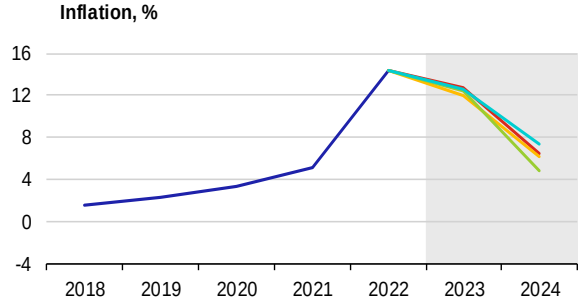
	CF	IMF	OECD	OE
2023	5.5	7.0	5.4	4.9
2024	4.8	4.6	5.2	4.3

II.8 Poland

Inflation was in line with market expectations in May, while GDP dropped less than predicted. Annual consumer price inflation slowed slightly again in May (to 13 %) and is thus at its lowest level in a year (a maximum of 18.4% in February). The GDP drop in Q1 was slightly lower than forecasted. This is probably also why analysts have revised their GDP outlooks for this year upwards. However, Poland is still grappling with the impacts of rising prices. The new data on industrial and manufacturing production indicate a bleak future for the Polish economy. Both indicators recorded a significant fall in April (of 6.4% and 5.6%) and the number of new orders is at its lowest since the pandemic. The composite PMI remains in the contraction band. These adverse developments are also being reflected in the business confidence index, which fell even further in May. Positive news is coming from the labour market, where unemployment dropped by 0.2 pp. New inflation outlooks agree on consumer price growth of around 15.5% this year.



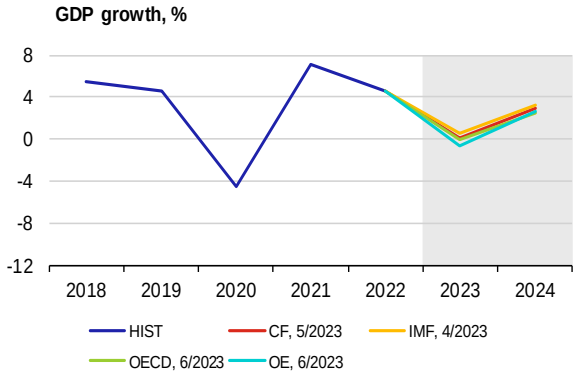
	CF	IMF	OECD	OE
2023	0.7	0.3	0.9	0.8
2024	3.1	2.4	2.1	2.1



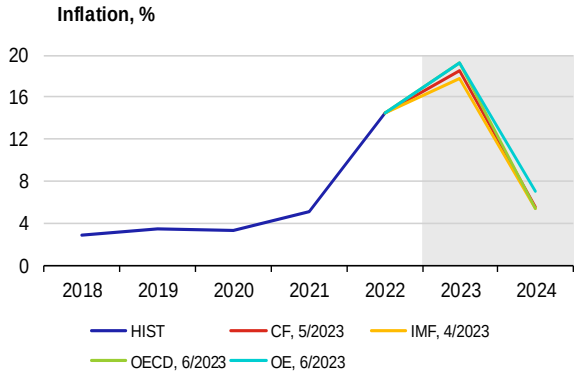
	CF	IMF	OECD	OE
2023	12.7	11.9	12.4	12.6
2024	6.4	6.1	4.8	7.4

II.9 Hungary

Annual inflation in Hungary has been falling gradually for four consecutive months. Despite the still high inflation (21.5%), the MNB continues to ease its monetary policy. Inflation surprised the markets again, with the first month-on-month decline recorded in May (of 0.4%). This enables the MNB to continue easing the tight monetary conditions cautiously. Last month, a technical reduction in the upper limit of the interest rate band to 19.5% was accompanied by a decrease in the overnight deposit rate by 100 basis points. This rate, which has kept the forint strong since last October, is now 17%. If the MNB maintains the current pace of rate decreases, the extraordinary rate could equal the base interest rate (13%) in early autumn. However, the outlook for Hungarian economic growth is not favourable. Analysts predict that the economy will remain flat this year. OE even predicts a modest recession.



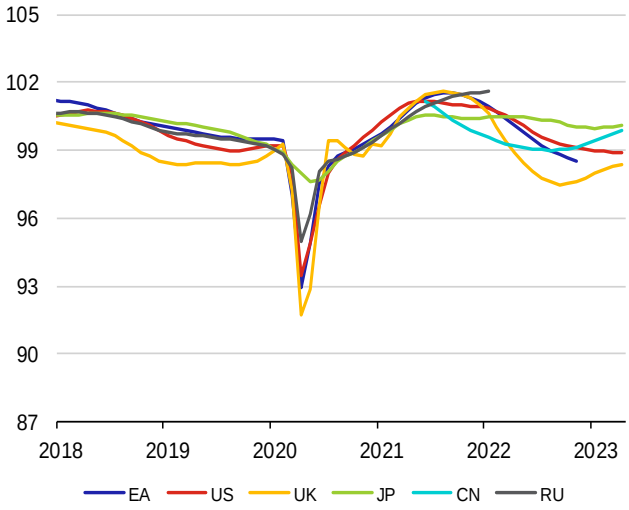
	CF	IMF	OECD	OE
2023	0.1	0.5	0.0	-0.7
2024	3.0	3.2	2.5	2.7



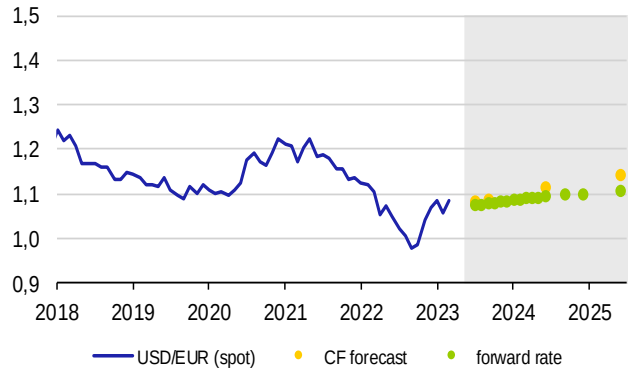
	CF	IMF	OECD	OE
2023	18.5	17.7	19.2	19.3
2024	5.5	5.4	5.4	7.0

III. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

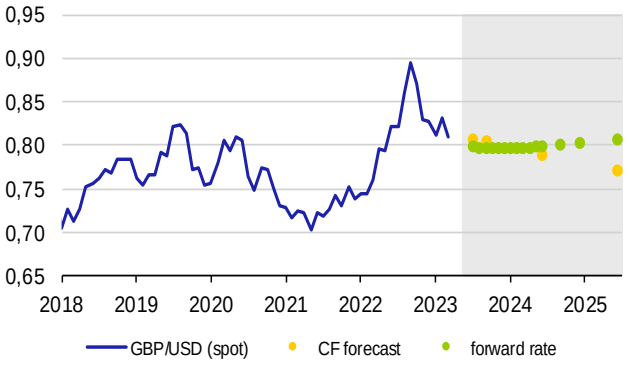


The US dollar (USD/EUR)



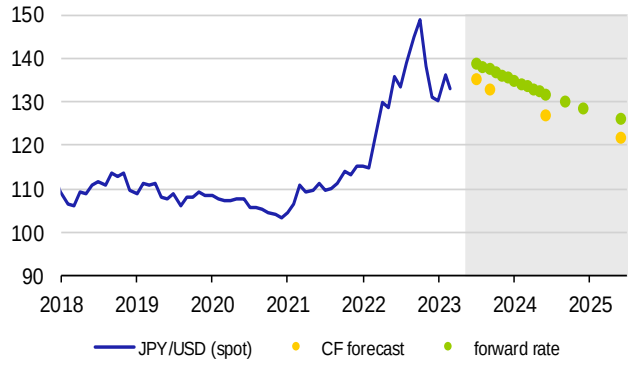
	12/6/23	7/23	9/23	6/24	6/25
spot rate	1.075				
CF forecast		1.084	1.091	1.118	1.145
forward rate		1.078	1.081	1.096	1.108

The British pound (GBP/USD)



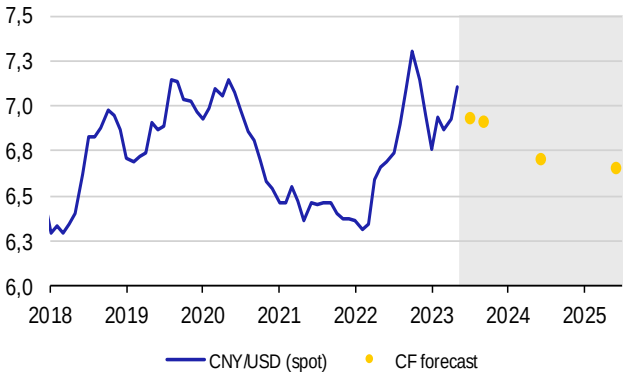
	12/6/23	7/23	9/23	6/24	6/25
spot rate	0.799				
CF forecast		0.807	0.805	0.790	0.772
forward rate		0.799	0.798	0.800	0.808

The Japanese yen (JPY/USD)



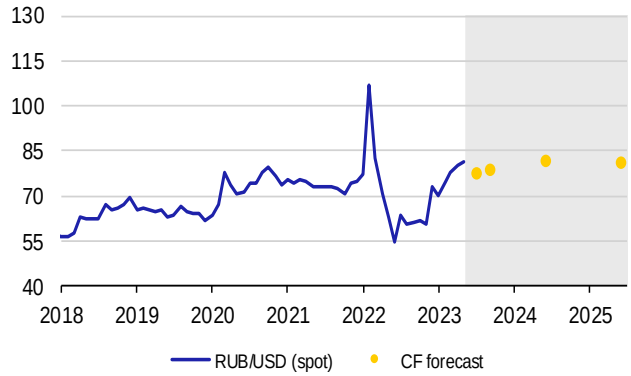
	12/6/23	7/23	9/23	6/24	6/25
spot rate	139.6				
CF forecast		135.2	133.2	127.1	121.8
forward rate		139.0	137.6	131.9	126.3

The Chinese renminbi (CNY/USD)



	12/6/23	7/23	9/23	6/24	6/25
spot rate	7.142				
CF forecast		6.941	6.917	6.713	6.656

The Russian rouble (RUB/USD)



	12/6/23	7/23	9/23	6/24	6/25
spot rate	83.33				
CF forecast		77.96	78.77	82.11	81.54

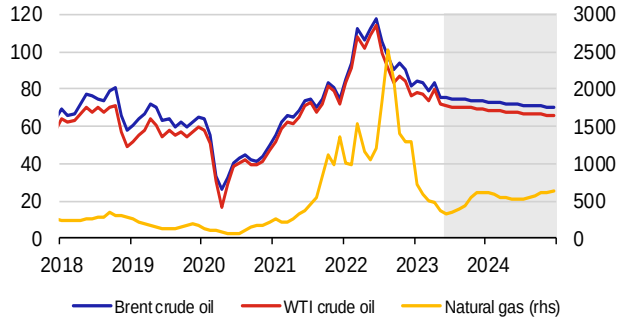
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

IV.1 Oil

The Brent oil price has been mostly in the narrow range of USD 74–77/bbl with no clear trend since early May. Market sentiment is still being adversely affected mainly by the uncertainty regarding future global economic developments. The economic recovery in China has so far been weaker than predicted after the lifting of the anti-epidemic measures, while monetary policy tightening in the USA and Europe is dampening economic growth in these regions. In response to a drop in oil prices (caused mainly by speculative sell-offs and problems in the US banking sector, later also the problematic talks about the US debt ceiling), OPEC+ first sharply cut its extraction quotas with effect from May until the end of 2023. It then extended this reduction until the end of 2024 at its June meeting. In addition, Saudi Arabia will unilaterally limit output in July by an additional 10% with an option to extend this measure into the coming months. However, these steps by OPEC+ are yet to generate the expected effect of more sustained price growth. Sea exports of oil from Russia remain strong despite sanctions and an announced drop in Russian oil extraction, while extraction in Libya and Iraq is also growing. Investors are thus waiting for tangible evidence of a recovery in physical demand. It could be aided, for example, by a drop in interest rates in China, the announced hike in Chinese oil import quotas and another stimulation package in support of the economy considered by the Chinese government. The growth in China's PMI in manufacturing into the expansion band in May could also be promising.

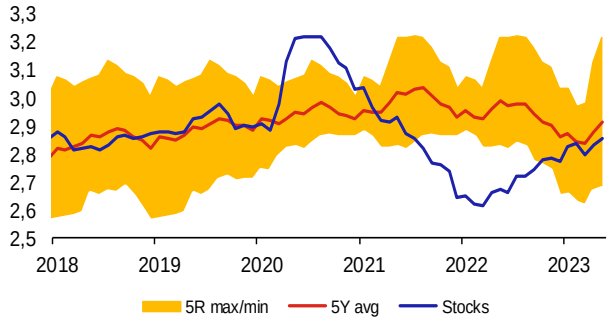
The market curve from mid-June is still falling and is signalling a Brent oil price of USD 73.3/bbl and USD 70.4/bbl at the end of this and next year respectively. By contrast, the EIA forecast, which has changed markedly in response to the recent steps by OPEC+, expects a steady moderate decline in global oil stocks. This will push the Brent price up – to USD 81/bbl and USD 85/bbl at the end of 2023 and 2024 respectively. The June CF predicts (in line with the EIA) a price of USD 81.8/bbl at the one-year horizon.

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

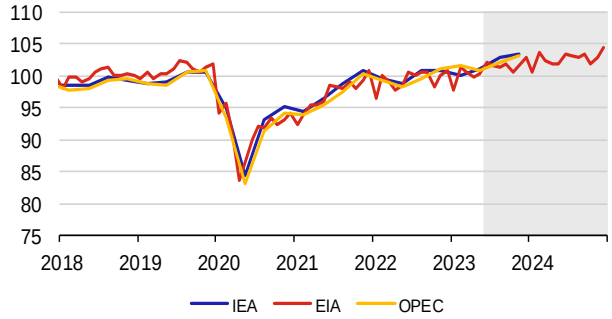


	Brent	WTI	Natural gas
2023	77.14	72.51	494.94
2024	71.62	67.31	572.71

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

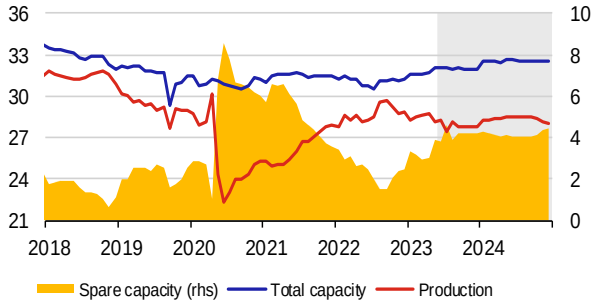


Global consumption of oil and oil products (mil. barrel / day)



	IEA	EIA	OPEC
2023	101.91	101.02	101.91
2024		102.72	

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



	Production	Total capacity	Spare capacity
2023	28.10	31.89	3.79
2024	28.38	32.53	4.16

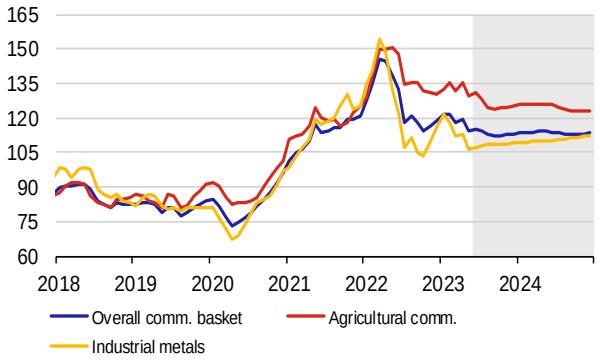
Source: Bloomberg, IEA, EIA, OPEC, CNB calculation
Note: Oil price at ICE, average natural gas price in Europe – World Bank data. Future oil and gas prices (grey area) are derived from futures. Industrial oil stocks in OECD countries – IEA estimate. Production and extraction capacity of OPEC – EIA estimate.

IV.2 Other commodities

The spot price of gas in Europe approached its two-year low of EUR 23/MWh at the end of May but then started to increase sharply. The outlook for next winter is rising. The price fell well below that in Asia and LNG supplies from the USA were thus partly redirected to Asia. The price growth was also driven by a temporary halt in supplies through the Turkstream pipeline to Turkey and the current production outages in Norway, which will unexpectedly continue into July. Europe expects the arrival of warmer weather, which will place greater demand on electricity consumption for air conditioning and hence higher output at gas power stations. In the medium term, however, the important news is that the Netherlands plans to halt production at its largest gas field this October due to the risk of earthquakes (the initial plan was to stop production no later than October 2024). As a result, the contract price for all of next year rose sharply from EUR 43/MWh to EUR 56/MWh in mid-June. The price of coal in Europe fell in May as strong demand from China observed in the previous month slackened.

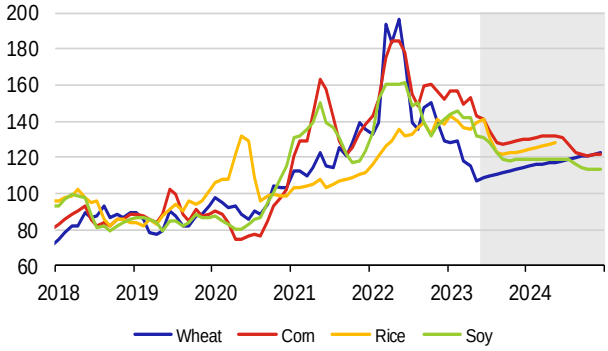
The non-energy commodity price index dropped sharply in May but corrected slightly upwards in the first half of June. The outlook for the overall index is flat. Within the base metals price sub-index, the prices of all its components decreased in May, partly due to persisting problems in the Chinese construction sector and growth in metal stocks on the LME. Demand for metals was also dampened by a strong dollar. However, this trend reversed in early June, when the Chinese PMI in manufacturing for May signalled a return of Chinese industry to growth. There were similar movements in the food commodity price sub-index, although some prices in the index started to grow as early as the second half of May. The price of sugar declined only slightly from a more than a ten-year high. The price of beef reached another all-time high in June. Looking ahead, the expected drop in the food commodity price sub-index will be offset by growth in the base metals price index.

Non-energy commodities price indicies



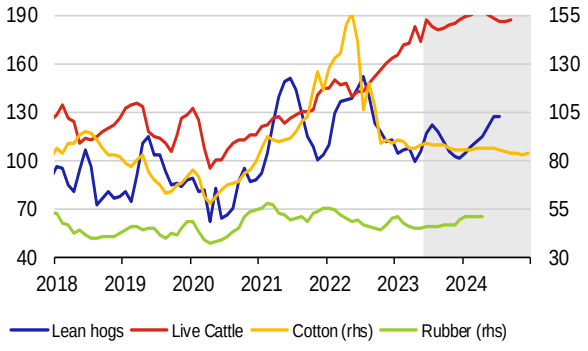
	Overall	Agricultural	Industrial
2023	115.6	129.0	110.8
2024	113.5	124.7	110.6

Food commodities



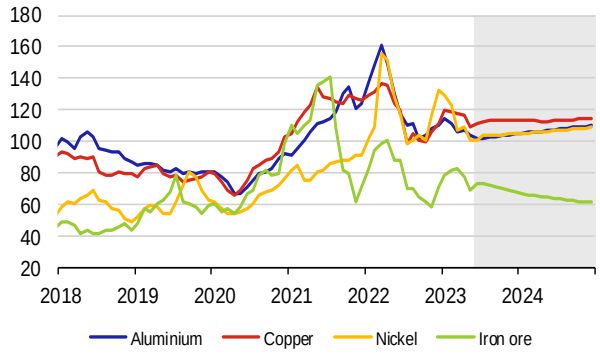
	Wheat	Corn	Rice	Soy
2023	114.9	139.6	131.6	130.2
2024	118.7	127.0	126.1	117.0

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2023	108.3	179.4	87.5	46.6
2024	116.1	189.2	84.8	50.9

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2023	105.7	114.5	108.1	74.1
2024	107.9	113.6	107.1	64.2

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.

Cross-border payments at a crossroads between SWIFT and DLT[1]

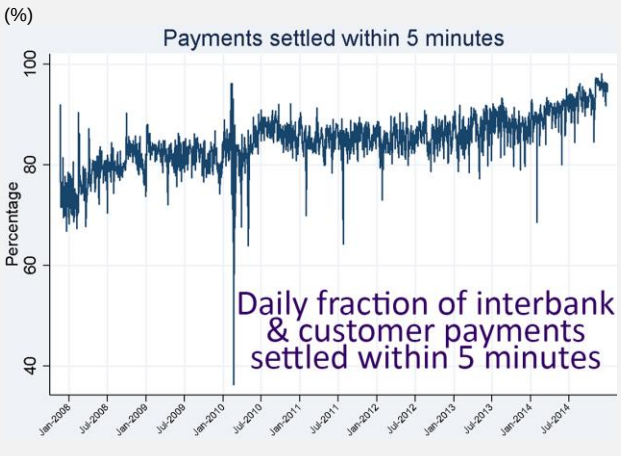
Decentralized ledger technologies (DLT) made popular by bitcoin and other crypto assets did not create new moneys. One of the things they did create was an alternative channel of cross-border value transfers independent of correspondent banks. In response, banks engaged in international payments started to experiment with blockchains themselves. In this article, I review the current cross-border payment landscape from the point of view of DLT adoption and try to assess the potential of current and emerging solutions.

Introduction

The economic importance of cross-border payments is growing steadily hand in hand with the increasing international mobility of goods, services, capital and people. Factors such as expanding GVC, international trade and e-commerce, cross-border asset management and global investment flows are behind this growth, as are international remittances sent by migrants. Remittances in particular play a vital role in low and middle-income economies and in some cases make up an indispensable source of development finance.

Whereas in recent years domestic payments have improved in terms of speed, safety, transparency and cost-efficiency, with many more initiatives on the way, cross-border payments are generally considered lagging behind domestic ones in each of these respects. In some instances, a cross-border payment can take several days and cost up to 10 times more than a domestic payment. Accordingly, demand for cross-border payment services that are as efficient and safe as domestic ones is increasing steadily. Bank transfers and card payments have been the most widespread methods of transferring funds across borders for dozens of years. In recent years, mobile payments have started to compete with these two methods (M-PESA in East Africa is a good example), with their providers promising customers higher speed and lower cost of delivery. These properties are in especially high demand in those parts of the world in which the speed of innovation of traditional cross-border payment technologies is lowest.

Chart 1 – Growth in the number of fast transactions in TARGET2, 2008-14



Source: Craig et al. (2018)
Note: Daily fraction of interbank & customer payments settled within 5 minutes.

Cross-border payments are by definition more complex than purely domestic ones, since national payment systems are operated by sovereign monetary authorities. Transfers of funds between two jurisdictions can take place because international banks provide accounts for, and have their own accounts with, foreign counterparts. A foreign currency payment is executed when an account in one currency is credited in one jurisdiction and another account in another currency is debited with the corresponding amount in another jurisdiction. When the payer's and payee's banks do not have a direct relationship, they need to engage a "correspondent" bank to act as an intermediary. The latter provides accounts for both banks. Other payment providers such as money transfer agents and fintechs also use this interbank network as an intermediary in the provision of payment services to businesses and individuals. This correspondent banking model is both an essential component of the traditional global payment system and, at the same time, the host of most existing frictions. The latter refers to multiple intermediaries, time zones, jurisdictions and regulations. Given that rules regarding capital flow management and/or controls, requests for documentation, balance of payments reporting, and other compliance procedures differ from country to country, significant payment delays are a fact of life, especially in EMDE. Other frictions accompanying cross-border payments include fragmented and truncated data formats, different operating hours, high funding costs (including "trapped liquidity", particularly in cases of large time-zone differences), legacy technology platforms, long transaction chains and weak competition.

Challenges to the established payment landscape

At the beginning of the millennium, there was essentially no alternative to the correspondent banking model for international transactions. The global correspondent bank network comprised the major multinational bank (MNB) groups. These MNB wielded overwhelming market power, which is why using their services was quite expensive. In addition, there was very little sign of technological progress, especially in terms of speed (see Chart 1). Founded in 1973, the Society of

[1] Autor: Alexis Derviz. The views expressed in this article are those of the author and do not necessarily reflect the official position of the Czech National Bank. All errors and omissions are the author's responsibility.

Worldwide Interbank Financial Telecommunication (SWIFT) operates the largest existing inter-bank messaging service and has hence been the backbone of the correspondent banking model ever since. Smaller networks with a specific scope (CHIPS, CIPS, SPFS and others) have adopted the same messaging format as SWIFT (including the incoming ISO 20022), as well as other attributes. On the other hand, remittances, particularly involving EMDE clients, were often in the hands of non-bank intermediaries, which were insufficiently regulated and, at times, had even lower transparency of operations than correspondent banks. The fees were also high and volatile.

Crypto assets have been gaining ground globally since 2010. As opposed to the original proclamations, they did not signify the emergence of decentralized money, but did – at least on the fringe – provide an alternative to correspondent banking in the retail payments domain. In principle, every functional cryptocurrency can act as a cross-border remittance vehicle. It is enough to buy crypto for fiat at the payer's end, transfer it and let the payee conduct the back-conversion on the receiving end. The crypto leg of such a transaction in many networks takes just seconds to complete and is relatively cheap. Naturally, moving cross-border payments "on-chain" is much easier said than done, given that the associated technical demands, access costs and user risks for the parties involved are not insignificant. Although there are banks willing to take over those risks on behalf of their clients, there are far-reaching compliance implications for legitimate intermediaries, which implies additional fee components for users. However, the main obstacle to a full-scale crypto disruption of the cross-border payment landscape, besides security and regulatory concerns, has been price volatility.

The response to prohibitive crypto price fluctuations was the creation of stablecoins, advertised as a solution to the volatility risk on the user side. In truth, the risk was simply shifted to the stablecoin issuer, relegating it to a more opaque environment of coin operators and creating an additional source of risk tied to credibility, not very different from traditional commercial banking (Hertig, 2023; Derviz, 2020).

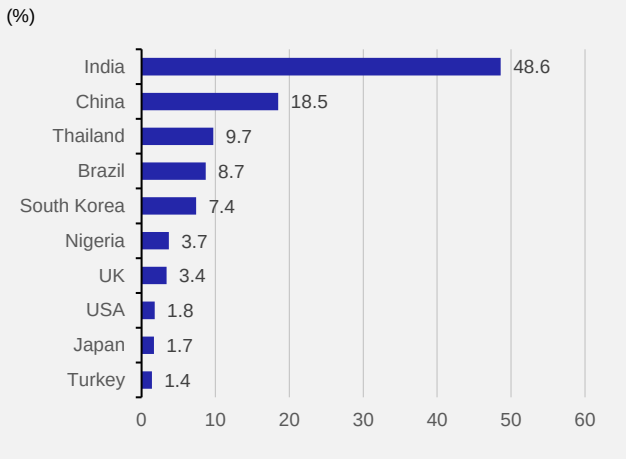
The Libra announcement in 2019 suggested – at least from the two billion-strong FB-user perspective – a resolution of the stablecoin credibility issue. The joint strength of the original Libra Association membership created a vision of an institution with virtually unlimited resources behind the envisaged payment instrument. Holders of Libra wallets, it seemed, would no longer experience any of the traditional barriers to international value transfers (compliance, credibility, security, excessive exchange rate fluctuations) as long as they stayed in the network. However, Libra's business concept was fuzzy from the outset and did not become much clearer in the years to follow or under Diem, its new name, either. The eventual abandonment of the project came as no surprise to anybody with an idea about the fundamental differences between BigTech and Big Finance (Financial Times, 2022). The principal consequence of the initiative was, as is often the case, unintended.

After the Libra announcement, major central banks, governments and international standard-setting bodies became seriously concerned about the erosion of their powers. ("Monetary policy implementation issues" were officially cited.) The threat looked a lot more real and present when coming from a stablecoin potentially used by 1.6 billion active Facebook account holders than from bitcoin and other crypto toys intended for a relatively narrow circle of true believers. The response came in the form of a rekindling of various hitherto slumbering CBDC (Central Bank Digital Currency) projects. Although the prime reason for CBDCs was to defend monetary sovereignty in the new world of private digital assets, the facilitation of payments, both domestic and cross-border, was listed among the official priorities.

Frictions and remedies

Although the aforementioned frictions are ubiquitous in the cross-border payments domain, several of them, such as those related to technology, the length of the intermediary chains, and the oligopolistic market structure, are perceived as particularly severe in the remittance segment. This explains the differences in perspective of developed and EMDE countries with regard to priority areas that require improvement: EMDE countries would benefit the most if access to remittances becomes cheaper and easier. This is why these countries are most eager to embrace any technology that promises instant payments (see Chart 2). This is also the reason why the typical blockchain-developing (Ripple, Stellar) and other fintech enterprises that are waging inroads into the cross-border remittance domain (MobiFin, Flywire, Remitly, Wise) are primarily targeting clients in EMDE.

Chart 2 – Adoption of fast payments in selected countries (number of transactions)



Source: ACI Worldwide
Note: Top 10 countries, ranked by real-time payments transactions, 2021

The EMDE perspective has made a distinct imprint on the ongoing inter-government efforts to improve cross-border payments. In 2020, the G20 declared improving cross-border payments a priority. Its justification was that it clearly reflects the remittance tribulations of the developing

world. The Financial Stability Board (FSB), in conjunction with the Committee on Payments and Market Infrastructures (CPMI) and other standard-setting bodies, were asked to co-ordinate a cross-border payments enhancement programme (FSB, 2022). The programme was divided into three stages: Assessment, Building Blocks and Roadmap. There are currently 19 "building blocks", as defined by CPMI. These were grouped into five focus areas: (i) commiting to a joint public and private sector vision to enhance cross-border payments (ii) coordinating regulatory, supervisory and oversight frameworks (iii) improving existing payment infrastructures and arrangements to support the requirements of the cross-border payments market (iv) increasing data quality and straight-through processing by enhancing data and market practices, and (v) exploring the potential role of new payment infrastructures and arrangements.

In the meantime, pressure from decentralised networks have had a visible effect on SWIFT, the superstructure which once enjoyed undivided dominance in the international payments domain. The company's response to the demands of faster user-friendly payment improvements was the widely publicised SWIFT gpi (Global Payments Innovation), launched in 2017 and currently linking over 4,200 banks in more than 150 countries[2]. Its recent acceleration, which could reportedly have been carried out a long time ago but was not recognised as a priority until the fintech (and DLT) incursion into the international payment business began, has so far been the most apparent effect of blockchain proliferation on international payments. In general, for various reasons, SWIFT is not always a front-runner in terms of implementing innovative standards. Notably, the ISO 20022 messaging standard for cross-border payments, which is currently being implemented worldwide, was adopted ahead of SWIFT by smaller services, such as CIPS in China.

Importantly, in its effort to make cross-border payments faster and less expensive, SWIFT gpi does not rely on DLT. Instead, it uses cloud-based tools to improve the existing processing and messaging infrastructure. Crucially, it is upgrading its messaging service to enable real time start-to-end transaction tracking by participating parties, making the time lags and other obstacles in the payment process clearly attributable to a particular participant. Since then, it has been reported that the typical cross-border remittance time required by some banks handling this business in EMDE has miraculously shortened from several days to several hours, in many cases to less than an hour. However, whereas SWIFT gpi has reduced the already decent transfer times in advanced countries to a new minimum of several minutes, same-day transactions are still a problem in many EMDEs. It turns out the main delay factors are on the receiving end, i.e. the payee's bank: both external (compliance requirements, especially in the case of substantial capital controls) and internal (the bank's own operational frictions) that no amount of technical upgrade seems able to eliminate (BIS, 2022a).

SWIFT is also adapting to the possibility of a mass DLT incursion in other ways, even though it has not yet proceeded beyond the proof-of-concept phase. For example, it has launched a trial to interlink domestic CBDCs to enable cross-border payments in them. Again, its approach is to transform rather than disrupt, insofar as it intends to offer CBDC-issuers the possibility of sending messages rather than money. On the contrary, blockchain payments advertise the integration of the message with the movement of value, as well as the ability to execute atomic transactions.

In recent years, many central banks have sought to establish cross-border interoperability in the course of their CBDC experiments. CBDCs base their aspiration to ease cross-border payments on the ability to solve the intermediary problem inherent in the correspondent banking model. However, the solution (the multiple-CBDC or mCBDC construction) will require interlinking CBDC systems, which implies common international standards, harmonised clearing mechanisms and, eventually, a common technical interface and a single multilateral payment platform, possibly with a special unit of account (and a native asset representing it). No matter how enticing the vision of associated benefits may be, achieving such interoperability is a highly ambitious enterprise because of different regulatory frameworks across jurisdictions.

More generally, many central bankers experimenting with CBDCs give the impression that they are living under the illusion that the rules of access and use they eventually decide upon will be obeyed by the public without objections. The rules themselves, though, particularly those concerning access by non-residents, conversion and the relationship to the existing forex, have not been made clear yet (BIS, 2021, 2022b). There is even less clarity in the area of legal and regulatory CBDC integration across jurisdictions (Zetsche et al. 2022). In short, an end-user is currently faced with the dual perspective of easy (albeit risky and legally unprotected) access to multiple permissionless blockchains allowing for global value transfers without checks or limits, and the uncertain outlook of a CBDC-based permissioned DLT with a solid degree of legal certainty, although associated with numerous jumps through bureaucratic hoops held up by domestic monetary and regulatory authorities. Even a tentative form of these jumps remains difficult to predict at the current juncture. If supervised access to mCBDC proves to be less digestible than the free wilderness of permissionless DLT, the whole vision of internationally integrated retail CBDCs may hit a wall of disinterest at the same time as more and more retail customers, dissatisfied with legacy international payment models, migrate to private crypto solutions. As can be expected, the projects involving cross-border interoperability of wholesale CBDCs, i.e. the option which is only indirectly significant to remittance facilitation, are momentarily the closest to operational mCBDC pilots. Regulated financial institutions are much more easily "convinced" to participate in such pilots than private individuals.

[2] See https://currencywave.com/what-is-swift-gpi/ ,or https://www.swift.com/our-solutions/swift-gpi/about-swift-gpi/join-payment-innovation-leaders and https://www.bis.org/cpmi/publ/swift_gpi.pdf

Concurrently, efforts to improve cross-border payments have been developed in the private sector. Examples of corporate DLT payment initiatives include RippleNet, Stellar, Partior, Fnality, etc. The latter two are examples of solutions by bank consortiums employing permissionless blockchains either fully or at least partially. The motivation of the banks is different to that of the official sector and the retail segment: faced with the ongoing encroachment of DLT in the payments domain, they need to be prepared for a period of uncertain duration when multiple technologies, institutions and standards will compete for market dominance, and familiarise themselves with coming alternatives in advance.

Partior is, by its own definition, a "blockchain-powered platform for value exchange", that is, an interbank DLT-based network. It supports multi-currency payments starting with the US dollar and Singapore dollar, with six more currencies (GBP, EUR, AUD, JPY, CNH and HKD) currently onboarding. It was launched in 2021 by JP Morgan, DBS Bank, and Temasek (Ledgerinsights, 2022). While Partior is a wholesale network, it also welcomes entrants that add retail payment applications on top. Payments are in commercial bank money (M1). In the future, Partior intends also to support central bank money (M0), giving M0 a clearing function across settlement banks, whereas M1 is given a clearing function within the commercial bank ecosystem.

Partior's inception is actually related to an mCBDC experiment: Project Ubin run by the Monetary Authority of Singapore and the Bank of Canada. It is currently involved in Project Dunbar, the mCBDC project with the central banks of Singapore, Malaysia, Australia and South Africa and the BIS Innovation Hub. Partior may also participate in another BIS Innovation Hub initiative, Project Meridian, which aims to synchronise RTGS infrastructures with digital asset ledgers and payment systems in various currencies. So, the potential of central banks to have nodes on Partior clearly exists.

Partior positions itself as a network rather than a payment or settlement system. It cannot itself initiate a transaction, move, store money, or create finality, and it does not collect any data. Banks have nodes on the network to make payments, implying they bear responsibility for themselves. Accordingly, Partior does not need a central bank approval, which enables it to expand quickly. The participant banks own the smart contracts, have control over their deployment, initiate payments and determine finality. Still, commercial banks may need to get the green light from their regulator to use the network.

Fnality, formerly known as the Utility Settlement Coin, is the interbank payment and settlement platform that uses blockchain technology and is now backed by 17 major financial institutions. Whereas Partior works with commercial bank money transfers, Fnality payments are all backed by central bank money, making its token a synthetic CBDC. This significantly reduces counterparty risk. Fnality tokenises money deposited at a central bank to enable the settlement of DLT-based transactions with on-chain digital currency. The planned fiat currencies to be involved are the British Pound, euro, US dollar, Japanese yen and Canadian dollar. The Fnality investors from the financial sector are Banco Santander, Bank of New York Mellon, Barclays, CIBC, Commerzbank, Credit Suisse, Euroclear, ING, KBC Group, Lloyds Banking Group, Mizuho, MUFG Group, Nasdaq, Nomura, SMBC, State Street and UBS. Although already designated a systemic payment system by the UK Treasury, its launch was delayed in September 2022 by nine months due to an ongoing probe by the Bank of England.

Conclusion: DLT as a catalyst, not a wrecking ball

Blockchains were invented as a technology for trustless value exchange, and hence they are usually demanded in cross-border payments when confidence-building prior to actual trade is complicated or impractical. This means above all new products, new markets and immature or compromised institutions. Therefore, it should not be a surprise if remittance solutions on permissionless blockchains remain a much sought-after alternative in jurisdictions where pressure on institutional quality improvement has not so far borne the desired fruit. Characteristic of this state of affairs, Ripple is already a household name on the Indian subcontinent, while still being a fairly unknown entity outside expert circles in the West.

At the same time, DLT payment initiatives have neither destroyed nor replaced the correspondent banking model of cross-border payments between well-established counterparties in a legally stable environment. They do, however, exercise pressure on incumbent players and legacy technologies to seek faster avenues of improvement. As a side effect, they may incite the creation of some really widespread and popular global stablecoins acting as units of account in partial interbank decentralised payment networks, until one (or a few) dominant technology(ies) force the rest to adapt to a universal standard. Nevertheless, none of this is a real threat to the monetary sovereignty of nations or the regulatory powers of central banks, since any international payment system, regardless of technology, needs capital and liquidity coming from fiat moneys and their issuers.

Adding CBDCs to the mix of payment opportunities is not essential, even though this can, under certain circumstances, facilitate policy implementation (as, for example, in sanctions enforcement). On the home front, CBDCs remain "a solution in search of a problem" (Waller, 2021). But, if they are mainly useful for international transactions, their potential depends crucially on the central banks' ability to drastically expand monetary bases. The existing multi-CBDC initiatives offer settlement in M0 (after all, CBDCs are themselves M0). A good example is mBridge (BIS, 2022b). Scaling up such systems in line with private sector demand is difficult, not just technically, but also in terms of accommodating independent monetary policy and the macroprudential objectives of participating jurisdictions. Central

banks would have to accept a higher degree of monetary policy coordination than they were used to. Another potentially explosive issue, i.e. that of pending FX trade implications, has not been seriously addressed at all thus far. For instance, an mCBDC native asset would offer a new category of triangle arbitrage trades on formerly unavailable media to a wide range of participants with likely consequences in the form of large liquidity swings across market segments, in extreme cases, even a dry-up of trade in certain fiat currencies (Benigno et al., 2022).

At present, payment solutions based on interoperable CBDCs look like a fairly expensive safeguard designed for exceptional circumstances. That is, even in the hypothetical case where the whole M0 were tokenised and transformed into CBDC, only a fraction of international transactions could be serviced. For instance, the current daily transaction volume handled by SWIFT alone is sometimes claimed to be around USD 15 trillion, i.e. more than the monetary bases of the USA, the euro area and China combined. Regardless of the reliability of these estimates, it is unlikely that any multi-CBDC could aspire to service the overall demand for cross-border transactions without a far-reaching change in the balance sheet composition and, more importantly, the scope of the activities of the central banks involved. An economic rationale for such a change has not been offered so far. In practice, cross-border payments will always need M1 and transnational commercial bank networking. Here, DLT can incite transformation, but not necessarily become the dominant element, since, as history shows, high-trust institutions are usually cheaper and more efficient.

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Keywords

DLT, blockchain, cross-border payments

JEL Classification

E58, F31, F41

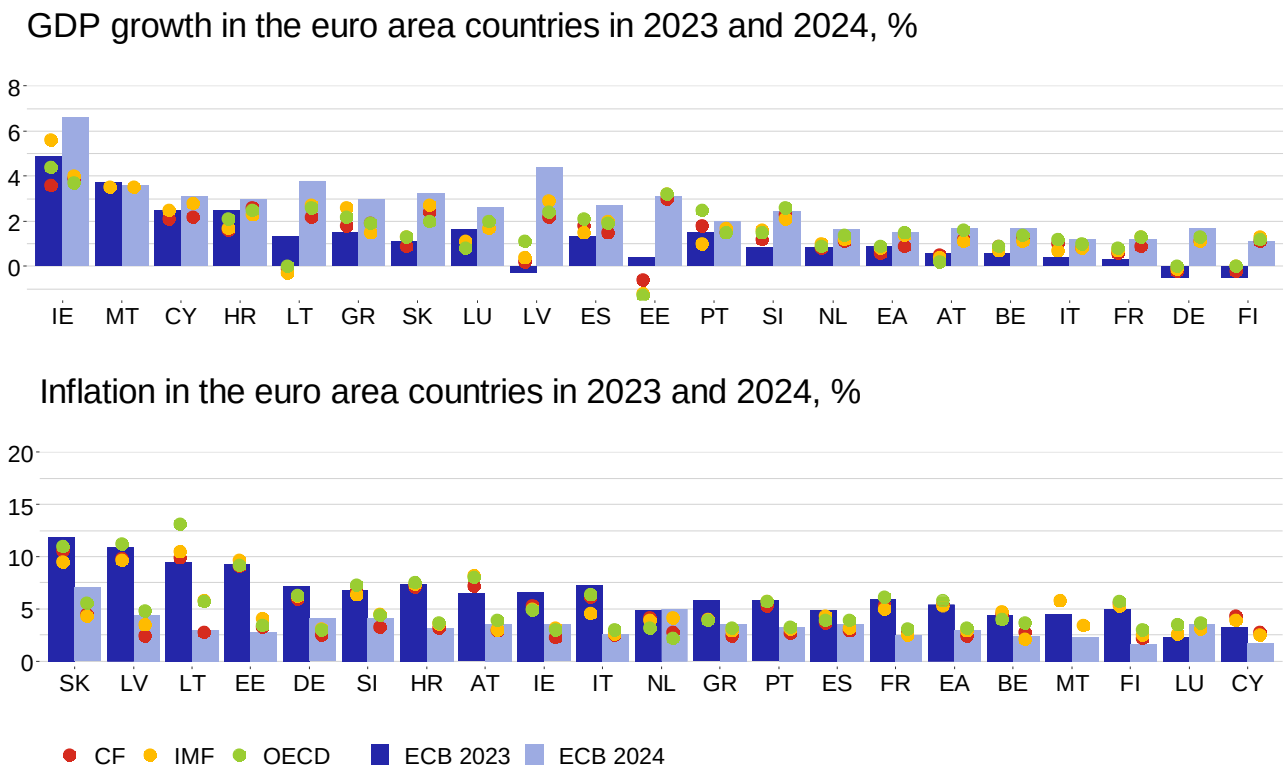
A1. Change in predictions for 2023

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

A2. Change in predictions for 2024

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

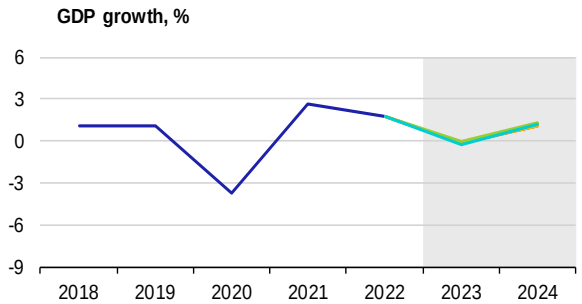
A3. GDP growth and inflation outlooks in the euro area countries



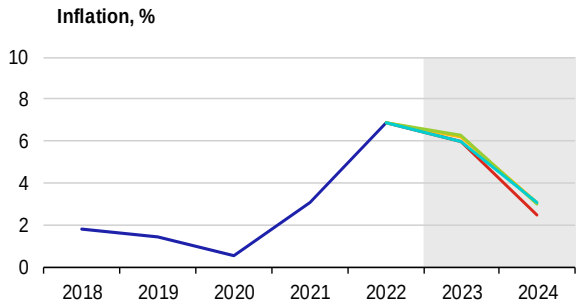
Note: Charts show institutions' latest available outlooks of for the given country.

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

Germany

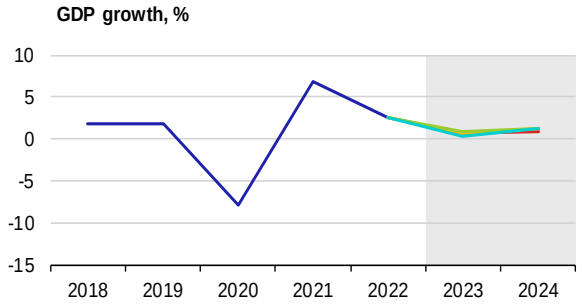


	CF	IMF	OECD	DBB
2023	-0.2	-0.1	0.0	-0.3
2024	1.1	1.1	1.3	1.2

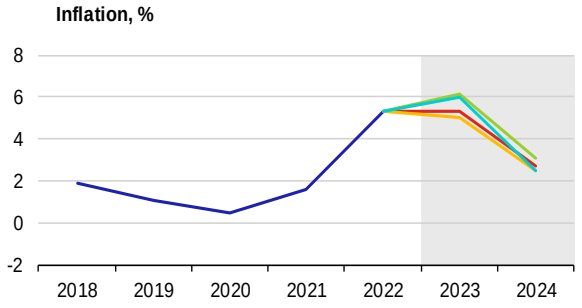


	CF	IMF	OECD	DBB
2023	6.0	6.2	6.3	6.0
2024	2.5	3.1	3.0	3.1

France

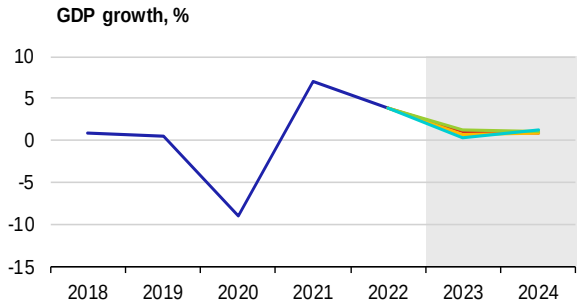


	CF	IMF	OECD	ECB
2023	0.6	0.7	0.8	0.3
2024	0.9	1.3	1.3	1.2

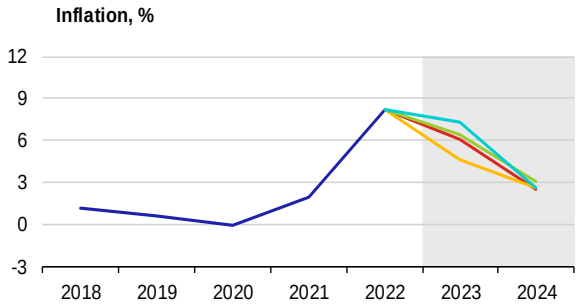


	CF	IMF	OECD	ECB
2023	5.3	5.0	6.1	6.0
2024	2.7	2.5	3.1	2.5

Italy

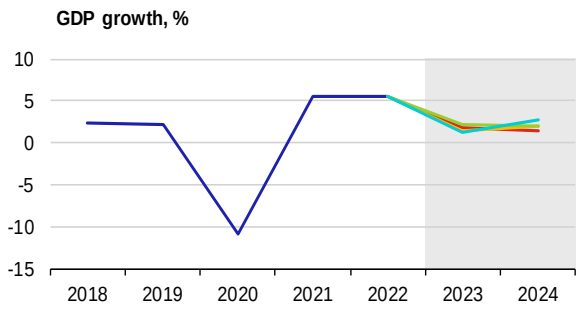


	CF	IMF	OECD	ECB
2023	1.0	0.7	1.2	0.4
2024	0.8	0.8	1.0	1.2

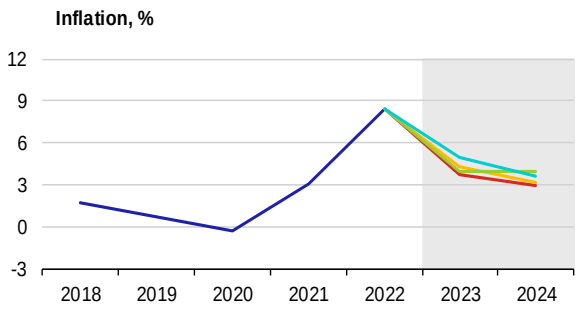


	CF	IMF	OECD	ECB
2023	6.1	4.6	6.4	7.3
2024	2.5	2.6	3.0	2.6

Spain



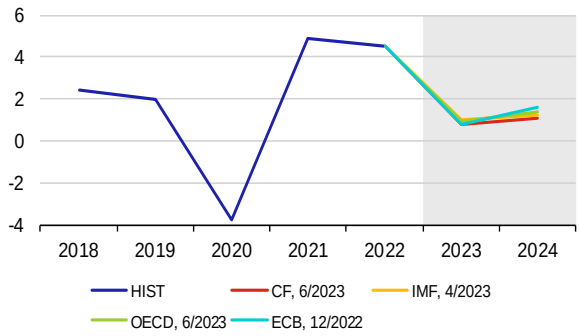
	CF	IMF	OECD	ECB
2023	1.8	1.5	2.1	1.3
2024	1.5	2.0	1.9	2.7



	CF	IMF	OECD	ECB
2023	3.7	4.3	3.9	4.9
2024	2.9	3.2	3.9	3.6

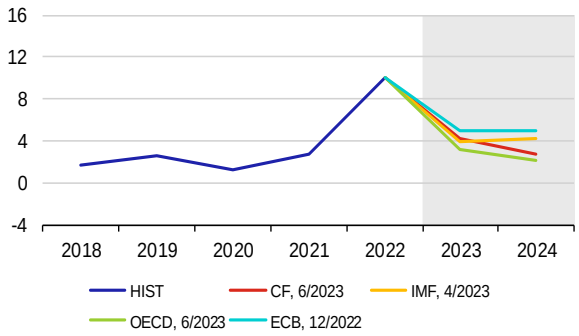
Netherlands

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.8	1.0	0.9	0.8
2024	1.1	1.2	1.4	1.6

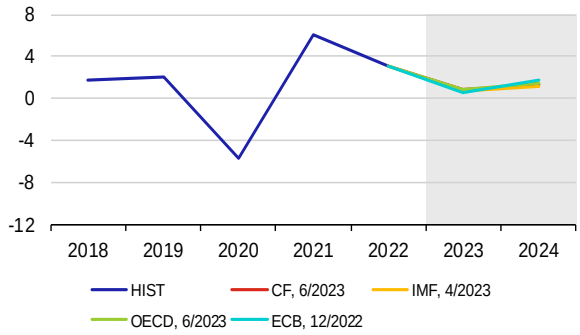
Inflation, %



	CF	IMF	OECD	ECB
2023	4.2	3.9	3.2	4.9
2024	2.8	4.2	2.2	5.0

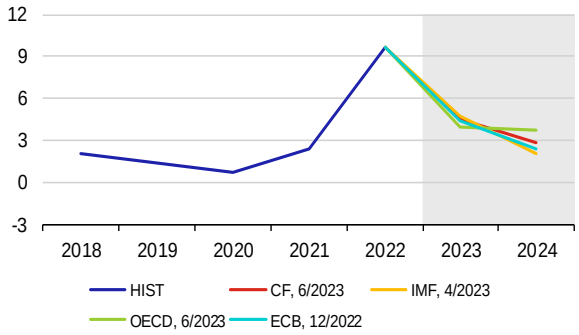
Belgium

GDP growth, %



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

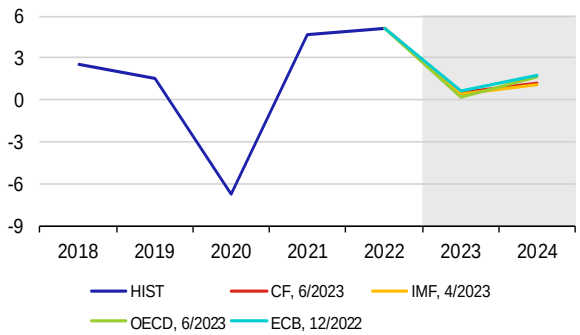
Inflation, %



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

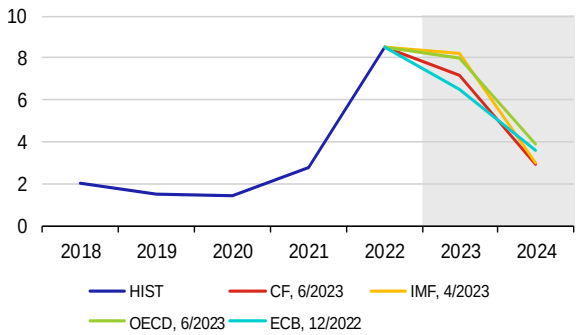
Austria

GDP growth, %



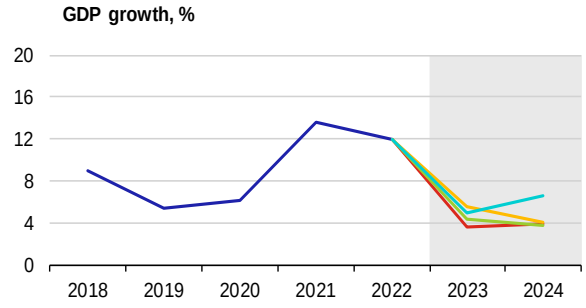
	CF	IMF	OECD	ECB
2023	0.5	0.4	0.2	0.6
2024	1.2	1.1	1.6	1.7

Inflation, %

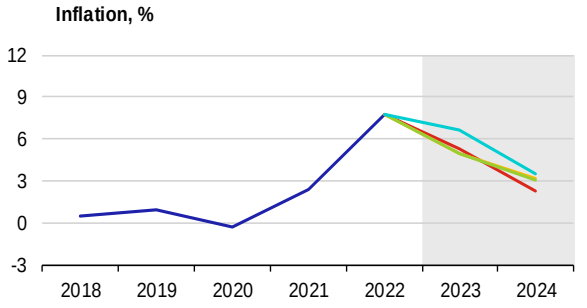


	CF	IMF	OECD	ECB
2023	7.2	8.2	8.0	6.5
2024	2.9	3.0	3.9	3.6

Ireland

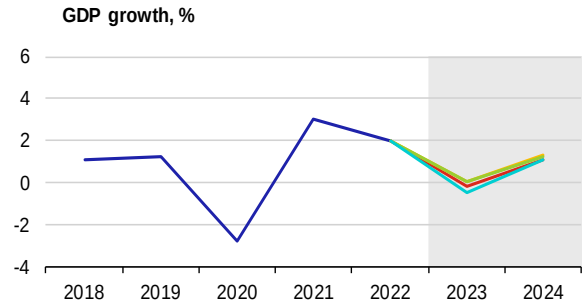


	CF	IMF	OECD	ECB
2023	3.6	5.6	4.4	4.9
2024	3.9	4.0	3.7	6.6

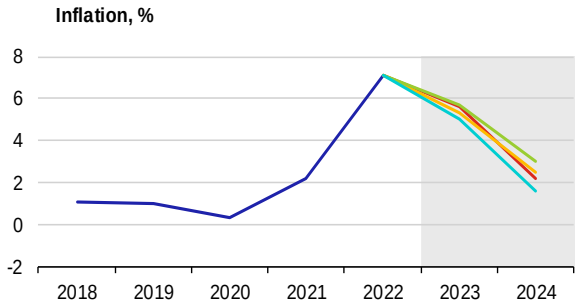


	CF	IMF	OECD	ECB
2023	5.3	5.0	4.9	6.6
2024	2.3	3.2	3.0	3.5

Finland

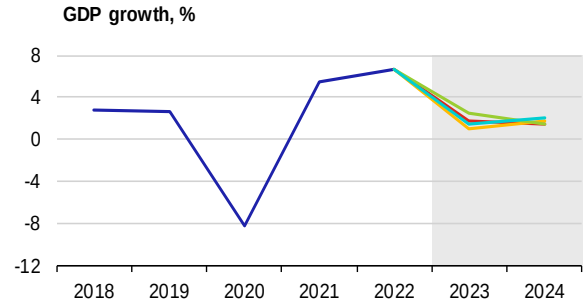


	CF	IMF	OECD	ECB
2023	-0.2	0.0	0.0	-0.5
2024	1.1	1.3	1.2	1.1

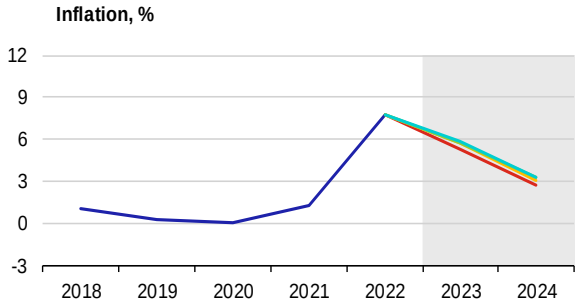


	CF	IMF	OECD	ECB
2023	5.6	5.3	5.7	5.0
2024	2.2	2.5	3.0	1.6

Portugal



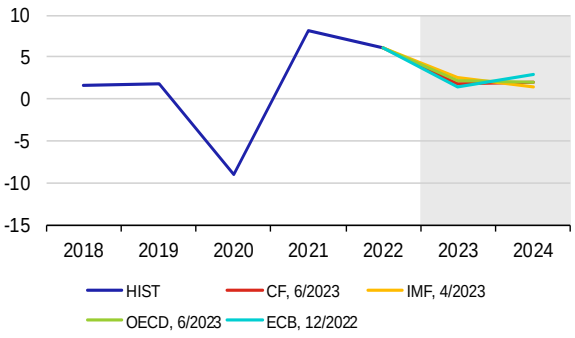
	CF	IMF	OECD	ECB
2023	1.8	1.0	2.5	1.5
2024	1.5	1.7	1.5	2.0



	CF	IMF	OECD	ECB
2023	5.3	5.7	5.7	5.8
2024	2.7	3.1	3.3	3.3

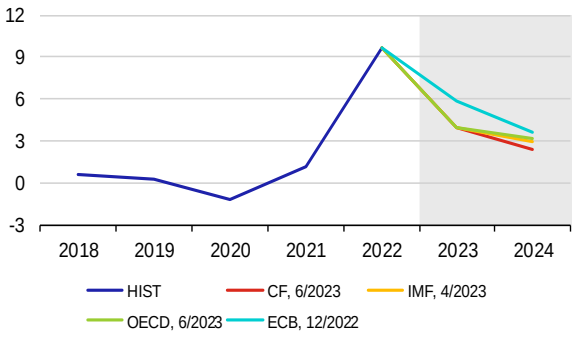
Greece

GDP growth, %



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

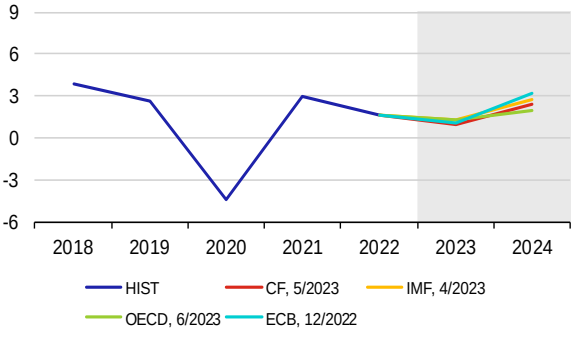
Inflation, %



	CF	IMF	OECD	ECB
2023	4.0	4.0	3.9	5.8
2024	2.4	2.9	3.2	3.6

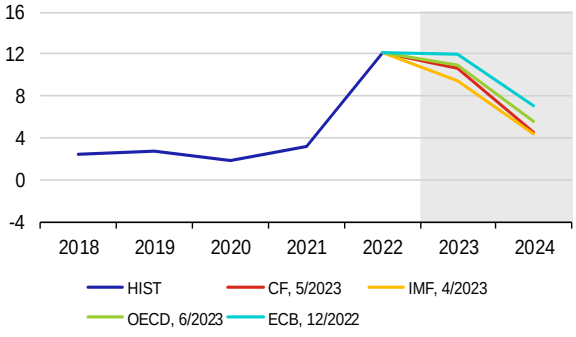
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.9	1.3	1.3	1.1
2024	2.4	2.7	2.0	3.2

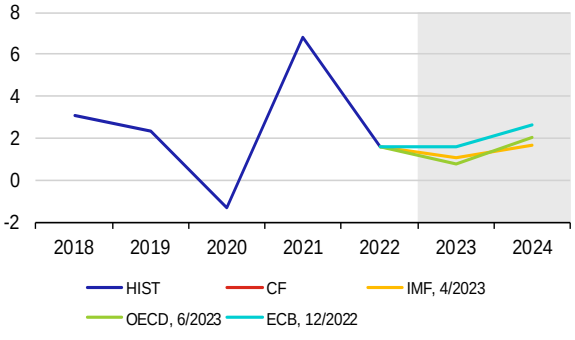
Inflation, %



	CF	IMF	OECD	ECB
2023	10.6	9.5	11.0	11.9
2024	4.5	4.3	5.6	7.0

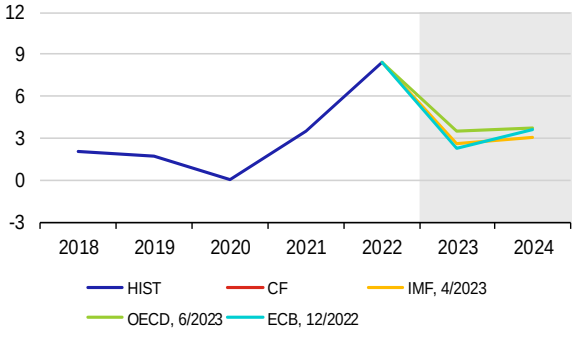
Luxembourg

GDP growth, %



	CF	IMF	OECD	ECB
2023	n. a.	1.1	0.8	1.6
2024	n. a.	1.7	2.0	2.6

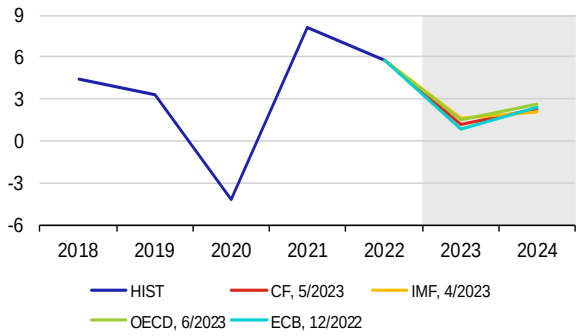
Inflation, %



	CF	IMF	OECD	ECB
2023	n. a.	2.6	3.5	2.3
2024	n. a.	3.1	3.7	3.6

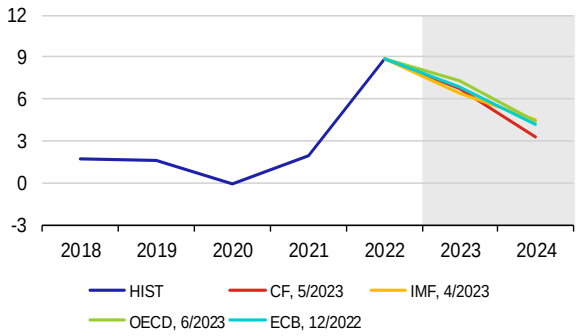
Slovenia

GDP growth, %



	CF	IMF	OECD	ECB
2023	1.2	1.6	1.5	0.8
2024	2.3	2.1	2.6	2.4

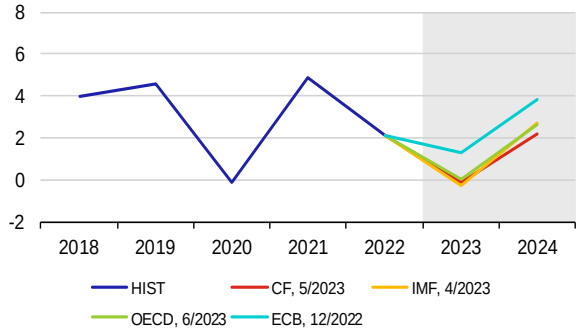
Inflation, %



	CF	IMF	OECD	ECB
2023	6.7	6.4	7.3	6.8
2024	3.3	4.5	4.4	4.2

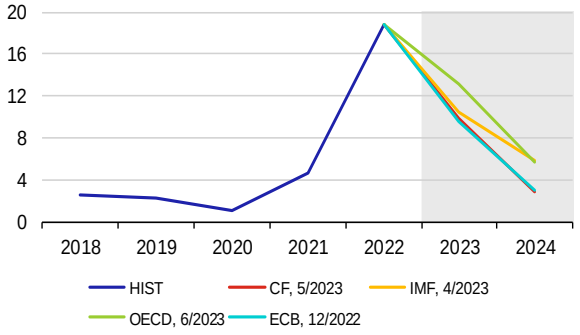
Lithuania

GDP growth, %



	CF	IMF	OECD	ECB
2023	-0.1	-0.3	0.0	1.3
2024	2.2	2.7	2.6	3.8

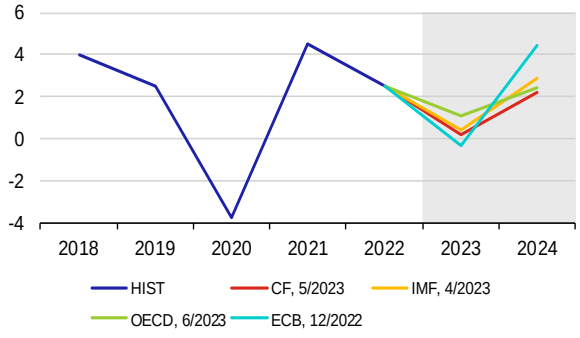
Inflation, %



	CF	IMF	OECD	ECB
2023	9.9	10.5	13.1	9.5
2024	2.8	5.8	5.7	3.0

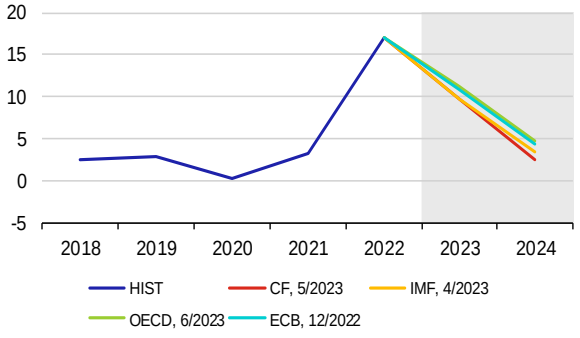
Latvia

GDP growth, %



	CF	IMF	OECD	ECB
2023	0.2	0.4	1.1	-0.3
2024	2.2	2.9	2.4	4.4

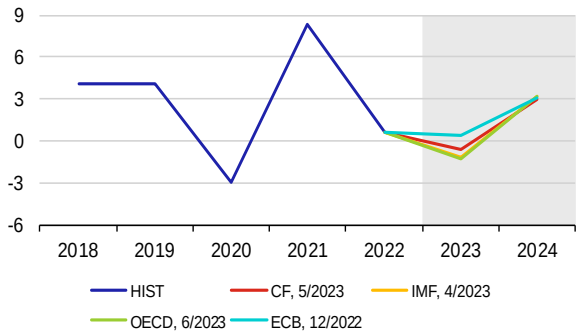
Inflation, %



	CF	IMF	OECD	ECB
2023	9.8	9.7	11.2	10.9
2024	2.4	3.5	4.8	4.4

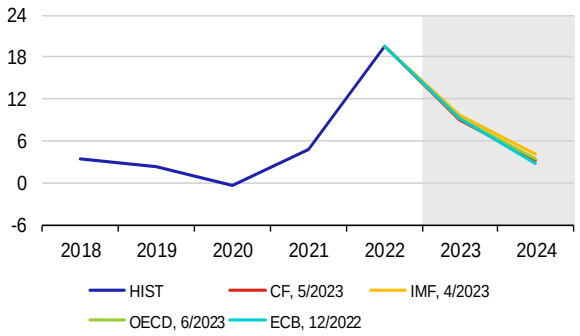
Estonia

GDP growth, %



	CF	IMF	OECD	ECB
2023	-0.6	-1.2	-1.3	0.4
2024	3.0	3.2	3.2	3.1

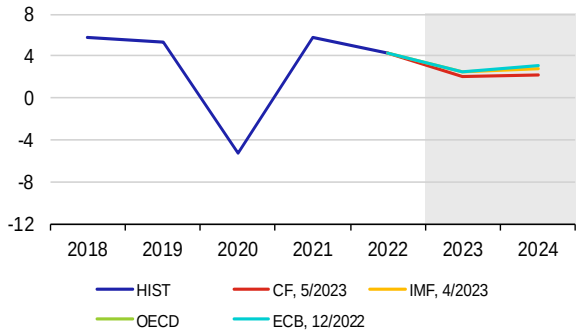
Inflation, %



	CF	IMF	OECD	ECB
2023	9.1	9.7	9.2	9.3
2024	3.3	4.1	3.4	2.8

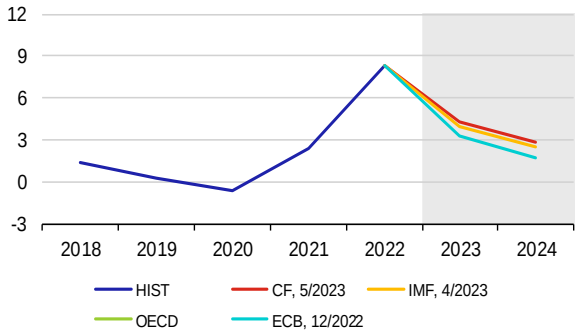
Cyprus

GDP growth, %



	CF	IMF	OECD	ECB
2023	2.1	2.5	n. a.	2.5
2024	2.2	2.8	n. a.	3.1

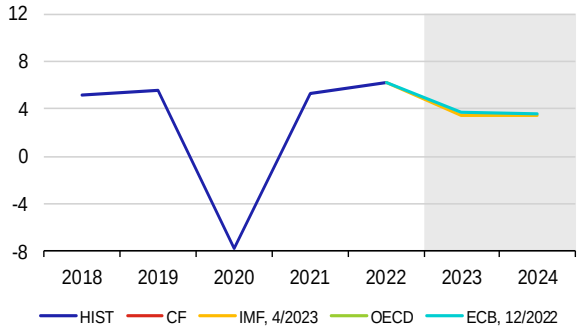
Inflation, %



	CF	IMF	OECD	ECB
2023	4.3	3.9	n. a.	3.3
2024	2.8	2.5	n. a.	1.7

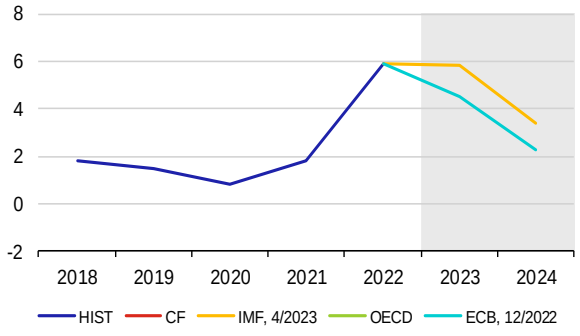
Malta

GDP growth, %



	CF	IMF	OECD	ECB
2023	n. a.	3.5	n. a.	3.7
2024	n. a.	3.5	n. a.	3.6

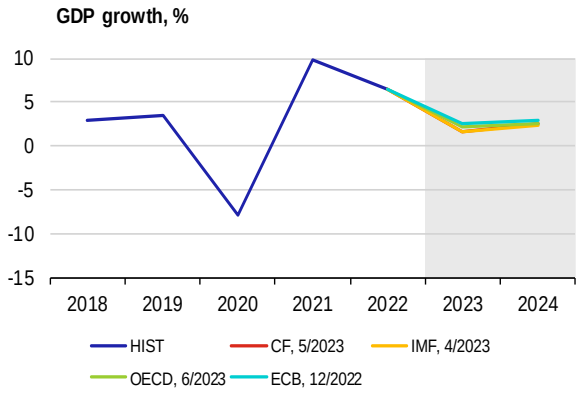
Inflation, %



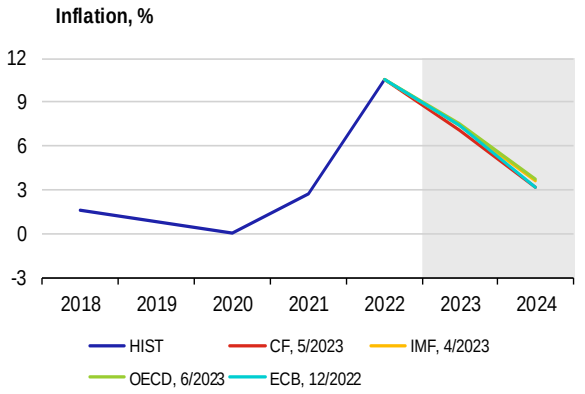
	CF	IMF	OECD	ECB
2023	n. a.	5.8	n. a.	4.5
2024	n. a.	3.4	n. a.	2.3

Ddd

Croatia



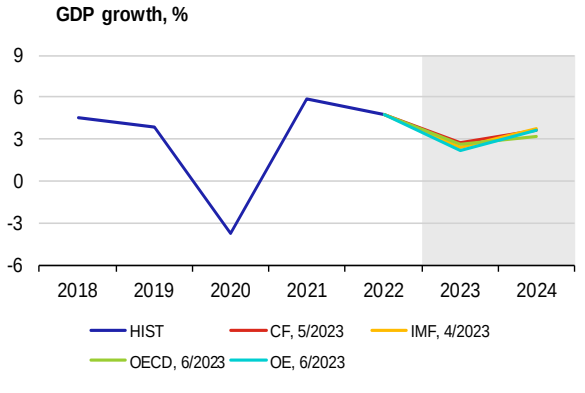
	CF	IMF	OECD	ECB
2023	1.6	1.7	2.1	2.5
2024	2.6	2.3	2.5	3.0



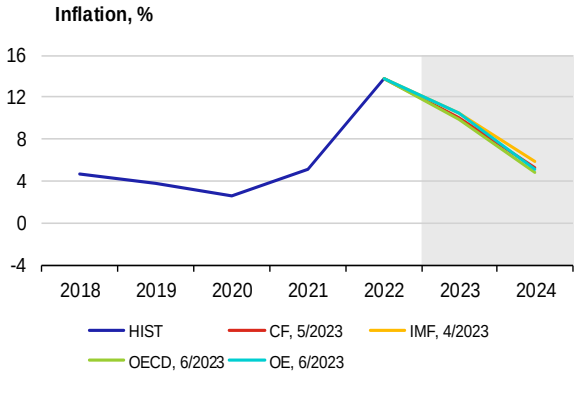
	CF	IMF	OECD	ECB
2023	7.1	7.4	7.5	7.4
2024	3.2	3.6	3.7	3.2

A5. GDP growth and inflation in other selected countries

Romania



	CF	IMF	OECD	OE
2023	2.7	2.4	2.6	2.2
2024	3.6	3.7	3.2	3.6



	CF	IMF	OECD	OE
2023	10.0	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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