Global Economic Outlook

September 2022

Czech National Bank ——— Global Economic Outlook ——— September 2022

CZECH NATIONAL BANK

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Cut-off date for data
16 September 2022

CF survey date
12 September 2022

GEO publication date
23 September 2022

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

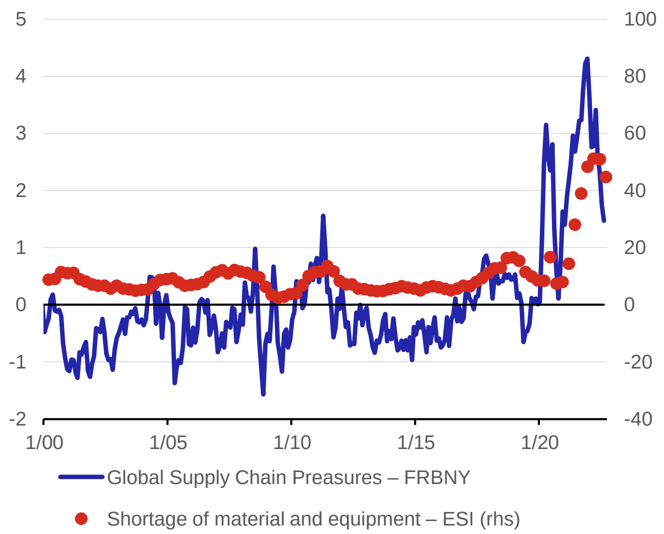
Queen Elizabeth II's earthly journey has come to an end. The sad event this September is the death of the respected Queen Elizabeth II, who served the United Kingdom and Commonwealth for over 70 years, the second longest reign after French King Louis XIV. She will be missed around the world. May she rest in peace!

And then there's the Ukrainian offensive, with mass graves in the Luhansk region providing sad evidence of the aggression. This absurd war has already led to the needless loss of many human lives , astronomical costs on both sides and increased global uncertainty, and has exacerbated post-Covid volatility in the world economy. The international community remains united and steadfast in its support for the attacked Ukraine. Material and financial assistance from the West is still being sent. US President Joe Biden signed a further USD 600 million military assistance package to Ukraine in September.

In the northern hemisphere, energy prices are economic topic number one ahead of winter. Their evolution – especially of gas prices in Europe – is significantly reflected in high inflation figures, which may perhaps have peaked already in some countries. An extraordinary EU summit approved the Commission's proposal to cap non-gas electricity prices at EUR 180/MWh, and similar measures are being prepared by individual EU governments.

The ECB and the Fed are riding a hawkish wave. In September, the ECB delivered its largest ever interest rate hike (of 0.75 pp). A similar increase can be expected at the next Governing Council meeting. The same shift in rates can also be predicted in the USA, as inflation has not yet reached its peak. However, it is already clear that the two key central banks will not meet their inflation targets until 2024, and the probability of economic stagnation has increased.

Tensions in supply chains are easing



Source: Federal Reserve Bank of New York, European Commision
Note: Monthly data for Global Supply Chain Preasures; data from the Commision are quarterly.

The chart in the current issue shows the developments in supply chain pressures through the lens of EU and US indicators. Pressures have declined since the start of the year, container transport prices are falling and firms are slowly ceasing to report large shortages of production inputs. Thus, the supply difficulties we have experienced over the last two years, which are increasing inflation pressures, will hopefully soon recede visibly.

The September issue also contains an analysis: "[How have firms' price increases contributed to the current inflation in the euro area?]" The article analyses developments in inflation in recent years and shows that companies actually did increase their prices more than would be expected based on historical evidence of the impact of input prices on output prices. Price increases were more pronounced in countries which entered the pandemic with a "more overheated", i.e. much tighter labour market and stronger domestic demand.

Barometr of Global Economic Outlook for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP	**2022**	2.9 ↗	1.4 ↘	1.7 →	3.4 →	1.5 ↗	3.3 ↘	-6.9 ↗
(%)	**2023**	0.2 ↘	-0.7 ↘	0.5 ↘	-0.3 ↘	1.5 ↘	5.0 ↘	-2.6 ↘
Inflation	**2022**	8.2 ↗	7.8 ↗	8.0 ↘	9.2 ↗	2.2 ↗	2.3 ↘	14.2 ↘
(%)	**2023**	5.4 ↗	5.8 ↗	3.8 →	7.0 ↗	1.4 →	2.3 ↘	6.3 ↘
Unemployment	**2022**	6.8 →	5.2 →	3.7 →	3.9 →	2.6 →	3.5 →	4.4 →
(%)	**2023**	7.1 ↗	5.5 ↗	4.2 →	3.9 →	2.5 →	3.3 →	5.3 →
Exchange rate	**2022**	1.05 ↘	1.05 ↘		1.20 ↘	131.0 ↗	6.90 ↗	66.7 ↘
(against USD)	**2023**	1.08 ↘	1.08 ↘		1.25 ↘	125.2 ↘	6.77 ↗	77.4 ↘

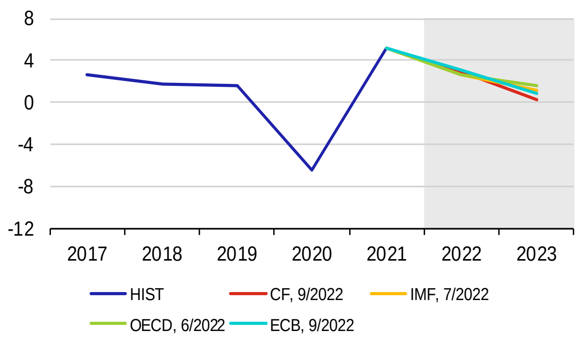
Source: Consensus Forecasts (CF)
Note: The arrows indicate the direction of the revisions compared with the last GEO.

II.1 Euro area

The euro area economy showed surprising strength in 2022 Q2, with quarterly GDP growth of as much as +0.8% after a revision. Growth in Q1 also shifted higher (+0.7%) and the euro area economy thus returned to the pre-pandemic output level. The very positive outcome was due to the opening of economies after the last Omicron wave, a recovery in demand for services and a boom in tourism. In addition to household consumption, growth was driven by government expenditure and investment, whereas the contribution of net exports was negative. However, the current news from the economy is less positive. The PMI indicator in manufacturing has been in the contraction band since July, mainly because of weakening demand. A decline in orders is fostering lower demand for inputs, which is already reducing supply chain tensions and also contributing to more moderate price dynamics in industry. The services PMI also entered the contraction territory in August, as the positive effect of the opening of economies after the pandemic had faded out. Price pressures are also easing in services, but it will take time for this to be fully reflected in consumer prices. Euro area inflation is meanwhile rising further, exceeding 9% in August. Energy and food prices remain the driver of price growth, but the other components also keep rising. High core inflation is a cause for concern for the ECB Governing Council, which thus decided unanimously to raise rates by 0.75 pp. The ECB has not yet activated its instrument against financial market fragmentation, but it strongly favours the indebted southern periphery in the reinvestment of the purchased assets. It also said it was ready to raise rates quickly at its subsequent meetings, although the euro area economic outlook had shifted visibly towards recession.

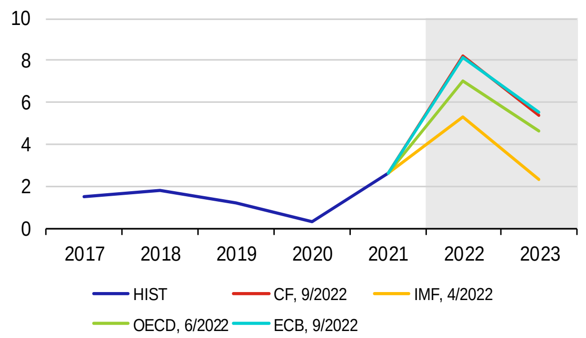
The September CF increased the GDP growth outlook this year, followed by a decrease next year, while expected inflation has shifted upwards for both years. The better 2022 figure is due in particular to the surprisingly positive outcome in the first half of the year. The inflation outlook has again shifted higher and euro area inflation will remain well above the ECB's target on average for 2023. The analysts also expect the rate on the main refinancing operations to reach 2.15% at the close of the year and grow further to 2.45% by June 2023.

GDP growth, %



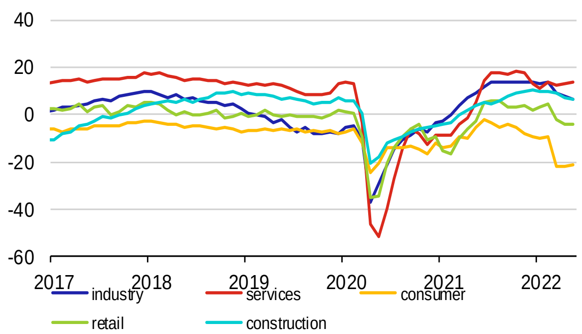
	CF	IMF	OECD	ECB
2022	2.9	2.6	2.6	3.1
2023	0.2	1.2	1.6	0.9

Inflation, %



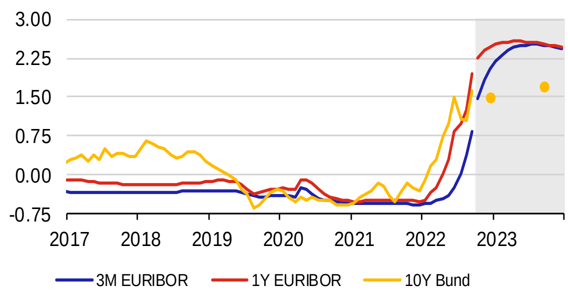
	CF	IMF	OECD	ECB
2022	8.2	5.3	7.0	8.1
2023	5.4	2.3	4.6	5.5

ESI leading indicators



	industry	services	consum.	retail	constr.
6/22	7.0	14.0	-23.7	-5.1	3.6
7/22	3.4	10.4	-27.0	-7.1	3.2
8/22	1.2	8.7	-24.9	-6.3	3.9

Interest Rates, %



	8/22	9/22	12/22	9/23
3M EURIBOR	0.39	0.85	2.03	2.50
1Y EURIBOR	1.25	1.95	2.47	2.52
10Y Bund	1.05	1.63	1.50	1.70

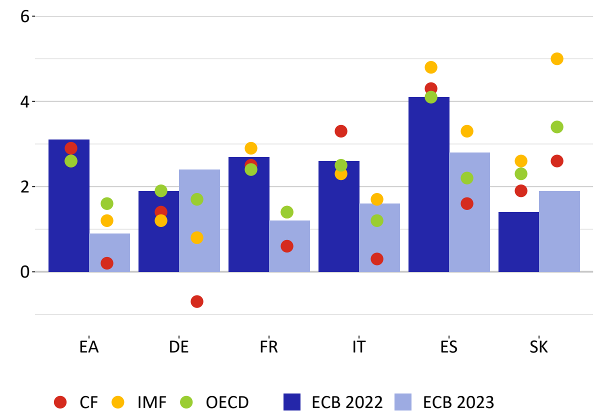
II.2 Germany

The German economy continued to grow moderately in 2022 Q2, but unlike the euro area it has still not reached the pre-pandemic output level and is expected to contract again next year. Following a revision, Germany recorded quarterly GDP growth of +0.1%. The figure for Q1 was revised to a high +0.8%. The German economy remained in positive figures in 2022 H1 owing mainly to consumer and government expenditures. From a sectoral perspective, the positive contribution of some services (e.g. IT) came as a surprise, while German industrial output was weak, dragging the economy down. The PMI leading indicators moved to the contraction territory, signalling a drop in activity in both services and industry. Analysts' concerns about a strong recession in Germany this winter are rising. Uncertainty is also linked with a halt in the supply of gas from Russia via the Nord Stream 1 pipeline. On the other hand, the current storage filling rate in Germany exceeded expectations (close to 90%) and supplies of liquefied natural gas and gas from Norway are stable. However, it will be necessary to further reduce consumption for the German economy to go through winter without rationing gas supplies. In this regard, the German government has taken a number of measures (lowering temperatures in public buildings, preferential supply of coal-fired power plants, etc.). However, it also decided to provide financial relief to firms and households and approved a third support package totalling EUR 65 billion in early September. In addition, excessive profits of energy companies will be taxed and the introduction of energy price caps is being considered.

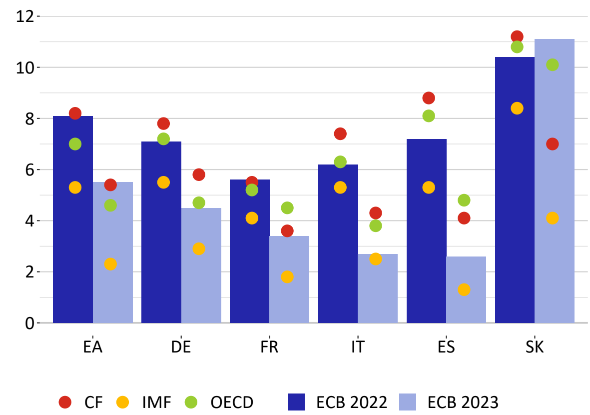
High energy prices are still visibly affecting inflation developments. Inflation in Germany accelerated again and, according to CF analysts, will not peak until December. This is because – in addition to a fade-out of the effect of the 9 euro transport ticket – a new gas procurement fee is to be introduced in October to protect suppliers from insolvency.

CF analysts have again lowered their outlook for German economic growth and revised expected inflation upwards. GDP growth will reach 1.4% this year and the German economy is expected to contract next year (-0.7%), while inflation will slow from 7.8% this year to 5.8% in 2023. The government will record a budget deficit in both years.

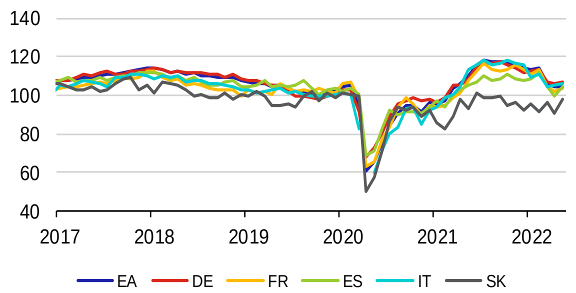
GDP growth in selected euro area countries in 2022 and 2023, %



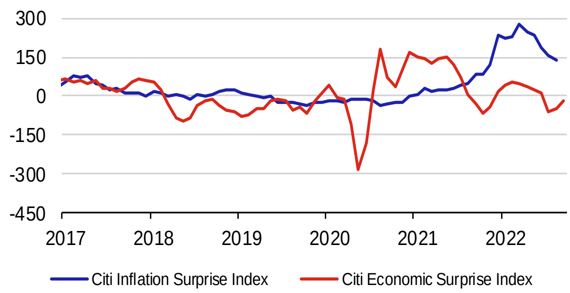
Inflation in selected euro area countries in 2022 and 2023, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
6/22	103.5	104.7	102.4	102.1	105.0	92.3
7/22	98.9	99.7	101.6	97.1	101.4	91.1
8/22	97.6	97.2	99.8	97.9	100.2	87.1

Inflation expectations based on 5year inflation swap and SPF

	5y5y	SPF
7/22	2.05	2.15
8/22	2.11	2.15
9/22	2.18	2.15

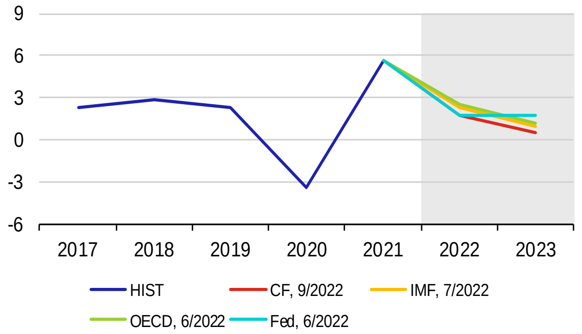
II.3 United States

The outlook for the US economy next year has shifted downwards and some analysts even expect recession. The new CF outlook expects GDP to grow by 1.7% this year (the same as last month), while the outlook for 2023 has fallen to just 0.5%. The lower outlook for economic activity is due to an expected decline in real household consumption and a possible worsening of the labour market situation, which could lead to a deeper economic downturn. Forward-looking confidence indicators are also declining.

Inflation rose by 0.1% month on month in August and core inflation was up by 0.6% month on month, surprising the financial markets in particular. As expected, fuel prices declined, but firms are not lowering their prices yet and are keeping their inventories at record levels. A tight labour market is fostering continued wage growth and the risk of a wage-price spiral. Global food commodity prices have declined, and container transport is also cheaper, which should lead to the stabilisation of food prices. Sales of new property are falling due to increasing rates, stocks of new property are rising and investment in residential property is expected to fall. Retail sales grew by 0.3% month on month in August, outpacing the outlook. According to the analysts, consumer demand is not falling on account of households' still large financial reserves.

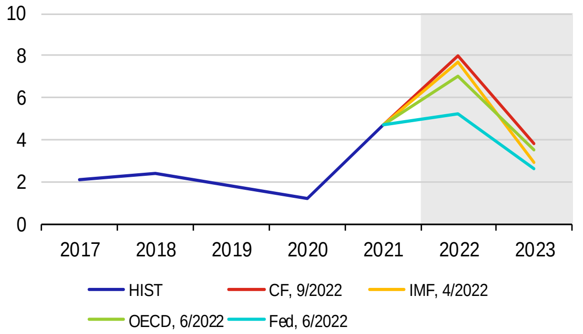
The Fed is expected to raise rates again by 0.75 pp at the September monetary policy meeting. At the traditional meeting of central bank governors in Jackson Hole in September, Fed Chairman Jerome Powell stated, as was generally expected, that the Fed was ready to keep tighter monetary policy for an extended period of time and that there was no reason to ease prematurely. So far Mr Powell has not even given any indication of the level at which rates will come to a halt. The analysts also disagree about when rates will peak. According to market expectations, this should happen in spring next year, with rates reaching just below 4% and then possibly declining. However, some analysts expect them to rise as high as 5% because of a very tight labour market that would otherwise keep inflation above the target.

GDP growth, %



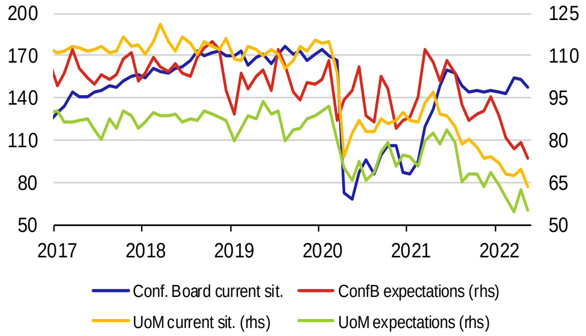
	CF	IMF	OECD	Fed
2022	1.7	2.3	2.5	1.7
2023	0.5	1.0	1.2	1.7

Inflation, %



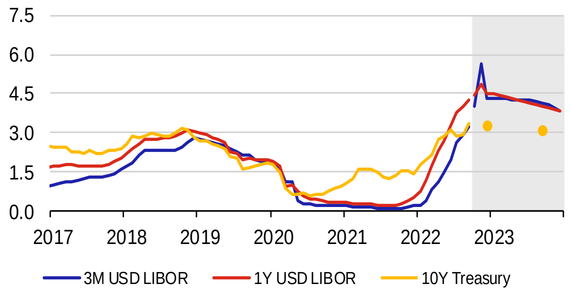
	CF	IMF	OECD	Fed
2022	8.0	7.7	7.0	5.2
2023	3.8	2.9	3.5	2.6

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
6/22	147.2	65.8	53.8	47.5
7/22	139.7	65.6	58.1	47.3
8/22	145.4	75.1	58.6	58.0

Interest Rates, %



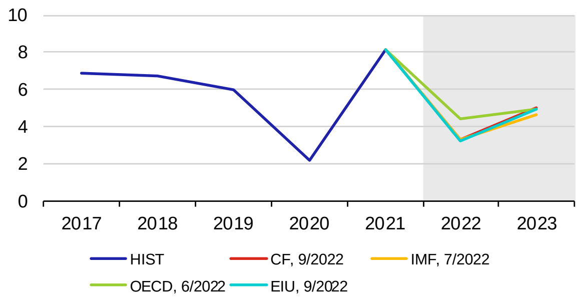
	8/22	9/22	12/22	9/23
USD LIBOR 3M	2.95	3.23	4.30	4.15
USD LIBOR 1R	3.99	3.99	4.49	3.99
Treasury 10R	2.91	3.33	3.30	3.10

II.4 China

The observed data suggest that the weaker performance of the Chinese economy in July continued into August. Heat waves and electricity shortages in some regions disrupted government-sponsored infrastructure projects. The still highly indebted property market remains problematic. Moreover, the situation is being exacerbated by the rapid spread of Covid-19, to which the Chinese government again reacted with large-scale lockdowns. This is having a negative effect on household consumption, industrial production and trade. The PMI in manufacturing thus remained in the contraction band in August, as confirmed by the Caixin index. The PMI in the non-manufacturing sector fell to a three-month low last month due to growing problems in services and construction. This negative trend is likely to continue in September, as at least 74 cities have been closed down throughout the country since the end of August. This affects over 300 million people, with these key areas of production and transport affected by the blockade accounting for around 35% of Chinese GDP. Moreover, the growth prospects for the Chinese economy are subject to external risks, especially weakening demand from the USA and Europe as a result of a drop in consumption due to sharply rising inflation. This was reflected in a marked decline in exports in August, with exports to the USA even falling year on year for the first time since May 2020. According to the CF analysts' September outlook, the Chinese economy will grow by 3.3% year on year in 2022, well below the Chinese government's target of 5.5%. The target will not be reached in 2023 either, as GDP is expected to increase by just 5% next year.

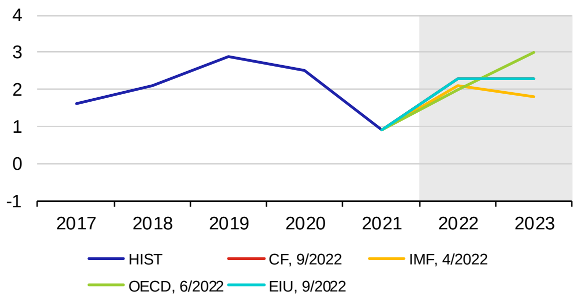
Annual producer price inflation slowed for the tenth consecutive month and was only 2.3% in August. This mainly reflects a decline in global prices of oil and metals due to the fall in global demand, which already clearly reflects the subdued economic activity in China. Consumer price inflation also slowed last month, falling to 2.5%. This was due mainly to falling fuel prices and food prices. Moreover, the Chinese government dampened the sharp growth in pork prices by releasing stocks from its reserves to increase supply. According to the September CF, annual consumer price inflation will reach 2.3% this year and the next.

GDP growth, %



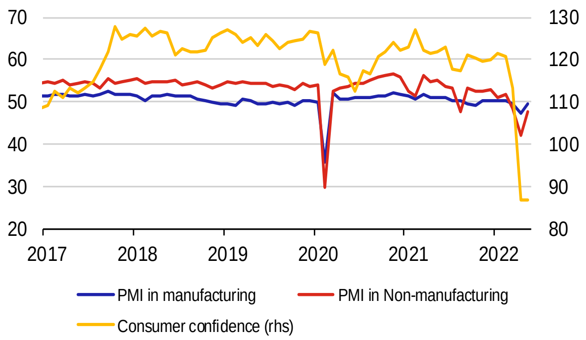
	CF	IMF	OECD	OE
2022	3.3	3.3	4.4	3.2
2023	5.0	4.6	4.9	4.9

Inflation, %



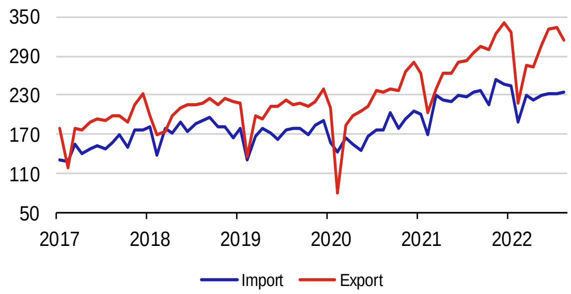
	CF	IMF	OECD	OE
2022	2.3	2.1	2.0	2.3
2023	2.3	1.8	3.0	2.3

Leading indicators



	PMI manuf.	-manufacturing	Cons. conf (rhs)
6/22	50.2	54.7	88.9
7/22	49.0	53.8	87.9
8/22	49.4	52.6	

Development of China foreign trade, bil. USD

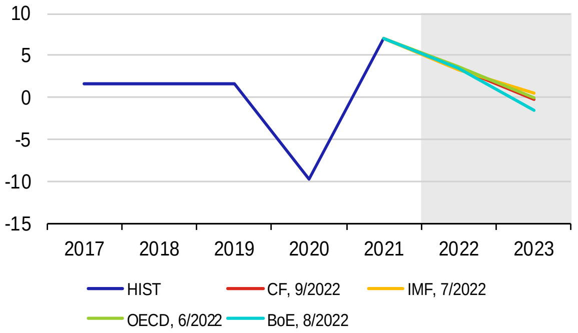


Source: Bloomberg

II.5 United Kingdom

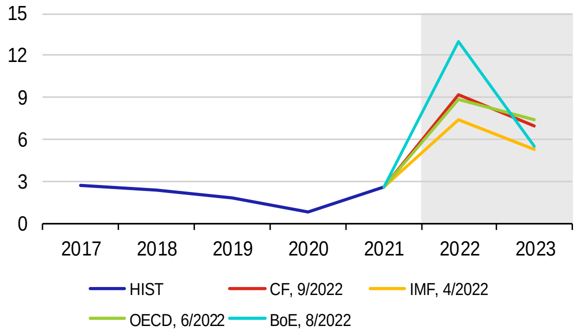
The UK has a new Prime Minister (Liz Truss) and a new King (Charles III) who are entering a time of great dilemmas for the whole economy. Specifically, from how to tackle high inflation to a stagnating economy on the brink of recession (CF predicts GDP to fall by 0.3% next year) as a result of spending cuts due to the cost of living crisis(measures to counter energy price growth are expected to reach up to GBP 150 billion), with consumer confidence fell to its lowest level in almost 50 years in August. The composite PMI also fell in August (to 49.6), entering the contraction band for the first time since February 2021. This was due primarily to a sharp decline in manufacturing growth, but the situation also worsened in the services sector. Annual inflation fell to 9.9% in August (from 10.1% in July) due to lower petrol prices, but food prices in particular continue to rise and price pressures in the economy are becoming ever stronger as wage growth accelerates, supported by labour shortages. CF thus increased its inflation outlook for both 2022 (9.2%) and 2023 (7.0%).

GDP growth, %



	CF	IMF	OECD	BoE
2022	3.4	3.2	3.6	3.5
2023	-0.3	0.5	0.0	-1.5

Inflation, %

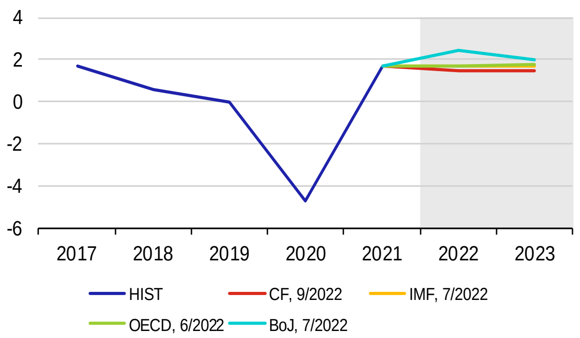


	CF	IMF	OECD	BoE
2022	9.2	7.4	8.8	13.0
2023	7.0	5.3	7.4	5.5

II.6 Japan

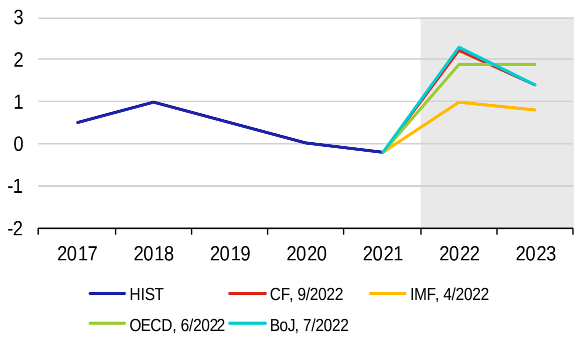
The growth of the third-largest world economy exceeded market expectations in Q2, finally reaching the pre-pandemic level. In quarter-on-quarter terms, real GDP grew by 0.9%, with domestic demand still the main driver of growth. After the easing of the remaining Covid restrictions, expenditure on services increased in particular. However, the contribution of net exports edged up as well. Consumer price inflation still diverges from the global trend – annual inflation stood at 2.6% in July and, according to most forecasts, will not rise significantly further. Annual producer price inflation has remained flat at around 9% since the start of the year. Tensions are visible in financial markets. The Japanese yen remains at its weakest levels in decades, with the volatility of currency derivatives rising markedly. An increased risk premium is also apparent in other derivative products and corporate bond spreads.

GDP growth, %



	CF	IMF	OECD	BoJ
2022	1.5	1.7	1.7	2.4
2023	1.5	1.7	1.8	2.0

Inflation, %

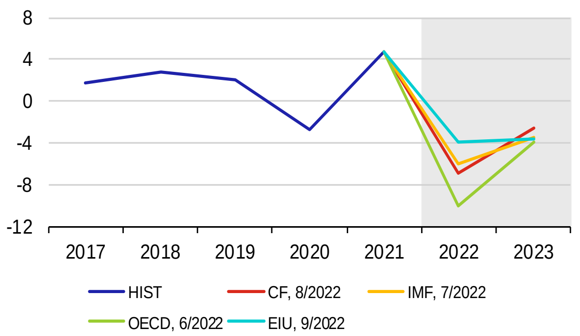


	CF	IMF	OECD	BoJ
2022	2.2	1.0	1.9	2.3
2023	1.4	0.8	1.9	1.4

II.7 Russia

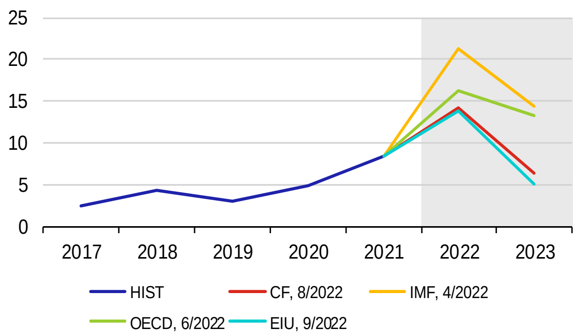
According to Rosstat's revised estimate, Russia's economic activity deteriorated in Q2 at a rate comparable to that in the hardest half-year of the current pandemic. Annual GDP growth fell by 4.1% compared to the 3.5% growth observed in Q1. The first wave of Covid-19 caused a comparable decline in economic activity in 2020 H1. The worst situation was now in retail and wholesale trade and also in motor vehicle repairs (-14.1%). A downturn can also be observed in manufacturing (-4.0%), while the mining industry fell only slightly (-0.8%). By contrast, good results were recorded by administrative activities (+5.0%), financial services and insurance (+4.4%), construction (+3.4%), cultural and sports activities (+2.5%), and information and communication services (+2.0%). However, these sectors also recorded a slowdown in growth compared with the previous quarter's annual growth rates. Inflation slowed slightly again, reaching 14.3% year on year in August. The key interest rate fell to 7.5%.

GDP growth, %



	CF	IMF	OECD	OE
2022	-6.9	-6.0	-10.0	-4.0
2023	-2.6	-3.5	-4.0	-3.6

Inflation, %

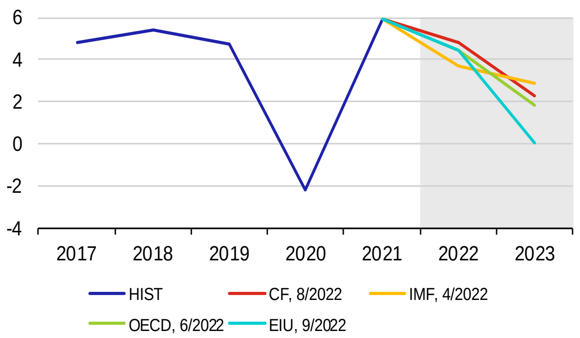


	CF	IMF	OECD	OE
2022	14.2	21.3	16.2	13.9
2023	6.3	14.3	13.2	5.1

II.8 Poland

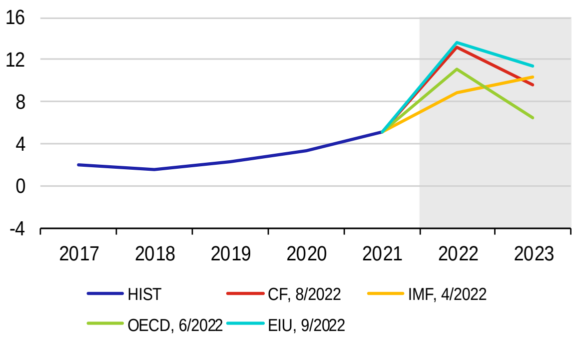
GDP growth in Poland reached 5.5% in Q2 (8.5% in Q1). Industrial production is slowing from double-digit rates (7.6% year on year in July). The outlooks for Poland's economic growth in 2023 have long been revised downwards and are now between 0% and 2.3%. Unemployment remained at 4.9% in July and business confidence in the Polish economy remains low. At its meeting on 7 September, the Polish central bank decided to raise its interest rate again (from 6.5% to 6.75%). Looking ahead, inflation is expected to slow in 2023 (to 6.5%–11.4%). The year-on-year increase in consumer prices was 16.1% in August, i.e. higher than in July (15.6%). Annual wage growth in the business sector also markedly exceeded the July market expectations (13.1%), reaching 15.8% in that month (13% in June).

GDP growth, %



	CF	IMF	OECD	OE
2022	4.8	3.7	4.4	4.4
2023	2.3	2.9	1.8	0.0

Inflation, %

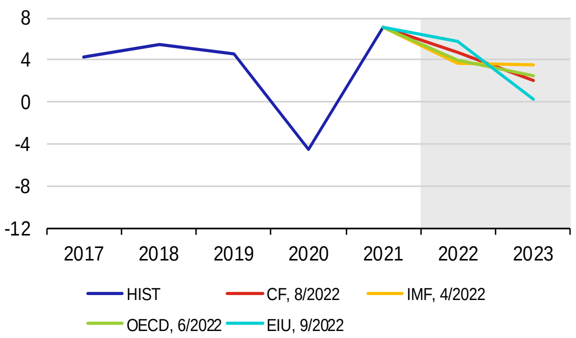


	CF	IMF	OECD	OE
2022	13.2	8.9	11.1	13.6
2023	9.6	10.3	6.5	11.4

II.9 Hungary

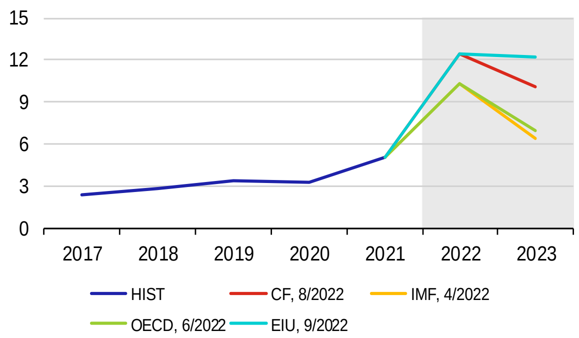
Annual GDP growth in Hungary reached 6.5% in Q2 (from 8.2% in Q1), exceeding the market expectations of 6.1%. A slowdown in growth to 0.2%–3.6% is expected in 2023. The Hungarian labour market recorded a modest increase in unemployment from 3.2% in June to 3.3% in July. At its meeting on 30 August, the Board of the Hungarian National Bank decided to increase the key interest rate again, by 1 pp to 11.75%. Annual consumer price inflation picked up significantly in August, to 15.6% from 13.7% in July, with core inflation increasing to a record high of 19%. Inflation pressures are expected to ease in 2023, but inflation will remain high at between 6.4% and 12.2%. Wages have been rising at double-digit rates since the start of the year (15.4% year on year in June). Annual industrial production growth accelerated in July (to 4% from 1.5% in June). On the other hand, retail sales slowed to 4.3% year on year in July, compared with 4.5% in June.

GDP growth, %



	CF	IMF	OECD	OE
2022	4.7	3.7	4.0	5.8
2023	2.1	3.6	2.5	0.2

Inflation, %



	CF	IMF	OECD	OE
2022	12.4	10.3	10.3	12.4
2023	10.1	6.4	7.0	12.2

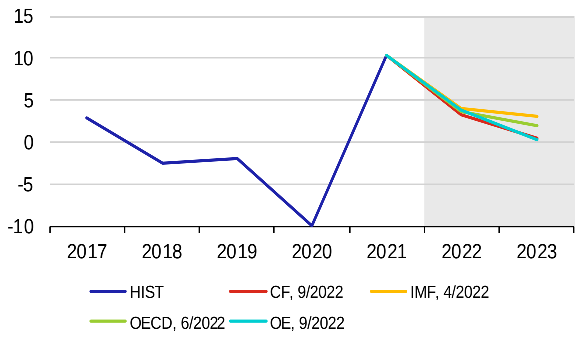
II.10 Countries in the spotlight – Argentina

Argentina's economy is still burdened mainly by the consequences of many years of political populism. The heavily indebted country just barely avoided yet another bankruptcy in the spring. The debt restructuring agreement with the IMF gives hope for somewhat more prudent economic policy. Its conditions limit, for example, the financing of the government by the central bank (which is currently the case in Argentina) and call for a shift towards positive real interest rates. This should help tame the high inflation that has plagued the country for a long time. However, the July resignation of the finance minister, who was behind the agreement, somewhat eroded confidence in the reform efforts.

Economic growth is gradually slowing and this will not change over the outlook horizon. The problems are structural and predate the coronavirus pandemic. The economy experienced post-Covid growth in 2021, but the GDP is only at levels observed around 2010. After Covid, unemployment fell to its usual level of 7%. Wage growth is keeping pace with galloping inflation, so there is no significant threat to real household income. However, the pro-growth effect of past monetary and fiscal expansion has been exhausted and other sources of economic growth do not seem to be available. So, a recession is expected in 2022 H2. The CF analysts expect GDP growth of 3.2% in 2022 and a further slowdown to 0.4% in 2023.

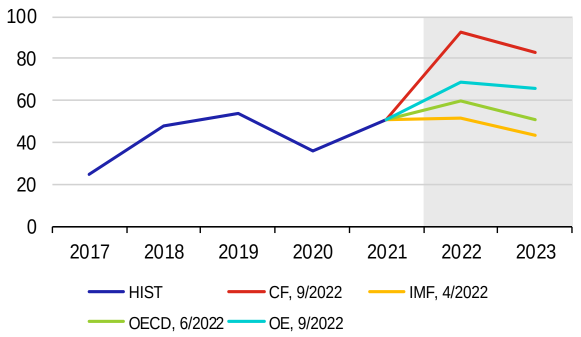
Inflation is accelerating steadily and the central bank's rate hikes are not keeping pace. At the start of this year, annual consumer price inflation departed from the 50% rate, which had become quite normal in Argentina over the past five years, and soared. In August, the official inflation rate was as high as 78.5%. In accordance with the IMF agreement, the central bank adopted a series of sharp increases in its key interest rate. The rate has thus risen from 38% to 69.5% since early 2022. The CF respondents expect inflation to exceed 90% in 2022 and slow only slightly in 2023. The new finance minister, appointed in August, rushed to help the central bank by committing to (unspecified) fiscal austerity. This did not stop the fall of the Argentinian peso, whose official exchange rate has already exceeded ARS 140 to the dollar (ARS 100/USD in January 2022, ARS 60/USD in January 2020 and ARS 8/USD in 2015). Given the still valid strict capital controls, the unofficial exchange rate is roughly twice as high, although it has appreciated slightly in recent weeks..

GDP growth, %



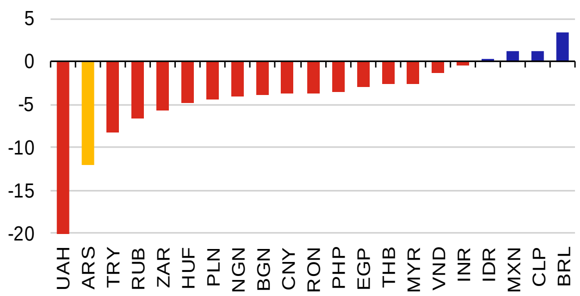
	CF	IMF	OECD	OE
2022	3.2	4.0	3.6	3.8
2023	0.4	3.0	1.9	0.2

Inflation, %



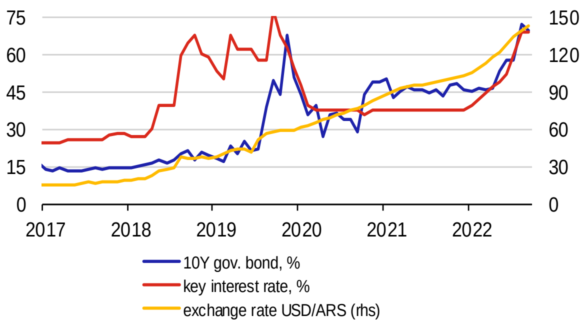
	CF	IMF	OECD	OE
2022	92.2	51.7	60.1	68.9
2023	83.2	43.5	50.6	65.8

Currency performance vis-à-vis USD



% change over 2022-07-01 to 2022-09-14 period

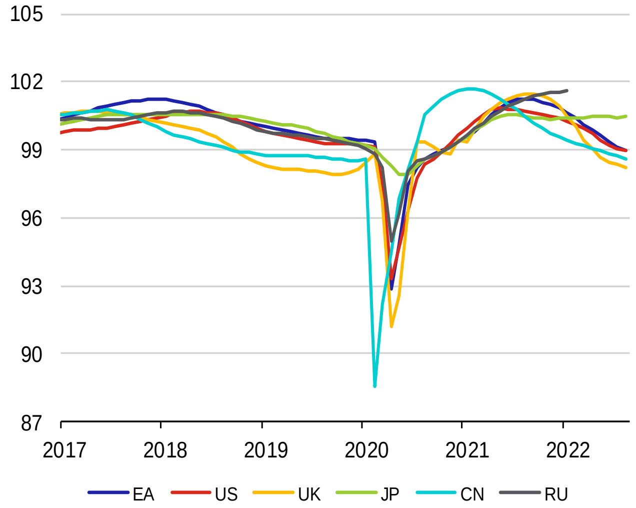
Selected indicators



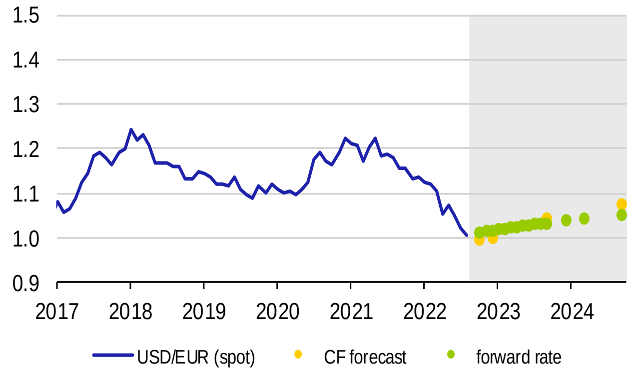
	10Y gov. bond, %	interest rate, %	USD/ARS
6/2022	57.99	52.00	128.39
7/2022	57.64	60.00	135.26
8/2022	72.07	69.50	140.00

III. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

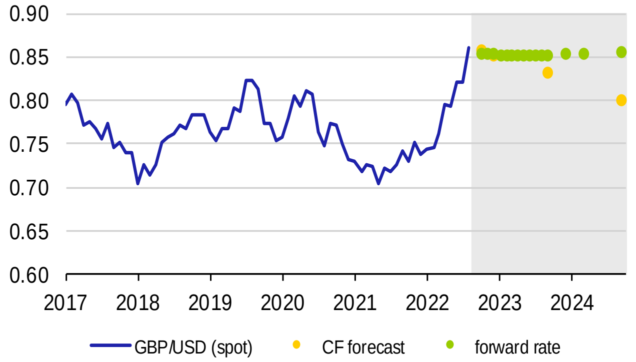


The US dollar (USD/EUR)



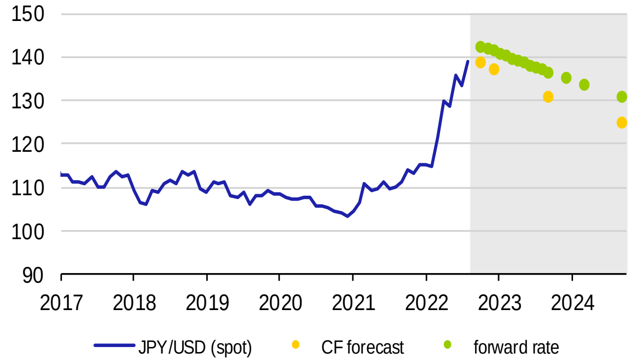
	12/9/22	10/22	12/22	9/23	9/24
spot rate	1.013				
CF forecast		0.999	1.004	1.046	1.076
forward rate		1.014	1.018	1.035	1.053

The British pound (GBP/USD)



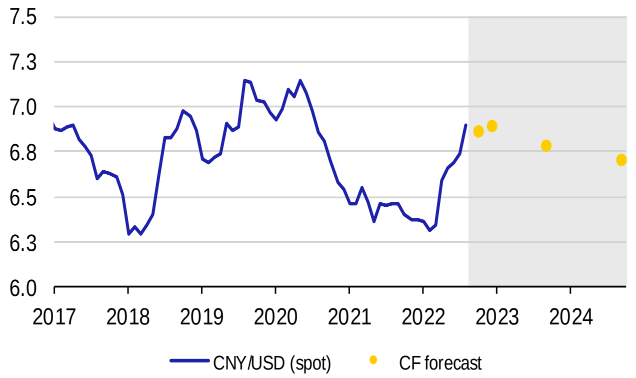
	12/9/22	10/22	12/22	9/23	9/24
spot rate	0.854				
CF forecast		0.859	0.853	0.833	0.801
forward rate		0.855	0.854	0.853	0.856

The Japanese yen (JPY/USD)



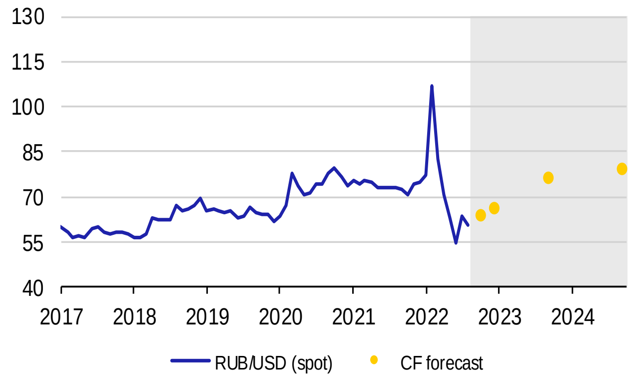
	12/9/22	10/22	12/22	9/23	9/24
spot rate	142.4				
CF forecast		139.0	137.4	131.0	125.2
forward rate		142.5	141.6	136.7	131.0

The Chinese renminbi (CNY/USD)



	12/9/22	10/22	12/22	9/23	9/24
spot rate	6.911				
CF forecast		6.873	6.897	6.788	6.712

The Russian rouble (RUB/USD)



	12/9/22	10/22	12/22	9/23	9/24
spot rate	60.43				
CF forecast		64.06	66.72	76.63	79.72

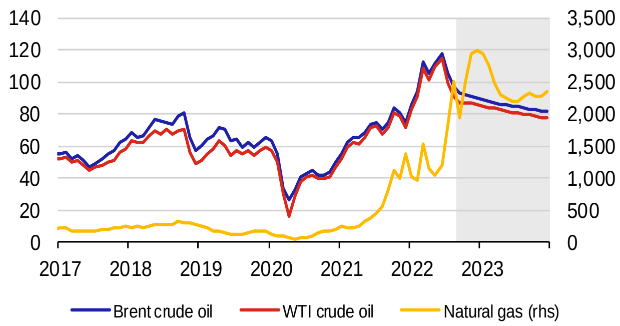
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

IV.1 Oil

Tensions in the physical oil market eased thanks to renewed oil exports from Libya and the continued release of oil from the strategic reserves of IEA member countries. Oil exports from the USA are high. By contrast, refinery demand is falling as seasonal maintenance is approaching. Oil imports to China are weak owing to low domestic demand and restrictions on exports of oil products from China. Investors have significantly reduced their net long positions on oil, fearing a slowdown in global economic growth. Owing to these factors, the Brent price fell by about USD 30/bbl in three months from its June high of over USD 120/bbl. Petrol prices dropped even more sharply, as the strong activity of refineries led to a fall in their margins due to unexpectedly weak demand during the summer motorist season in the northern hemisphere. However, demand for other oil products (diesel, heating oil) is rising due to the exceptionally high gas prices. The IEA expects that replacing gas with oil products in electricity production (as well as in other industrial sectors) could increase demand for oil by around 700,000 barrels a day in 2022 Q4 and 2023 Q1. A complete ban on imports of diesel from Russia into the EU should apply from February 2023. Given the markedly below-average global diesel stocks ahead of the heating season and limited exports from China and India, refineries' margins on diesel production, and hence also its prices, remain high, although they fell in mid-September following news of a possible rise in fuel export quotas from China.

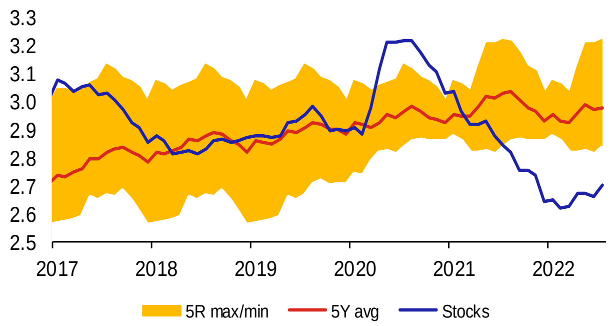
The market curve from the first half of September shifted downwards again compared with the previous month. It continues to signal a further drop in Brent prices to around USD 90/bbl at the close of 2022 and USD 82/bbl at the end of 2023. The September CF expects a more moderate decline to around USD 90/bbl at the one-year horizon. By contrast, the EIA forecast has increased and expects the Brent price to stay slightly above USD 95/bbl until the end of next year.

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

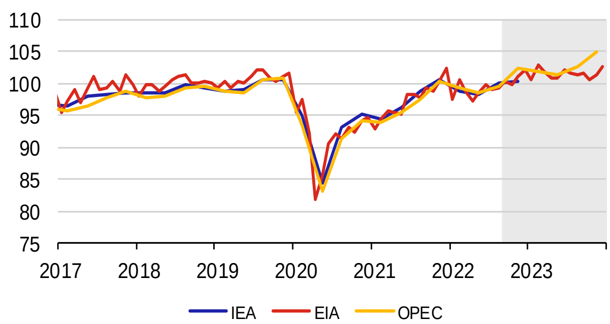


	Brent	WTI	Natural gas
2022	99.70	95.51	1807.66
2023	85.02	81.16	2393.20

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

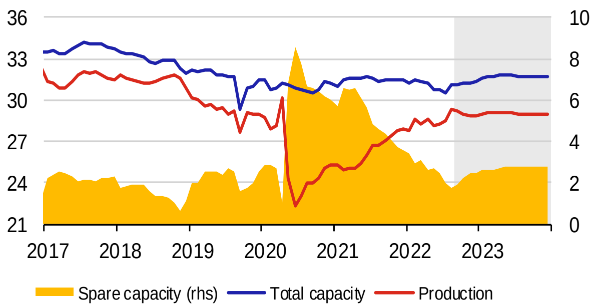


Global consumption of oil and oil products (mil. barrel / day)



	IEA	EIA	OPEC
2022	99.35	99.54	100.02
2023		101.51	102.72

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



	Production	Total capacity	Spare capacity
2022	28.61	31.10	2.49
2023	28.99	31.72	2.73

Source: Bloomberg, IEA, EIA, OPEC, CNB calculation
Note: Oil price at ICE, average gas price in Europe – World Bank data, smoothed by the HP filter. Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Total oil stocks (commercial and strategic) in OECD countries – IEA estimate. Production and extraction capacity of OPEC – EIA estimate.

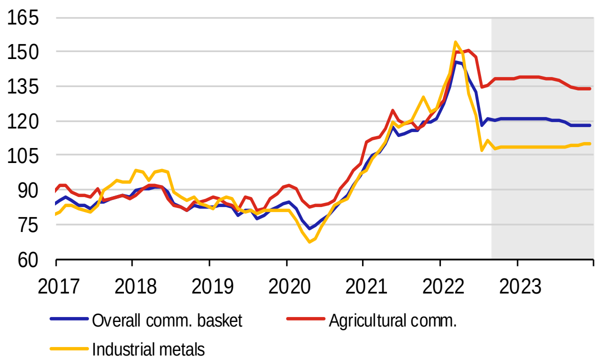
IV.2 Other commodities

The spot price of natural gas in Europe reached a record high of EUR 330/MWh in late August before returning to EUR 200/MWh. The surge was due to a complete halt in Russian gas supplies through the Nord Stream pipeline. However, the market was calmed by news of rapid tank filling in Europe (over 80% on average at the end of August, which the EU had not demanded until the end of November). It is also uncertain how the administrative interventions under discussion will be reflected in gas market prices. However, even higher prices are expected over the coming winter. Coal prices fell temporarily in early August, but rebounded during the month to a near all-time high due to strong demand from China.

The basic metals price index rose in August after four months of decline, but lost its modest gains again in the first half of September. Data from manufacturing in China and Europe remain weak and the PMI remains below 50 despite new government stimulus measures in China. The Chinese government's plan to invest massively in electricity distribution and other energy infrastructure coupled with a drop in stocks at the LME led to a halt in the several-month-long decline in prices of aluminium, copper and other industrial metals in mid-July. In addition, China increased its copper exports. By contrast, prices of iron and iron ore continued to fall due to weak activity in Chinese manufacturing.

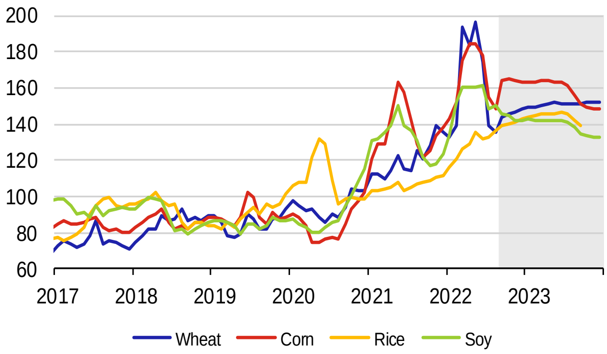
The food commodity price index also returned to growth in August and continued to grow in the first half of September. This was due to a worse outlook for the US harvest due to continued drought in some agricultural regions. However, higher exports from Ukrainian ports and Indonesia helped dampen price growth. Only prices of maize, rice, sugar, coffee and beef recorded modest growth last month. By contrast, pork prices fell sharply in mid-August.

Non-energy commodities price indicies



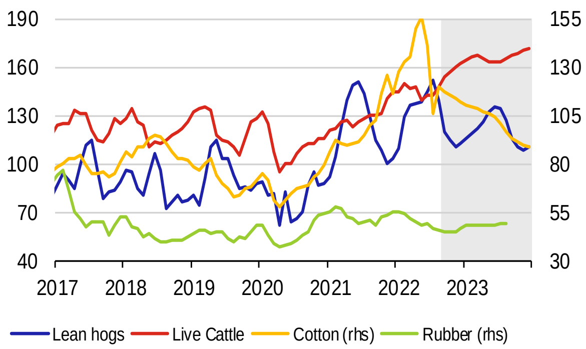
	Overall	Agricultural	Industrial
2022	128.7	140.6	123.7
2023	119.8	137.0	108.9

Food commodities



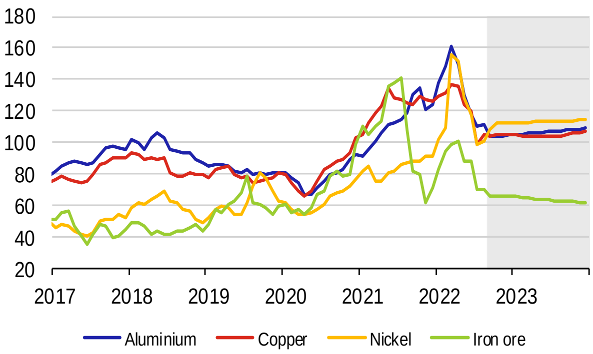
	Wheat	Corn	Rice	Soy
2022	156.5	164.6	132.7	150.0
2023	151.0	158.0	144.2	138.9

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2022	128.6	149.5	127.1	48.4
2023	121.3	166.4	100.3	48.3

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2022	123.8	116.8	117.6	80.1
2023	107.2	105.0	113.6	63.8

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.

How have firms' price increases contributed to the current inflation in the euro area?[1]

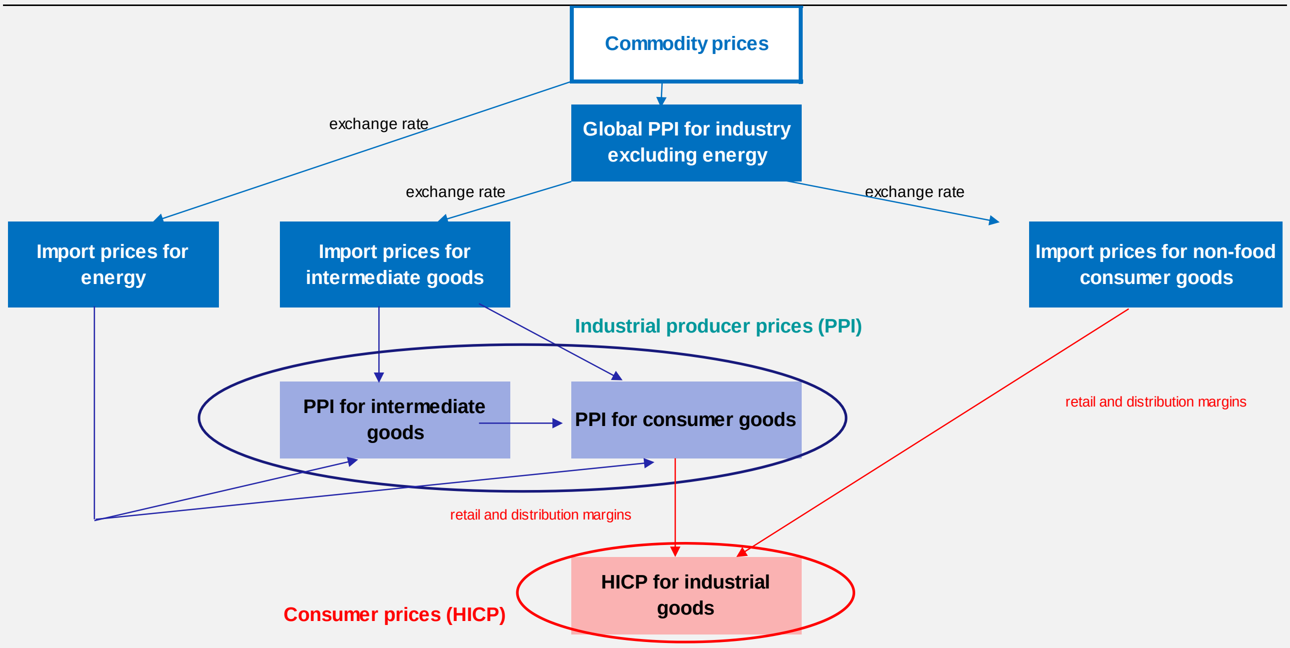
The story of today's inflation in the euro area started last year after the pandemic shutdowns when companies had to grapple with shortages of parts and materials amid almost sky-rocketing prices of commodities and transport. The circumstances for growth in prices and corporate sales were favourable. Demand had shifted from services to goods, and households had seen an increase in their "rainy day funds" during the shutdowns. This analysis confirms that companies actually did increase their prices during this period more than would be expected based on historical data. Price increases were more pronounced in countries which entered the pandemic with a "more overheated", i.e. much tighter labour market and stronger domestic demand. However, prices cannot go up indefinitely. Producers are starting to ease the pass-through to prices, not only in the production sector, but also with respect to end consumers. However, we are still not at pre-pandemic pricing. The pressure to increase prices remains considerable. So are price increases driven by costs? Evidently so. Input costs in particular are putting pressure on companies but – after a decade of fighting deflation – robust demand has made room for the burst of high inflation currently being observed.

From expensive gas to the price of a shirt

Recent months have seen surprisingly strong price increases, with the prices of goods changing more often than many of us would like to see. News items have repeatedly attributed this to factors such as rising gas and electricity prices due the war in Ukraine, shortages of materials and components and global transport price increases. But is this a good enough explanation? Could it be that producers and importers are actually using the situation of higher costs as a crutch to justify higher price tags and to compensate for losses in the lean pandemic period? And are prices really going up to the same extent all over Europe? To allow us to answer at least some questions, it is important to describe in more detail how the prices of goods for end consumers come about and look at the entire "pipeline"[2] from input prices to the price tag for end consumers.

How do they come up with the price tag on your new shirt or on a new fridge? To illustrate what happens, we have put together a stylised overview (see Chart 1) which can be used to describe the possible channels through which price increases are passed on to consumers in the production chain. If the price of oil or other energy commodities (gas or electricity) rise, this effect will primarily be reflected in industrial producer prices in the euro area through the costs of imported energy (energy import prices). This may occur indirectly through global prices of non-energy producers, affecting the prices of imported goods

Chart 1 – Stylised overview of the pass-through of price pressures from commodities and the global economy through the production sector to consumers



Source: ECB (2017), modified by the author

[1] Author: Soňa Benecká. The views expressed in this article are those of the author and do not necessarily reflect the official position of the Czech National Bank.

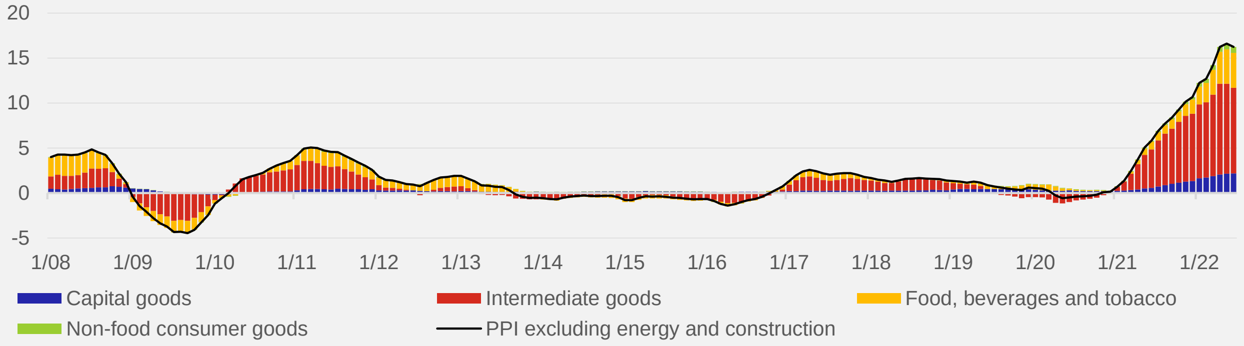
[2] The term "pipeline pressures" is used. See, for example,
https://www.ecb.europa.eu/pub/economic-bulletin/focus/2021/html/ecb.ebbox202105_07~d799754f4e.en.html

which form part of the supply chain used in domestic production (from intermediate goods to final products). That said, consumers may also be affected by a rise in prices of non-energy commodities. If a poor harvest leads to increases in cotton prices, the shock will hit producers worldwide. Producers, in turn, will make material more expensive, and depending on the exchange rate of national currencies against the dollar, this effect will be reflected in import prices which then pass through directly to industrial producer prices. Producers will respond to higher input costs by raising the price of final products, so a domestically-produced shirt will also become more expensive. However, for shirts made abroad, importers increase the price directly. How often and by how much domestic producers and importers increase prices is determined by their own pricing policy, which depends on their margins and expected demand. Margins are a variable that is monitored not only by the central bank because they indicate the way in which companies try to pass on higher input costs to customers.[3] As long as producers continue to raise prices, we will not see an easing of inflation pressures.

Price increases in the euro area were at an all-time high

Chart 2 – Producer prices in the euro area by main components

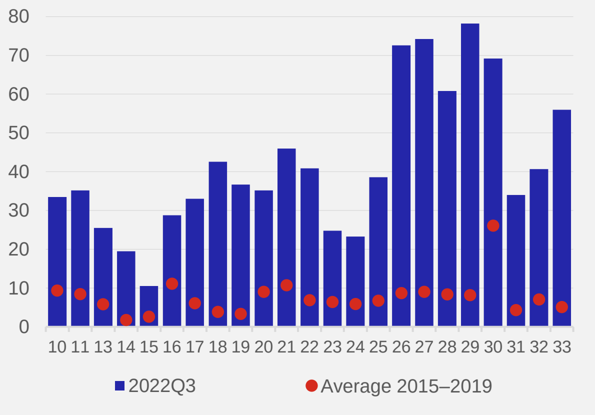
(y-o-y changes in %; contributions in pp)



Source: Eurostat, CNB calculations

Chart 3 – Equipment shortages in the euro area by sector

(% of companies reporting shortages)



Source: European Commission; quarterly business survey
Note: 10 – Food, 11 – Beverages, 12 – Tobacco, 13 – Textiles, 14 – Wearing apparel, 15 – Leather, 16 – Wood, 17 – Paper, 18 – Printing and reproduction, 19 – Refined petroleum products, 20 – Chemicals, 21 – Pharmaceutical products, 22 – Plastic products, 23 – Other products, 24 – Metals, 25 – Metal products, 26 – Computers and electronic products, 27 – Electrical equipment, 28 – Machinery and equipment, 29 – Motor vehicles, 30 – Other transport equipment, 31 – Furniture, 32 – Other, 33 – Repair and installation

Producers in the euro area have been increasing prices at an unprecedented pace this summer. To understand the price pressures in the production sector which affect consumers, it is important to consider sectors excluding the energy and construction. The main driver of inflation in PPI core prices[4] (essentially manufacturing) was the intermediate goods sector (plotted in red in Chart 2). Capital and consumer goods also became more expensive, and there was also a rise in food prices. However, the year-on-year PPI growth in the intermediate goods sector peaked in May and the pace of growth in prices is already losing steam. The decline in the consumer goods category is crucial for consumer price inflation, as we can see in Chart 1. However, the price dynamics in this category are still accelerating.

Price pressures have so far been concentrated at the earlier stages of the pricing chain. Indeed, the PPI for intermediate goods includes the prices for fully or partially processed commodities which will be used as inputs for the production of a different product. Take the chemical industry, whose products are used, for example, in the production of paper. In many cases, these are lower-added-value industries where company pricing strategies are based on a rapid pass-through of input costs to output prices.[5] In

[3] https://www.cnb.cz/cs/verejnost/servis-pro-media/autorske-clanky-rozhovory-s-predstaviteli-cnb/Firmy-radeji-zvysuji-ceny-do-foroty-nez-aby-si-snizily-marze.-Musime-proti-tomu-bojovat-rika-Holub-z-CNB/ (available in Czech only)

[4] We will use the abbreviation for Producer Price Index (PPI) for the price index in the production sector. We will use the Harmonised Index of Consumer Prices (HICP) for consumer prices.

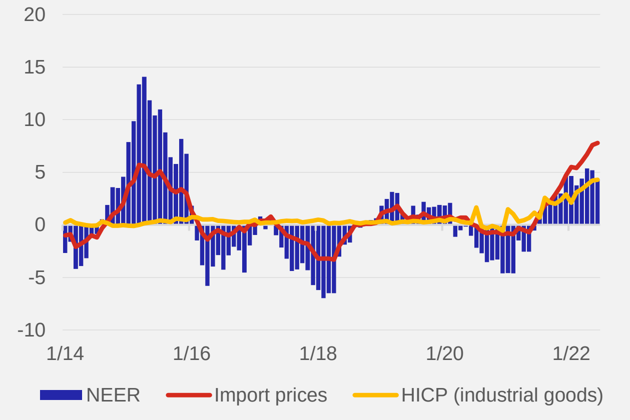
[5] We looked at pricing policies depending on the availability or unavailability of materials and components in the August 2021 issue of Global Economic Outlook https://www.cnb.cz/export/sites/cnb/en/monetary-policy/.galleries/geo/geo_2021/gev_2021_08_en.pdf

addition to the costs of input materials (for example, other chemicals), energy costs are also particularly important for these industries. This is why they have faced a very difficult situation in recent months, which saw a surge in electricity and gas prices to all-time highs and companies facing a shortage of materials and components. However, the situation with missing inputs has already improved slightly compared to last year (see Chart 3), although according to the European Commission's survey, a significant percentage of companies still reported input shortages in 2022 Q3. Even price expectations[6], which are monitored by the European Commission on a monthly basis, corrected during the summer, mostly in industries such as chemicals, metals and metal products, and wood and paper. On the contrary, no major improvement – i.e. a decrease in the share of companies expecting price increases – has been seen from April to July in some sectors with high value added (computers and electronics, electrical equipment and machinery). Companies in the motor vehicle sector have seen a greater availability of semiconductors, but almost half of them still expect selling prices to rise. To sum up, there has been a shift in pressure along the pricing chain, while the greater availability of some materials and components, along with the correction in the prices of non-energy commodities, are making room for a further easing of price pressures in the production sector. The still unpredictable development of energy, gas and electricity prices, which may further sharply increase the input costs of companies, is a risk which – amid weakening demand in the euro area – poses a serious threat to industrial companies there.

The price pressures from the intermediate goods sector are passed through to final goods, and this is already being reflected in consumer price inflation. However, import price increases in the euro area are also surprisingly strong. As described in Chart 1, two price channels feed through to consumer price inflation (for industrial goods). The first of them is the direct channel through *import prices*, which is primarily affected by the exchange rate of the euro against other currencies. As Chart 4 shows, exchange rate developments were the dominant factor influencing past growth in import prices. However, increases in import prices have been much larger in 2022. Higher prices at the global level are thus putting pressure on importers as well. The second channel is directly from *production in the euro area*. PPI indicators show significant price pressures in the chain moving towards final consumption. However, the strength of the pass-through seems to have decreased and the gap between the PPI and the HICP is widening. In addition, the PPI for intermediate goods indicates a continuation of price pressures in the production and distribution chains, as pressures from production are reflected in final consumption with a lag. According to ECB estimates, it takes more than a year for price pressures from

Chart 4 – Pressure on consumer prices through import prices

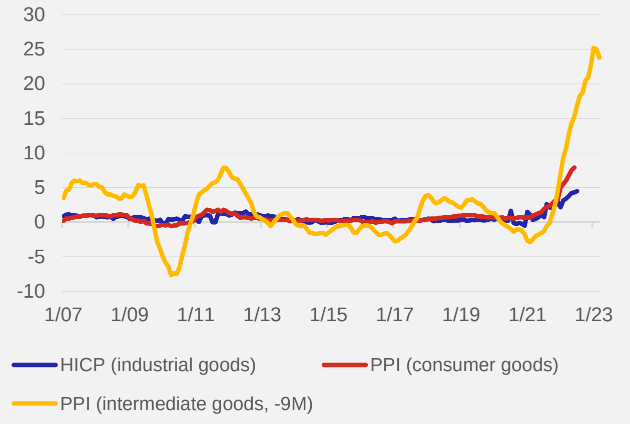
(y-o-y changes in %)



Source: Eurostat, ECB
Note: NEER – nominal effective exchange rate of the euro (inverted scale), HICP – non-energy industrial goods, Import prices – non-food consumer goods, from countries outside the euro area

Chart 5 – Pressure on consumer prices from the production sector

(y-o-y changes in %)



Source: Eurostat
Note: HICP – non-energy industrial goods, PPI (consumers goods) – non-food consumer goods, domestic producer prices, PPI (intermediate goods) – producer prices of intermediate goods moved back nine months

intermediate goods to be fully reflected in the HICP. To illustrate this, we have compared all the monitored variables in Chart 5. This comparison indicates a correction in the HICP for industrial goods in 2023 Q1 at the very earliest. Thus, the

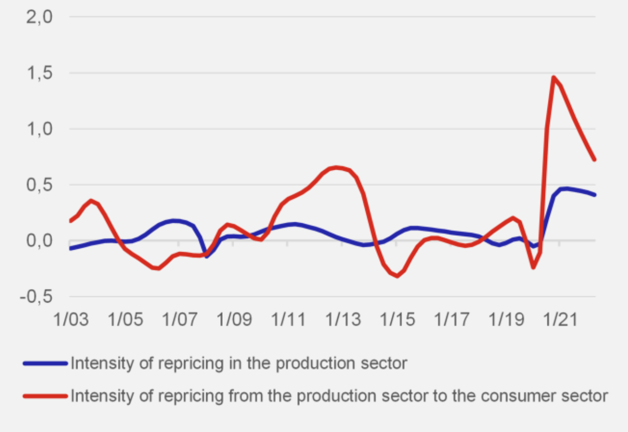
[6] A box in the June 2022 ECB Monthly Bulletin indicated which factors are currently most important for firms' pricing practices in the euro area. According to this report, "in line with the observed increase in global prices for commodities and raw materials, the cost of production inputs is the most important factor currently influencing selling price expectations (reported as "very important" by 74% of firms), followed by labour costs (60%), expected inflation (58%) and own demand (55%). By contrast, factors such as market shares/competitors' prices, the exchange rate, and financing costs and availability play a much more limited role." See

https://www.ecb.europa.eu/pub/economic-bulletin/focus/2022/html/ecb.ebbox202205_06~c70344dd39.en.html production prices broadly indicate that although producers seem to be dampening the full pass-through of costs to customers, it will still take a while for core inflation to subside.

Are producers dampening price increases or is the current inflation evidence of their greed?

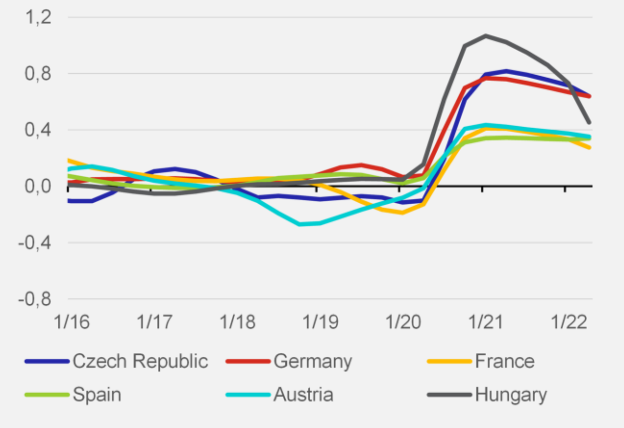
Analysing the margins of producers is far from easy, as the data is not usually freely available. However, the HICP and PPI price indices themselves reveal all sorts of things about pricing policies. Repricing in the production and distribution chain should primarily reflect input costs and the situation on the demand side. However, producer behaviour changes over the business cycle. The intensity of producer price increases or decreases is not constant over time, but is adjusted by the costs, margins, profitability and the selling possibilities. Price go up more in good times, while they may go down when input costs fall. At each stage of the pricing chain, pricing decisions depend on a range of different factors (including capacity utilisation, the stock of inventories, profit absorption and the competitive environment). Therefore, the cost shock from the earlier stages of the pricing chain does not have to pass through to the final consumer at all. We thus tried to estimate how the intensity of producer repricing in the euro area has developed over the last two decades using two simple linear models with time-varying coefficients[7]– referring back to some elements of Chart 1: both directly in the blue production bubble (*Intensity of repricing in the production sector*) and from the blue bubble to the red one (*Intensity of repricing from the production sector to the consumer sector*). Chart 6 then shows both intensity indicators, which are actually time-varying coefficients from our model.

Chart 6 – Indicators of the intensity of repricing in the euro area



Source: Authors' calculations

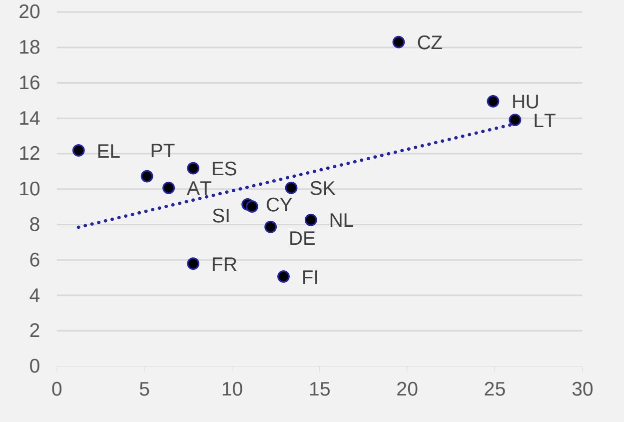
Chart 7 – Intensity of repricing in the production sector across countries



Source: Eurostat, ECB

Chart 8 – Pressure on consumer prices across countries

(y-o-y changes in %; x-axis: PPI growth (consumer goods) ;y-axis: HICP growth (industrial goods))



Source: Eurostat
Note: Index growth for non-energy industrial goods between February 2020 and June 2022; simple regression line plotted in blue.

The post-Covid price increases – even in terms of the intensities defined in this article – deviate from the historically observed values; however, these increases are starting to slow. From 2003 until the onset of the Covid pandemic in Europe, the intensity fluctuated in a narrow band close to zero. However, the shutdowns of economies during the pandemic changed producer behaviour. Producers tried to cope with this unique cost shock by raising prices at the first opportunity possible. Along with the decline in the availability of materials and components and the subsequent onset of the energy crisis, this saw the triggering of what was historically the fastest

[7] This is a linear model where the coefficients are variable over time. The first regression equation includes the PPI for intermediate goods, the PPI for consumer goods and industrial production in the consumer goods sector. The second regression equation includes the HICP for non-energy industrial goods and the PPI for non-food consumer goods. The estimation sample is from 2003 to 2022 Q2 with all variables seasonally adjusted and lagged by one to three periods. The variables are in log differences. The model is set to smooth the estimated parameters, so it ignores irregular fluctuations in the data (for example, shifts in sales periods during the pandemic). This, however, worsens the accuracy of the coefficient estimate.

industrial price increase in the euro area. However, it started to run out of steam during 2022, as households' savings from the pandemic gradually dissipated while their energy and fuel costs soared. The demand narrative is also supported by the significantly larger jump in the intensity of repricing from the production sector to the consumer sector. However, a correction is also taking place in this area, and producers are starting to slow price increases.

Pressures in the pricing chain are significant all across Europe

Estimates for the intensity of repricing in individual EU countries are up against a lack of data, but even more modest evidence confirms the complicated situation faced by producers across Europe. Chart 7 shows the estimates for the intensity of repricing in the production sector for several selected countries. Hungary, followed by the Czech Republic and Germany, report record-high levels of willingness to pass on costs to customers in the production sector. These are also countries which face significant problems with material and component shortages amid robust domestic demand and a tight labour market. By contrast, the intensity in France and Spain is half that. Similarly to data for the euro area, data for the individual countries show that price rises have seen a gradual dampening, and more so in those countries in which the pass-through to prices was higher. Price increases are being abandoned more quickly in those countries in which production sector price growth was greater.

The pass-through to consumer prices is also apparent but is affected by several factors. In addition to price pressures from the producer sector, import prices have a direct impact, and play a leading role in particular for small open economies with an independent currency such as many new EU Member States. For the sake of simplicity, however, we have not included these economies in this article, as they would require a different method of analysis. Therefore, we have limited our analysis to comparing price increases for non-energy industrial goods (see Chart 8). The countries which recorded the highest price increases in the production sector also saw the highest growth in prices of manufactured goods (Hungary, the Czech Republic and Lithuania). Conversely, limited price pressures in the production sector, for example, in France, allowed for only moderate increases in consumer prices. The increase in consumer prices in the Czech Republic was particularly strong, much more so than the production data would imply.

And finally, the crucial question is how much longer will this go on? Based on this analysis, we will not see a year-on-year price decline in the production sector until 2023 Q1 at the earliest. Therefore, we cannot expect the effect of the current receding price pressures in consumer prices to be felt until the one-year horizon. However, given the magnitude of the current shock, it is likely that producer behaviour will be more market-driven and that repricing will be brisker.

Conclusion

Record-high producer price increases passed through to consumer prices in the euro area more significantly than we would have expected. In this analysis, we have tried to estimate how much producers put up their prices in response to rising input prices. At the start of our analysis, we examined the overall pricing chain. This allowed us to identify the areas in which price increases can be easily captured. It showed that producers in the euro area started to increase prices last year and that they did so with greater intensity than in the pre-pandemic period. However, with further price increases and the energy crisis, the pass-through to prices must begin to moderate. Some countries were hit more by price increases, and this was related to the demand and labour market situation before the onset of the pandemic.

References

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https://www.ecb.europa.eu/pub/pdf/other/mb200506_focus05.en.pdf

https://www.ecb.europa.eu/pub/pdf/other/ebbox201703_04.en.pdf

Keywords

Inflation, industrial producer prices, margins

JEL Classification

E31, E32, F44

A1. Change in predictions for 2022

GDP growth, %

	CF		IMF		OECD		CB / EIU	
EA	+0.1	2022/9 2022/8	-0.2	2022/7 2022/4	-1.7	2022/6 2021/12	+0.3	2022/9 2022/6
US	0	2022/9 2022/8	-1.4	2022/7 2022/4	-1.2	2022/6 2021/12	-1.1	2022/6 2022/3
UK	0	2022/9 2022/8	-0.5	2022/7 2022/4	-1.1	2022/6 2021/12	-0.3	2022/8 2022/5
JP	+0.1	2022/9 2022/8	-0.7	2022/7 2022/4	-1.7	2022/6 2021/12	-0.5	2022/7 2022/4
CN	-0.5	2022/9 2022/8	-1.1	2022/7 2022/4	-0.7	2022/6 2021/12	0	2022/9 2022/8
RU	+0.8	2022/8 2022/7	+2.5	2022/7 2022/4	-12.7	2022/6 2021/12	+1.7	2022/9 2022/8

Inflation, %

	CF		IMF		OECD		CB / EIU	
EA	+0.4	2022/9 2022/8	+3.6	2022/4 2021/10	+4.3	2022/6 2021/12	+1.3	2022/9 2022/6
US	-0.1	2022/9 2022/8	+4.2	2022/4 2021/10	+2.2	2022/6 2021/12	+0.9	2022/6 2022/3
UK	+0.1	2022/9 2022/8	+4.8	2022/4 2021/10	+4.4	2022/6 2021/12	+2.7	2022/8 2022/5
JP	+0.2	2022/9 2022/8	+0.5	2022/4 2021/10	+1.1	2022/6 2021/12	+0.4	2022/7 2022/4
CN	-0.1	2022/9 2022/8	+0.3	2022/4 2021/10	+0.3	2022/6 2021/12	+0.1	2022/9 2022/8
RU	-1.9	2022/8 2022/7	+16.5	2022/4 2021/10	+10.3	2022/6 2021/12	-0.8	2022/9 2022/8

A2. Change in predictions for 2023

GDP growth, %

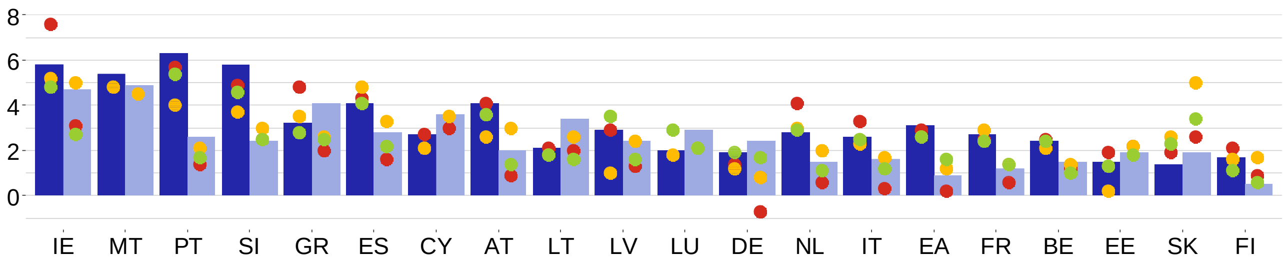
	CF		IMF		OECD		CB / EIU	
EA	-0.7	2022/9 2022/8	-1.1	2022/7 2022/4	-0.9	2022/6 2021/12	-1.2	2022/9 2022/6
US	-0.2	2022/9 2022/8	-1.3	2022/7 2022/4	-1.2	2022/6 2021/12	-0.5	2022/6 2022/3
UK	-0.4	2022/9 2022/8	-0.7	2022/7 2022/4	-2.1	2022/6 2021/12	-1.2	2022/8 2022/5
JP	-0.1	2022/9 2022/8	-0.6	2022/7 2022/4	+0.7	2022/6 2021/12	+0.1	2022/7 2022/4
CN	-0.4	2022/9 2022/8	-0.5	2022/7 2022/4	-0.2	2022/6 2021/12	-0.2	2022/9 2022/8
RU	-0.1	2022/8 2022/7	-1.2	2022/7 2022/4	-5.3	2022/6 2021/12	+0.4	2022/9 2022/8

Inflation, %

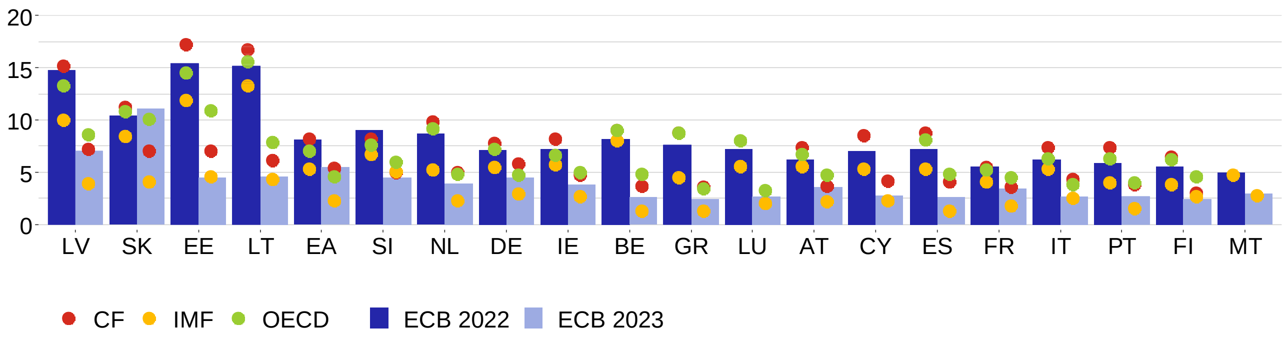
	CF		IMF		OECD		CB / EIU	
EA	+1.3	2022/9 2022/8	+0.9	2022/4 2021/10	+2.8	2022/6 2021/12	+2.0	2022/9 2022/6
US	0	2022/9 2022/8	+0.2	2022/4 2021/10	+1.0	2022/6 2021/12	-0.1	2022/6 2022/3
UK	+0.3	2022/9 2022/8	+3.3	2022/4 2021/10	+5.0	2022/6 2021/12	+2.0	2022/8 2022/5
JP	0	2022/9 2022/8	+0.1	2022/4 2021/10	+1.1	2022/6 2021/12	+0.3	2022/7 2022/4
CN	-0.2	2022/9 2022/8	-0.1	2022/4 2021/10	+0.6	2022/6 2021/12	0	2022/9 2022/8
RU	-0.2	2022/8 2022/7	+9.8	2022/4 2021/10	+8.8	2022/6 2021/12	-2.0	2022/9 2022/8

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

GDP growth in the euro area countries in 2022 and 2023, %



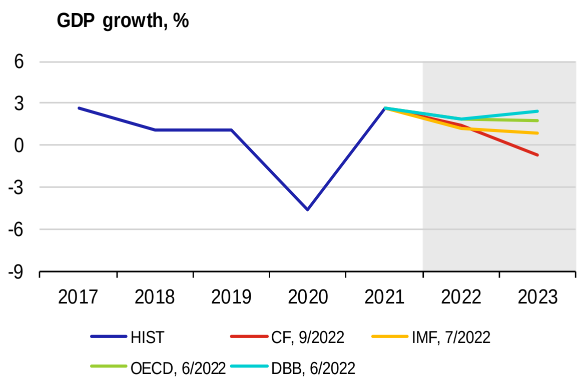
Inflation in the euro area countries in 2022 and 2023, %

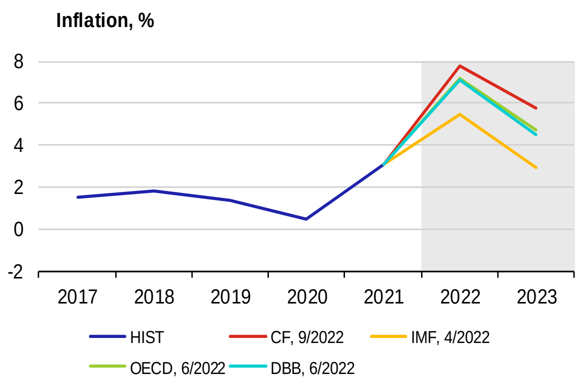


Note: Charts show institutions' latest available outlooks of for the given country.

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

Germany



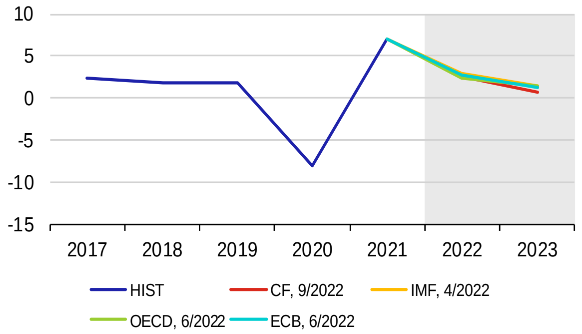


	CF	IMF	OECD	DBB
2022	1.4	1.2	1.9	1.9
2023	-0.7	0.8	1.7	2.4

	CF	IMF	OECD	DBB
2022	7.8	5.5	7.2	7.1
2023	5.8	2.9	4.7	4.5

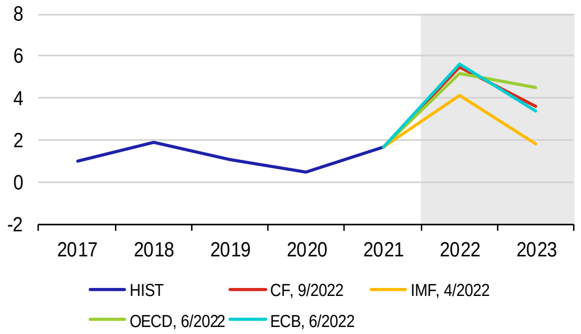
France

GDP growth, %



	CF	IMF	OECD	ECB
2022	2.5	2.9	2.4	2.7
2023	0.6	1.4	1.4	1.2

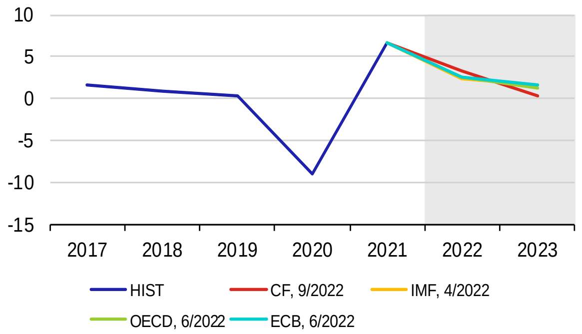
Inflation, %



	CF	IMF	OECD	ECB
2022	5.5	4.1	5.2	5.6
2023	3.6	1.8	4.5	3.4

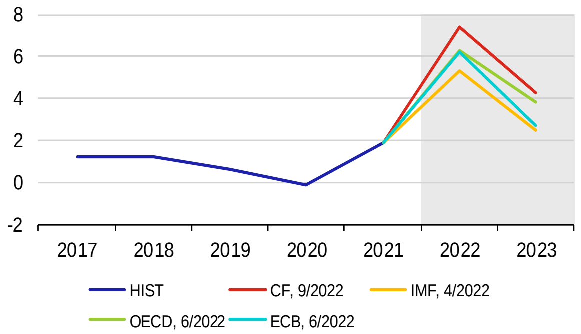
Italy

GDP growth, %



	CF	IMF	OECD	ECB
2022	3.3	2.3	2.5	2.6
2023	0.3	1.7	1.2	1.6

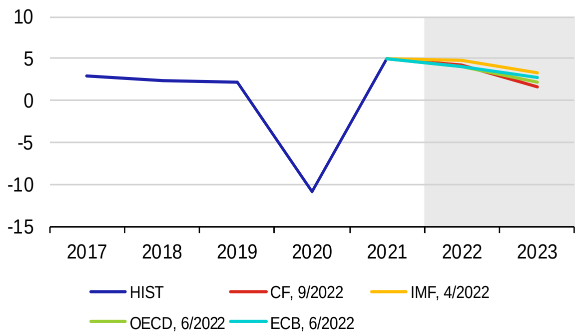
Inflation, %



	CF	IMF	OECD	ECB
2022	7.4	5.3	6.3	6.2
2023	4.3	2.5	3.8	2.7

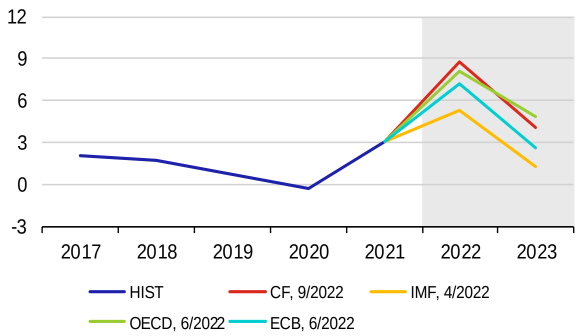
Spain

GDP growth, %



	CF	IMF	OECD	ECB
2022	4.3	4.8	4.1	4.1
2023	1.6	3.3	2.2	2.8

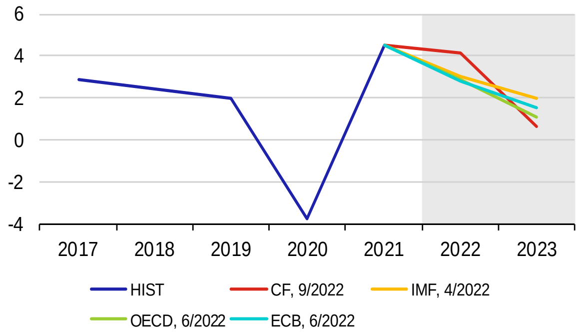
Inflation, %



	CF	IMF	OECD	ECB
2022	8.8	5.3	8.1	7.2
2023	4.1	1.3	4.8	2.6

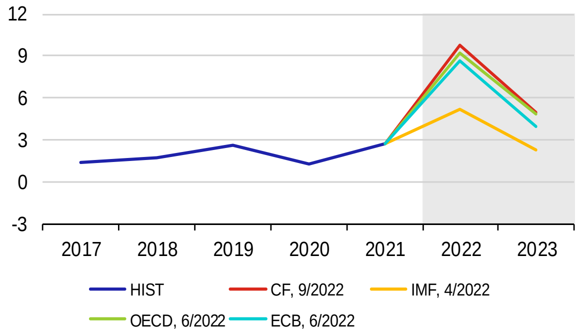
Netherlands

GDP growth, %



	CF		IMF	OECD	ECB
2022	4.1		3.0	2.9	2.8
2023	0.6		2.0	1.1	1.5

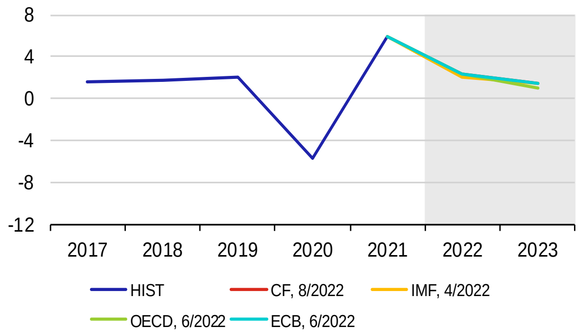
Inflation, %



	CF		IMF	OECD	ECB
2022	9.8		5.2	9.2	8.7
2023	5.0		2.3	4.8	3.9

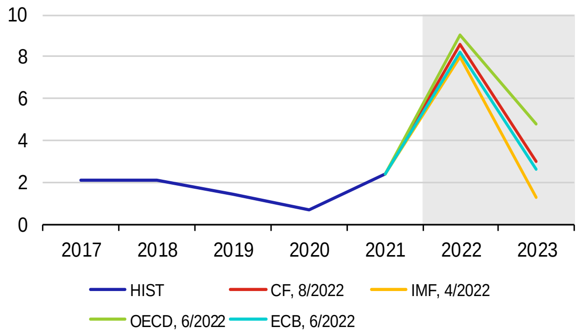
Belgium

GDP growth, %



	CF		IMF	OECD	ECB
2022	2.4		2.1	2.4	2.4
2023	1.4		1.4	1.0	1.5

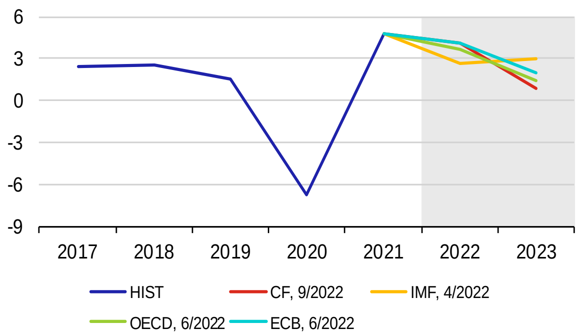
Inflation, %



	CF		IMF	OECD	ECB
2022	8.6		8.0	9.0	8.2
2023	3.0		1.3	4.8	2.6

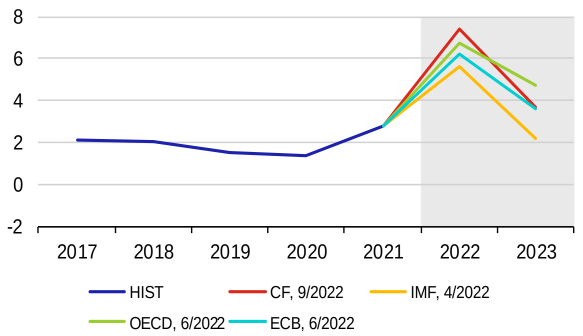
Austria

GDP growth, %



	CF		IMF	OECD	ECB
2022	4.1		2.6	3.6	4.1
2023	0.9		3.0	1.4	2.0

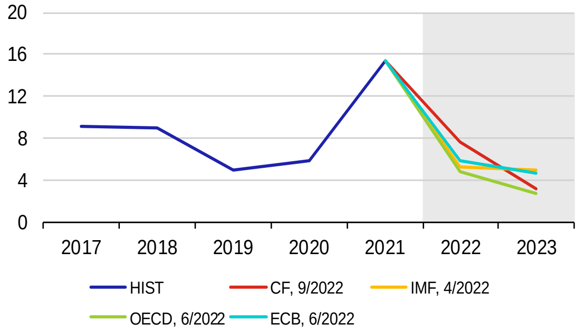
Inflation, %



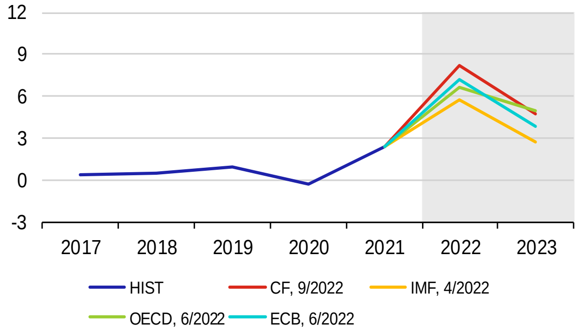
	CF		IMF	OECD	ECB
2022	7.4		5.6	6.7	6.2
2023	3.7		2.2	4.7	3.6

Ireland

GDP growth, %



Inflation, %

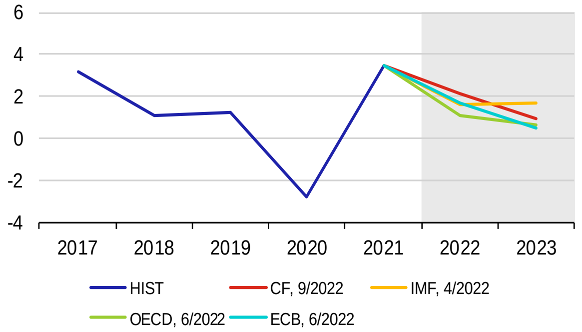


	CF	IMF	OECD	ECB
2022	7.6	5.2	4.8	5.8
2023	3.1	5.0	2.7	4.7

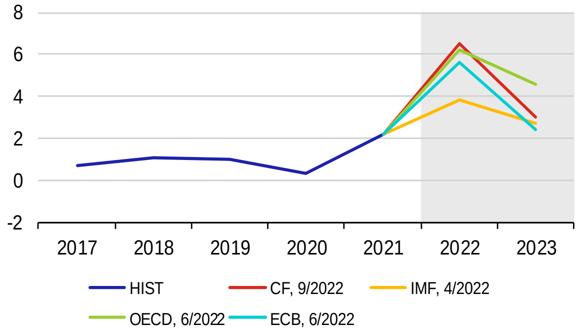
	CF	IMF	OECD	ECB
2022	8.2	5.7	6.6	7.2
2023	4.7	2.7	5.0	3.8

Finland

GDP growth, %



Inflation, %

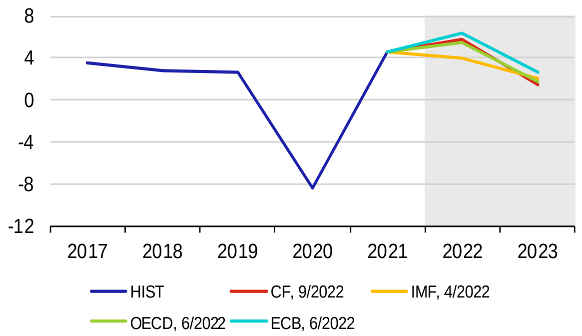


	CF	IMF	OECD	ECB
2022	2.1	1.6	1.1	1.7
2023	0.9	1.7	0.6	0.5

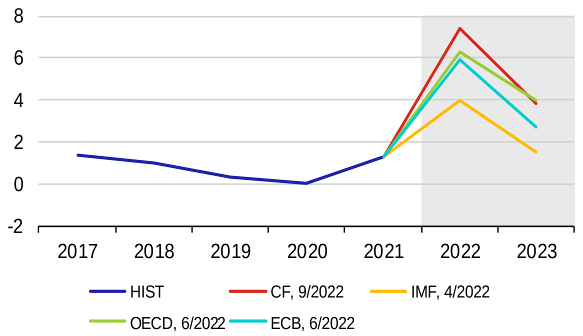
	CF	IMF	OECD	ECB
2022	6.5	3.8	6.2	5.6
2023	3.0	2.7	4.6	2.4

Portugal

GDP growth, %



Inflation, %

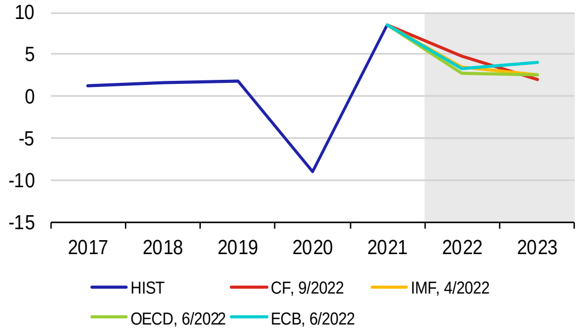


	CF	IMF	OECD	ECB
2022	5.7	4.0	5.4	6.3
2023	1.4	2.1	1.7	2.6

	CF	IMF	OECD	ECB
2022	7.4	4.0	6.3	5.9
2023	3.8	1.5	4.0	2.7

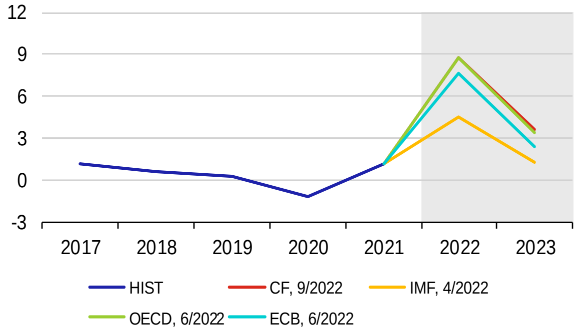
Greece

GDP growth, %



	CF	IMF	OECD	ECB
2022	4.8	3.5	2.8	3.2
2023	2.0	2.6	2.5	4.1

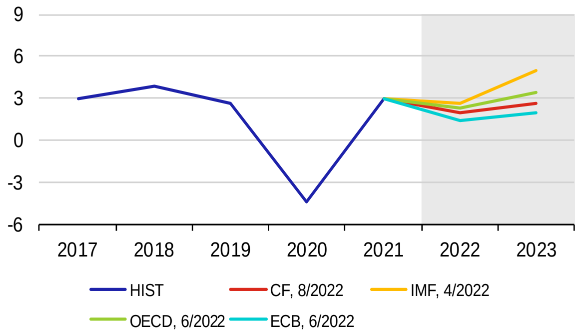
Inflation, %



	CF	IMF	OECD	ECB
2022	8.8	4.5	8.8	7.6
2023	3.6	1.3	3.4	2.4

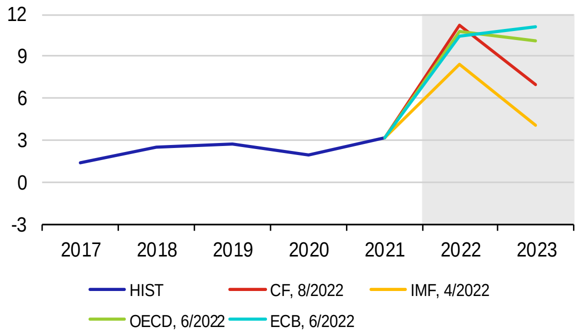
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2022	1.9	2.6	2.3	1.4
2023	2.6	5.0	3.4	1.9

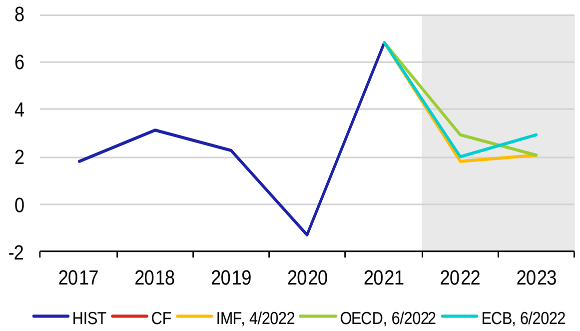
Inflation, %



	CF	IMF	OECD	ECB
2022	11.2	8.4	10.8	10.4
2023	7.0	4.1	10.1	11.1

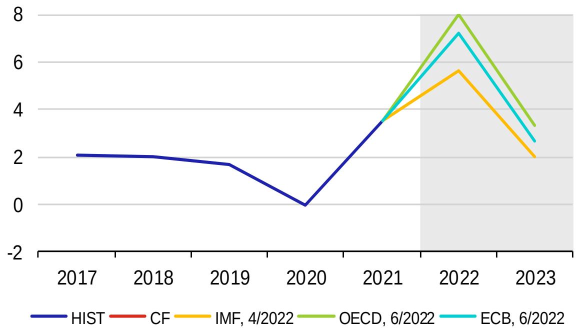
Luxembourg

GDP growth, %



	CF	IMF	OECD	ECB
2022	n. a.	1.8	2.9	2.0
2023	n. a.	2.1	2.1	2.9

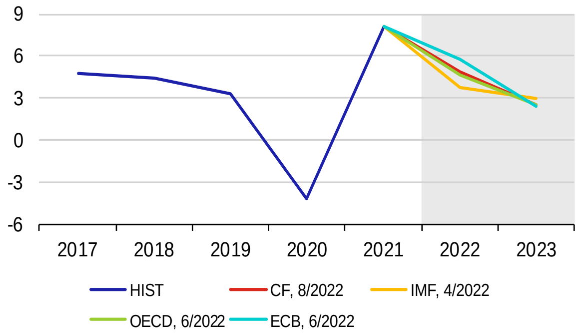
Inflation, %



	CF	IMF	OECD	ECB
2022	n. a.	5.6	8.0	7.2
2023	n. a.	2.0	3.3	2.7

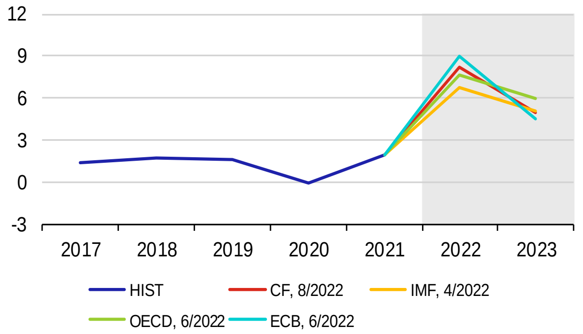
Slovenia

GDP growth, %



	CF	IMF	OECD	ECB
2022	4.9	3.7	4.6	5.8
2023	2.5	3.0	2.5	2.4

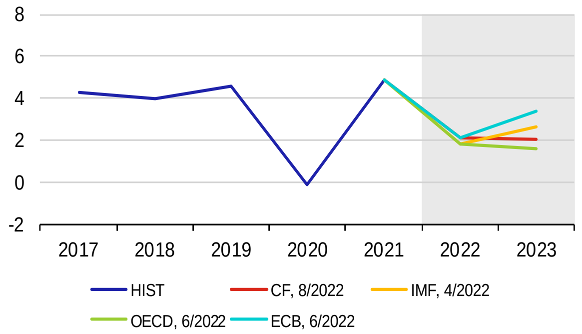
Inflation, %



	CF	IMF	OECD	ECB
2022	8.2	6.7	7.6	9.0
2023	5.0	5.1	6.0	4.5

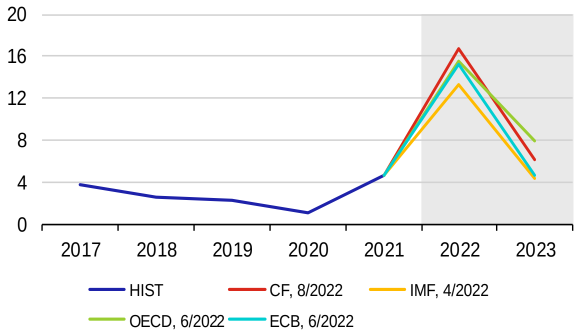
Lithuania

GDP growth, %



	CF	IMF	OECD	ECB
2022	2.1	1.8	1.8	2.1
2023	2.0	2.6	1.6	3.4

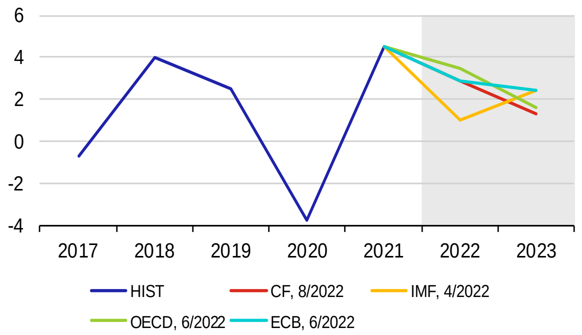
Inflation, %



	CF	IMF	OECD	ECB
2022	16.7	13.3	15.6	15.2
2023	6.1	4.3	7.9	4.6

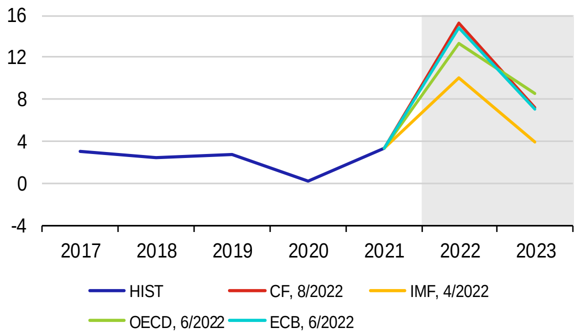
Latvia

GDP growth, %



	CF	IMF	OECD	ECB
2022	2.9	1.0	3.5	2.9
2023	1.3	2.4	1.6	2.4

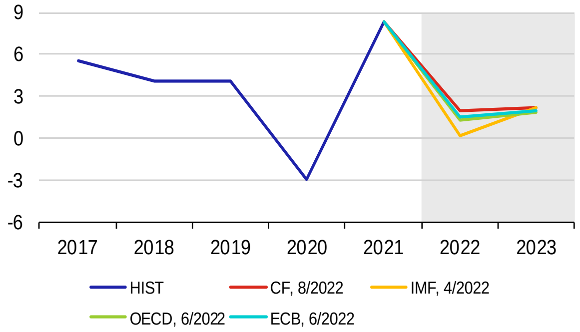
Inflation, %



	CF	IMF	OECD	ECB
2022	15.2	10.0	13.3	14.8
2023	7.2	3.9	8.6	7.0

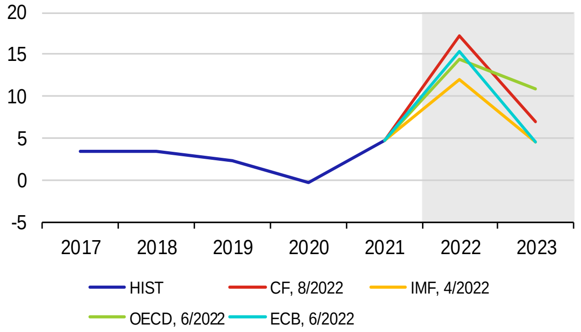
Estonia

GDP growth, %



	CF	IMF	OECD	ECB
2022	1.9	0.2	1.3	1.5
2023	2.2	2.2	1.8	1.9

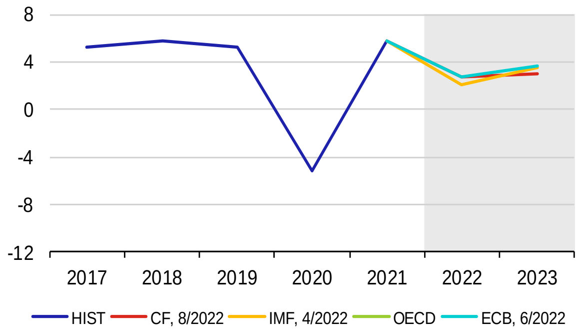
Inflation, %



	CF	IMF	OECD	ECB
2022	17.2	11.9	14.5	15.4
2023	7.0	4.6	10.9	4.5

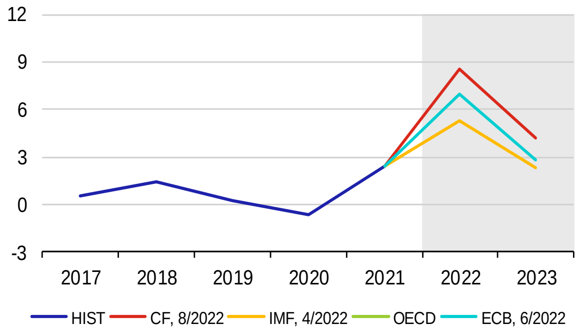
Cyprus

GDP growth, %



	CF	IMF	OECD	ECB
2022	2.7	2.1	n. a.	2.7
2023	3.0	3.5	n. a.	3.6

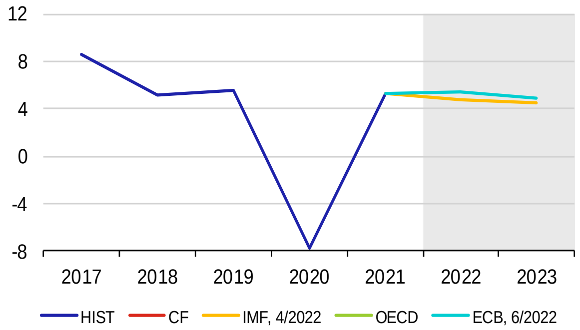
Inflation, %



	CF	IMF	OECD	ECB
2022	8.5	5.3	n. a.	7.0
2023	4.2	2.3	n. a.	2.8

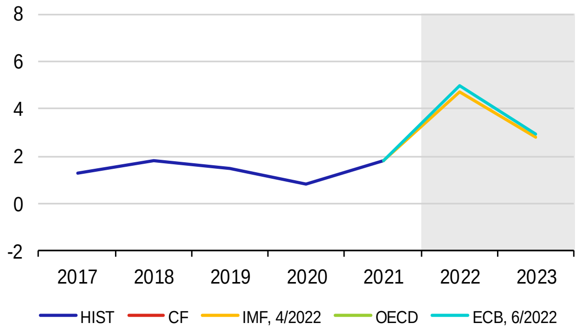
Malta

GDP growth, %



	CF	IMF	OECD	ECB
2022	n. a.	4.8	n. a.	5.4
2023	n. a.	4.5	n. a.	4.9

Inflation, %



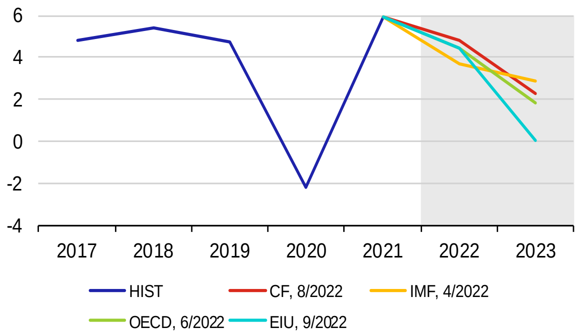
	CF	IMF	OECD	ECB
2022	n. a.	4.7	n. a.	5.0
2023	n. a.	2.8	n. a.	2.9

Ddd

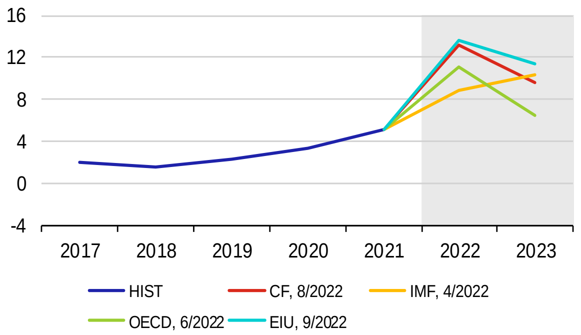
A5. GDP growth and inflation in other selected countries

Poland

GDP growth, %



Inflation, %

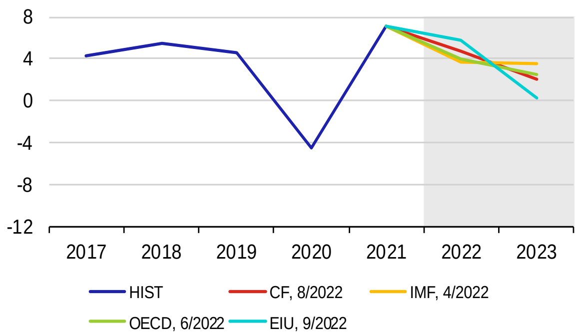


	CF	IMF	OECD	OE
2022	4.8	3.7	4.4	4.4
2023	2.3	2.9	1.8	0.0

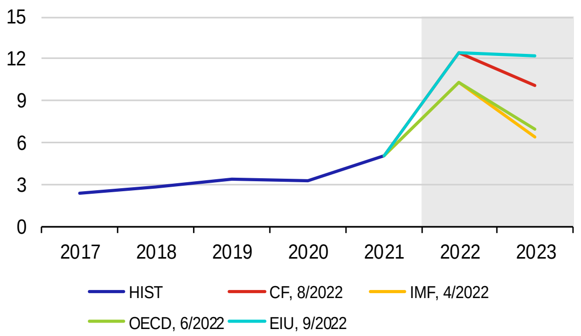
	CF	IMF	OECD	OE
2022	13.2	8.9	11.1	13.6
2023	9.6	10.3	6.5	11.4

Hungary

GDP growth, %



Inflation, %

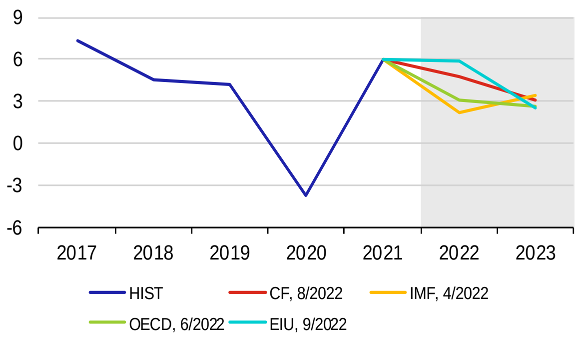


	CF	IMF	OECD	OE
2022	4.7	3.7	4.0	5.8
2023	2.1	3.6	2.5	0.2

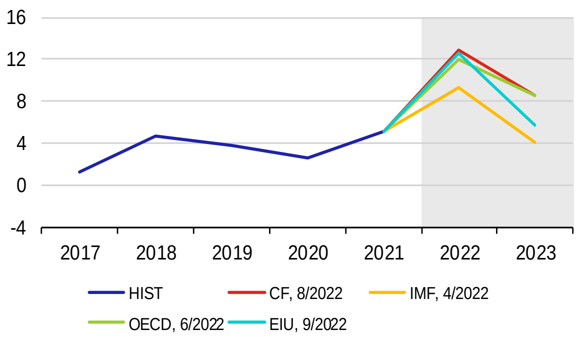
	CF	IMF	OECD	OE
2022	12.4	10.3	10.3	12.4
2023	10.1	6.4	7.0	12.2

Romania

GDP growth, %



Inflation, %



	CF	IMF	OECD	OE
2022	4.7	2.2	3.1	5.9
2023	3.1	3.4	2.6	2.5

	CF	IMF	OECD	OE
2022	12.9	9.3	11.9	12.5
2023	8.5	4.0	8.5	5.7

A6. List of abbreviations

AT	Austria
bbl	barrel
BE	Belgium
BoE	Bank of England (the UK central bank)
BoJ	Bank of Japan (the central bank of Japan)
bp	basis point (one hundredth of a percentage point)
CB	central bank
CBR	Central Bank of Russia
CF	Consensus Forecasts
CN	China
CNB	Czech National Bank
CNY	Chinese renminbi
ConfB	Conference Board Consumer Confidence Index
CXN	Caixin
CY	Cyprus
DBB	Deutsche Bundesbank (the central bank of Germany)
DE	Germany
EA	euro area
ECB	European Central Bank
EE	Estonia
EIA	Energy Information Administration
EIU	Economist Intelligence Unit
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
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
MT	Malta
NIESR	National Institute of Economic and Social Research (UK)
NKI	Nikkei
NL	Netherlands
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
QE	quantitative easing
RU	Russia
RUB	Russian rouble
SI	Slovenia
SK	Slovakia
UK	United Kingdom
UoM	University of Michigan Consumer Sentiment Index - present situation
US	United States
USD	US dollar
USDA	United States Department of Agriculture
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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