

# Global Economic Outlook

October 2023



<b>I. Introduction</b>	<b>2</b>
<b>II. Macroeconomic barometer</b>	<b>3</b>
<b>III. Economic outlook in selected territories</b>	<b>4</b>
<b>III.1 Euro area</b>	<b>4</b>
<b>III.2 Germany</b>	<b>5</b>
<b>III.3 United States</b>	<b>6</b>
<b>III.4 China</b>	<b>7</b>
<b>III.5 United Kingdom</b>	<b>8</b>
<b>III.6 Japan</b>	<b>8</b>
<b>III.7 Russia</b>	<b>9</b>
<b>III.8 Poland</b>	<b>9</b>
<b>III.9 Hungary</b>	<b>10</b>
<b>IV. Leading indicators and exchange rate outlooks</b>	<b>11</b>
<b>V. Commodity market developments</b>	<b>12</b>
<b>V.1 Oil</b>	<b>12</b>
<b>V.2 Other commodities</b>	<b>13</b>
<b>VI. Focus...</b>	<b>14</b>
<b>Who will pay the COVID debt?</b>	<b>14</b>
<b>A. Annexes</b>	<b>19</b>
<b>A1. Change in predictions for 2023</b>	<b>19</b>
<b>A2. Change in predictions for 2024</b>	<b>19</b>
<b>A3. GDP growth and inflation outlooks in the euro area countries</b>	<b>20</b>
<b>A4. GDP growth and inflation in the individual euro area countries</b>	<b>20</b>
<b>A5. GDP growth and inflation in other selected countries</b>	<b>27</b>
<b>A6. List of abbreviations</b>	<b>28</b>

#### Cut-off date for data

13 October 2023

#### CF survey date

9 October 2023

#### GEO publication date

20 October 2023

#### Notes to charts

ECB, Fed, BoE and BoJ: midpoint of the range of forecasts.

The arrows in the GDP and inflation outlooks indicate the direction of revisions compared to the last GEO. If no arrow is shown, no new forecast is available. Asterisks indicate first published forecasts for given year. Historical data are taken from CF, with exception of MT and LU, for which they come from OE.

Leading indicators are taken from Bloomberg and Refinitiv Datastream.

Forecasts for EURIBOR and LIBOR rates are based on implied rates from interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizons). Forecasts for German and US government bond yields (10Y Bund and 10Y Treasury) are taken from CF.

#### Contact

gev@cnb.cz

#### Authors

<b>Luboš Komárek</b>	Editor-in-chief, I. Introduction
<b>Petr Polák</b>	Editor, III.3 United States
<b>Pavla Růžičková</b>	III.1 Euro area
<b>Michaela Ryšavá</b>	III.2 Germany, III.5 United Kingdom
<b>Martin Motl</b>	III.4 China
<b>Martin Kábrt</b>	III.6 Japan, VI. Focus
<b>Jakub Doležal</b>	III.7 Russia
<b>Anna Drahozalová</b>	III.8 Poland, III.9 Hungary
<b>Jan Hošek</b>	V.1 Oil, V.2 Other commodities

## I. Introduction

**Sadly, another military conflict has broken out after the barbaric attack by Hamas on the State of Israel.** Similarly, the Russian Federation continues its unjustifiable aggression in Ukraine and there is no “light at the end of the tunnel” even after 20 months of conflict. Tensions are also intensifying in other parts of the world, mirrored in the heightened uncertainty and nervousness in financial markets as well as in the economic outlook.

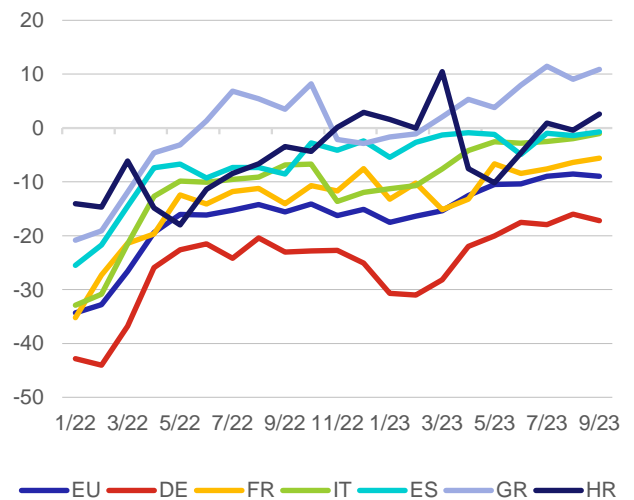
**The global economy will see slightly slower economic growth next year against a background of higher inflation.** In its autumn forecast, the IMF worsened its global economic growth outlook for next year to 2.9%, leaving the outlook for this year unchanged at 3.0%. For the IMF, global economic growth of 3% is weak. The average growth from 2000 to 2019 was 3.8%. Modest growth of around 1.5% is expected in advanced economies, with Germany, Europe’s strongest economy, even contracting this year and growing by no more than 1% next year. Emerging economies will continue to be the driving force of the global economy with 4% growth, although it will also be slightly reduced due to several factors (post-pandemic effects, military conflicts and growing geo-economic fragmentation, extreme weather, and monetary policy tightening by central banks to combat the fading unprecedentedly high inflation wave). Global inflation is projected to decline gradually from 8.7% in 2022 to 6.9% in 2023 and 5.8% in 2024, owing to a tightening of monetary policy supported by lower commodity prices.

**The key central banks already seem to be close to the peak of their interest rate cycle.** The minutes of the latest meetings of the Fed and the ECB showed that the decision between stability and rate hikes was close, and an easing of monetary conditions can only be expected in 2024. Some central banks of small open economies have already announced or implemented such easing, but others are still tightening monetary policy.

**The chart in the current issue shows** that the post-pandemic recovery in air transport is still ongoing. Although according to data from Flightradar24.com, the number of commercial flights worldwide has exceeded the 2019 figure, this is still not the case within the EU, as shown by Eurostat data. In the EU, the number of flights is still about 10% lower than before the pandemic. Of the southern states, Greece is doing well and the number of flights there has already increased by about 10% compared to 2019, while Croatia has also reached roughly pre-pandemic levels this year. This shows that the aviation industry has not recovered in all of the world’s regions, and Europe is still lagging behind.

**The current issue also contains an analysis: “Who will pay the COVID debt?”** The article focuses on the sharp and temporary increase in government spending to fight the COVID-19 pandemic. The article shows that most of the new debt has already been offset by inflation and bond revaluation, but that the final distribution of the COVID-19 burden will depend on developments in the post-pandemic period.

Commercial flights in selected regions over the last two years, %



Source: Eurostat.  
Note: Comparison against the same month in 2019.

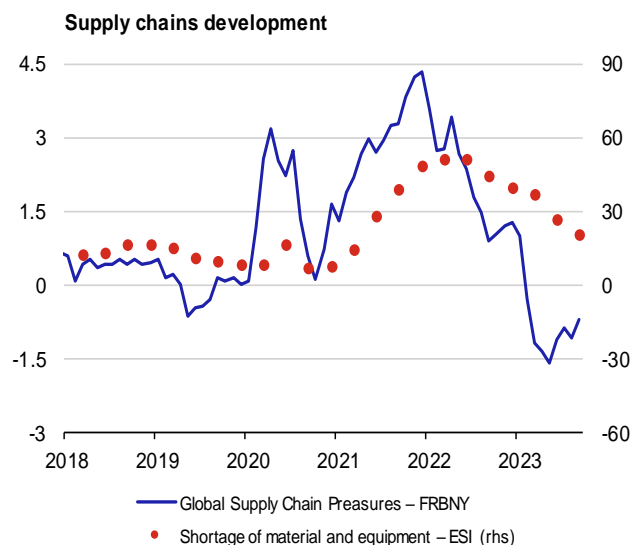
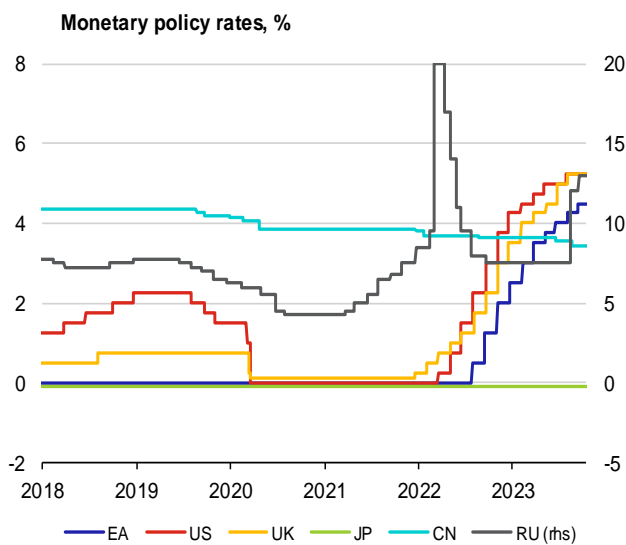
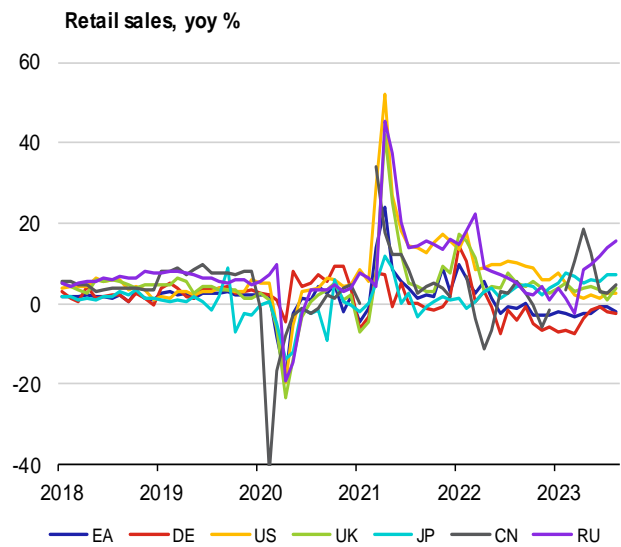
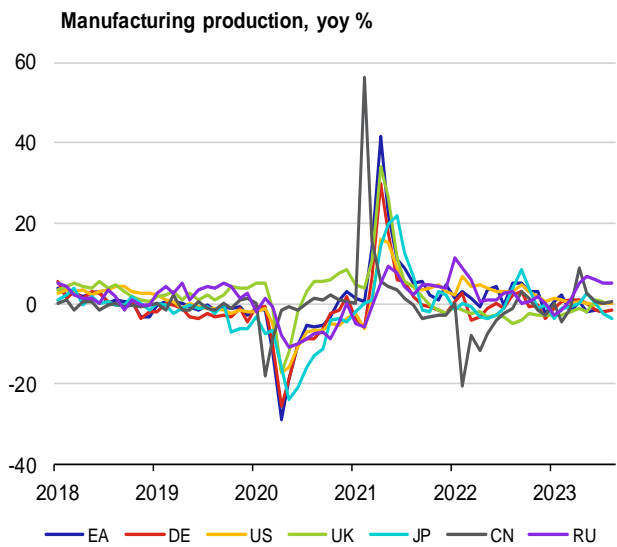
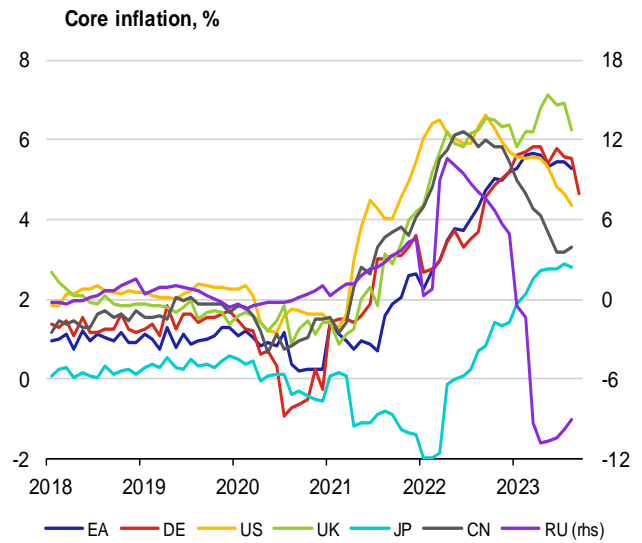
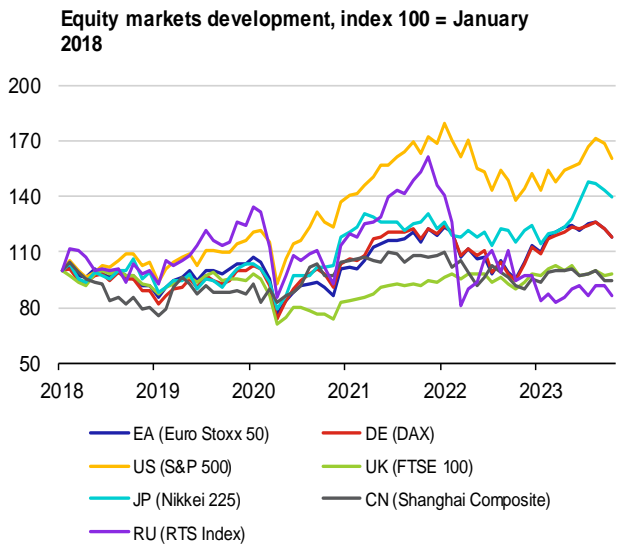
### GEO barometer for selected countries

		EA	DE	US	UK	JP	CN	RU
<b>HDP</b> (%)	<b>2023</b>	0,5 →	-0,4 →	2,2 →	0,4 →	1,9 →	5,0 →	1,4 →
	<b>2024</b>	0,6 →	0,5 →	0,9 →	0,3 →	0,9 →	4,4 →	1,3 →
<b>Inflace</b> (%)	<b>2023</b>	5,6 →	6,1 →	4,1 →	7,4 →	3,2 →	0,6 →	5,7 →
	<b>2024</b>	2,5 →	2,7 →	2,6 →	3,1 →	2,2 →	1,7 →	4,6 →
<b>Nezaměstnanost</b> (%)	<b>2023</b>	6,5 →	5,6 →	3,6 →	4,3 →	2,6 →	3,5 →	3,3 →
	<b>2024</b>	6,7 →	5,7 →	4,3 →	4,3 →	2,5 →	3,4 →	3,4 →
<b>Kurz</b> (vůči USD)	<b>2023</b>	1,10 →	1,10 →		1,26 →	135,3 →	7,28 →	95,3 →
	<b>2024</b>	1,13 →	1,13 →		1,29 →	126,6 →	6,99 →	96,2 →

Source: Consensus Forecasts (CF)

Note: The arrows indicate the direction of the revisions compared with the last GEO.

## II. Macroeconomic barometer



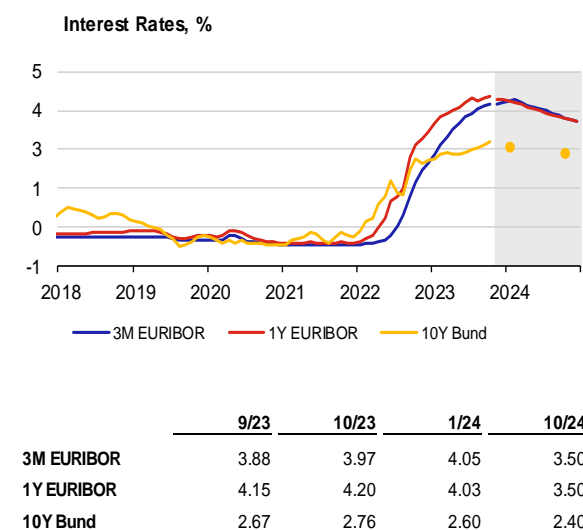
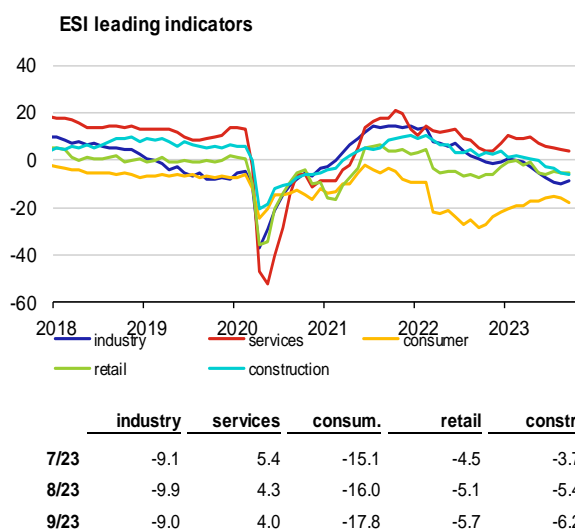
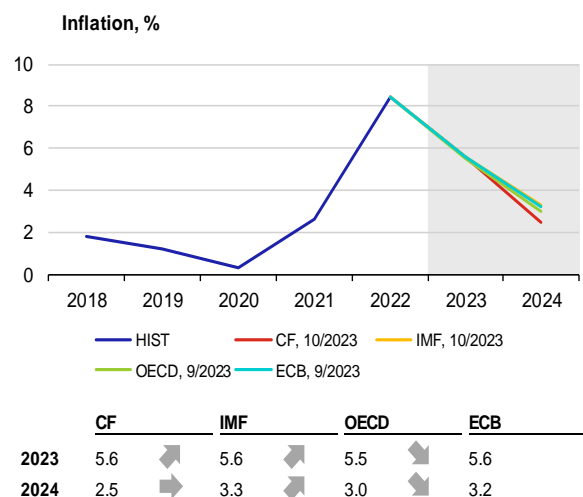
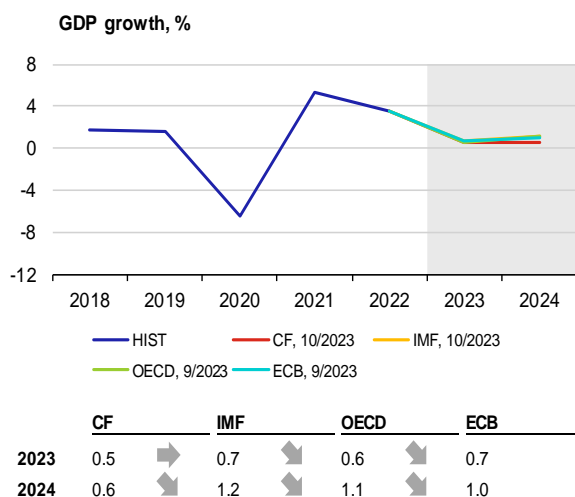
Source: Refinitiv Datastream, European Commission.

### III.1 Euro area

**The economic performance of the euro area will remain subdued in the coming months, yet a recovery is expected.**

GDP was broadly flat in the first half of the year, and new data suggest that the anticipated recovery did not occur in Q3 either. External demand for euro area production remains depressed and is not expected to recover significantly until next year. Tight monetary policy is contributing to a contraction in investment through tighter financial conditions. The services sector, until recently resilient and offsetting the decline in output in industry, is now also reporting declining demand. In general, a heavy cloud of low confidence among both businesses and consumers hangs over the economy. In the medium term, however, economic performance will be boosted by real income growth as the labour market remains tight. Unemployment is at a record low, and continued nominal wage growth in an environment of falling inflation will soon start to stimulate consumer spending growth. Economic growth outlooks have shifted lower. According to the newly issued IMF and OECD forecasts, a return to roughly normal levels (the new euro area GDP growth outlook at a ten-year horizon is 1.1% according to the CF survey) can be expected next year after this year's rather anaemic performance. By contrast, CF is no longer expecting a more pronounced recovery next year.

**Inflation in the euro area will stay elevated next year.** According to the flash estimate, annual HICP inflation slowed to 4.3% in September, with services, non-energy industrial production and food price inflation slowing and the year-on-year decline in energy prices deepening. Disinflation thus picked up pace again after the previous few months. Not only is inflation below double figures in all euro area countries, prices in the Netherlands are now lower than a year ago. However, inflation may be volatile in the coming months due to base effects (reflecting national programmes to help with high energy prices introduced last year). In the longer term, however, it remains necessary to take into account the persistence of elevated inflation, to which now rising energy prices will contribute. They have been accelerating the HICP momentum in recent months. Neither the IMF nor the OECD expect average inflation to fall below 3% in 2024. CF respondents are more optimistic.

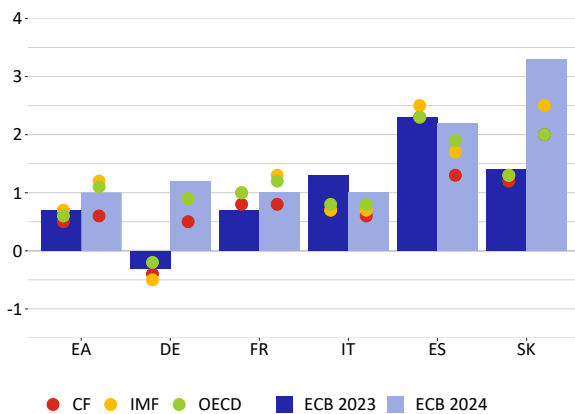


### III.2 Germany

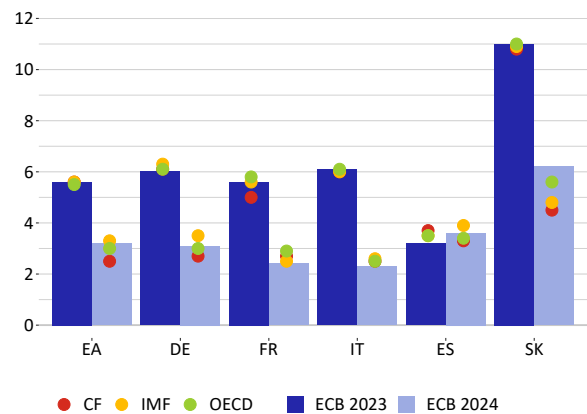
**Worsening forecasts indicate that the German economy will shrink this year, but recovery is expected to follow in 2024.** The economy is struggling with weak household consumption, high inflation and weak demand in the industrial sector, and is generally lagging behind others. According to the new OECD, IMF, CF and German government forecasts, the GDP decline this year will be around 0.5%. The GDP growth outlook for next year is more optimistic, at around 1% (except for CF, which predicts only 0.5%). High interest rates are also a drag on economic growth. In addition, fears of another recession this year persist as a result of the expected economic downturn in Q3. According to the ZEW and Ifo index, business sentiment in the German economy remains gloomy. In particular, the assessment of the current business situation has worsened significantly in month-on-month terms. Pessimism about the coming months has only slightly dissipated, while the German economy is stalling. Consumer sentiment fell once again and is not expected to recover this year. According to the composite PMI indicator, the decline in German business activity slowed slightly in September compared to the previous month, with the index rising to 46.4 points. While activity in services increased slightly (50.3), the manufacturing sector continued its sharp decline (39.6).

**Consumer price inflation recorded a sharp slowdown in September, reaching a two-year low.** Harmonised prices increased by 4.3% year on year. Despite slowing, food price inflation remains above-average, while services inflation decreased and energy prices rose only marginally. However, base effects have played an important role owing to the fading out of last year's government support measures, especially the subsidised EUR 9 tickets for public transport. Core inflation has also slowed, namely below the 5% threshold. New OECD, IMF, CF and German government forecasts see inflation of around 6% this year, but a slowdown to 3% in 2024. Industrial producer prices fell in August for the second month in a row, by 12.6% year on year, the largest decrease since the start of data collection in 1949.

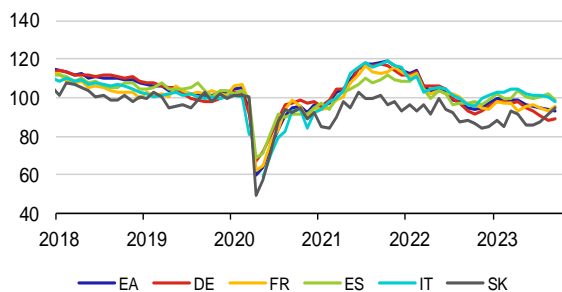
**GDP growth in selected euro area countries in 2023 and 2024, %**



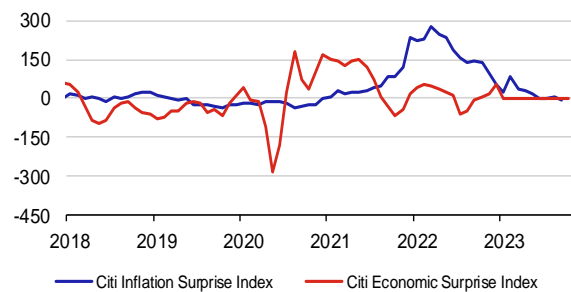
**Inflation in selected euro area countries in 2023 and 2024, %**



**ESI leading indicators**



**Economic and inflation surprises in the euro area, %**



	EA	DE	FR	ES	IT	SK
7/23	94.6	91.1	94.4	100.8	101.1	87.5
8/23	93.6	88.7	93.2	102.2	100.1	91.8
9/23	93.3	89.0	95.9	99.0	97.9	95.0

**Inflation expectations based on 5 year inflation swap and SPF**

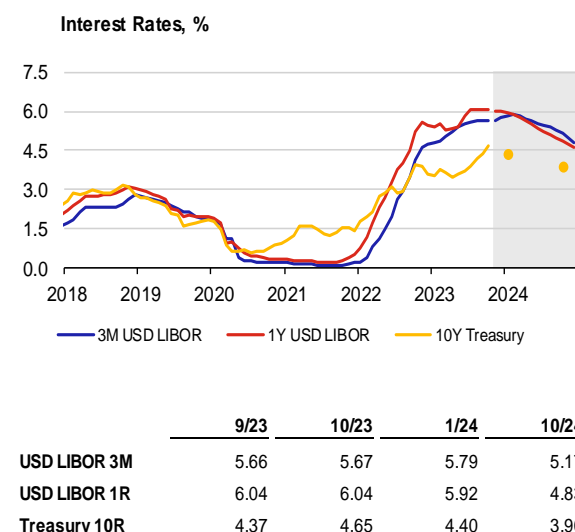
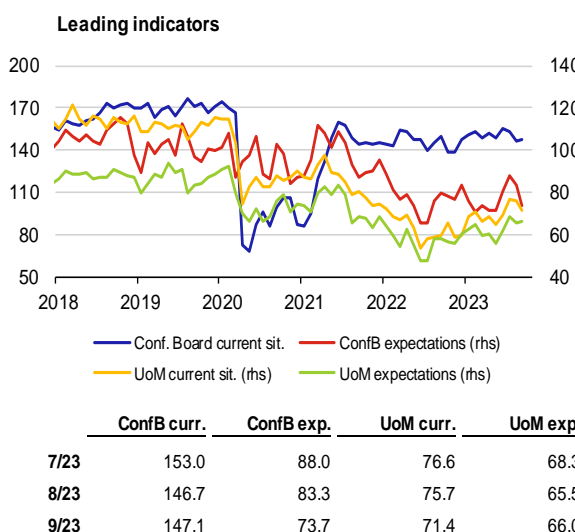
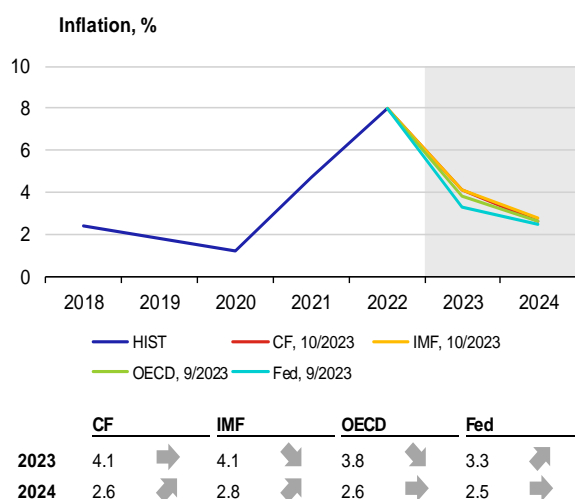
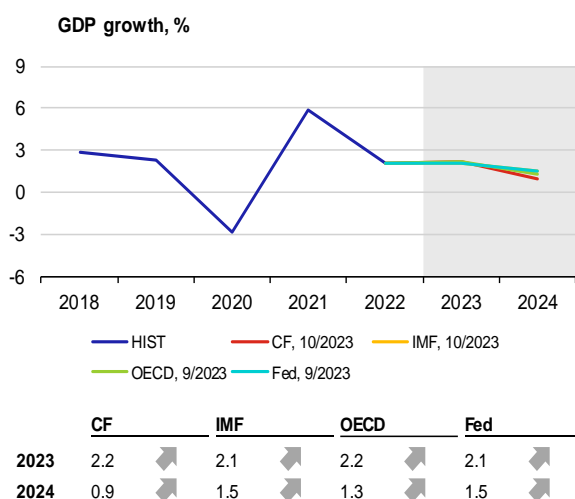
	5y5y	SPF
8/23	2.61	2.14
9/23	2.60	2.14
10/23	2.52	

### III.3 United States

**The outlook for US economic growth has shifted upwards.** The new CF outlook expects GDP growth of 2.2% this year and 0.9% next year. According to a Bloomberg survey, growth will be 2.1% this year, mainly because of developments in Q3, where the figures point to stronger-than-expected investment activity. The new IMF outlook has also led to an increase in growth expectations for the U.S. economy, although the IMF expects more subdued development this year for most advanced economies. Growth continues to be supported not only by government investment incentives, but also by households, which further increased real consumption in September despite a fall in real income. The labour market remains tight and new job figures are not yet indicating any cooling soon.

**Inflation was 0.4% month on month and core inflation 0.3% month on month in September.** The new outlooks from CF analysts expect inflation of 4.1% this year and 2.6% next year. The new IMF outlook is slightly more pessimistic, but even this does not expect inflation to fall below 2% for the year as a whole before 2026. The Fed's September outlooks for this year expect inflation to be higher than in June, at 3.3%, yet the Fed has also retained its outlook of 2.5% for next year and remains the most optimistic of the monitored institutions.

**At its September monetary policy meeting, the Fed left its interest rates within the 5.25%–5.5% range, as expected by the markets and analysts.** The published minutes reveal that Fed representatives expect rates to rise further this year and then remain elevated for some time to successfully tame inflation. However, the markets no longer expect rate hikes and are still waiting for the first reduction in late spring/early summer 2024. A statement about a prolonged period of higher rates led to an increase in US bond yields, with yields reaching almost 5% at the long end. Following Hamas's attacks in Israel, risk sentiment among investors has increased, increasing interest in the US dollar, which thus strengthened vis-à-vis the euro.



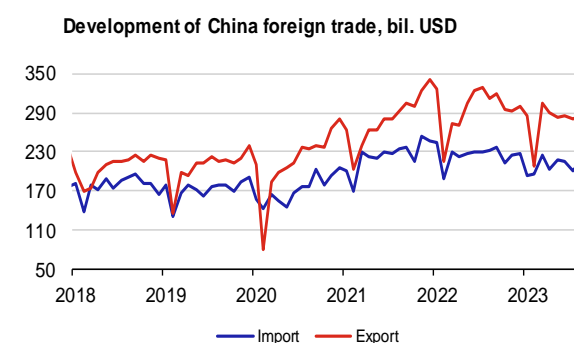
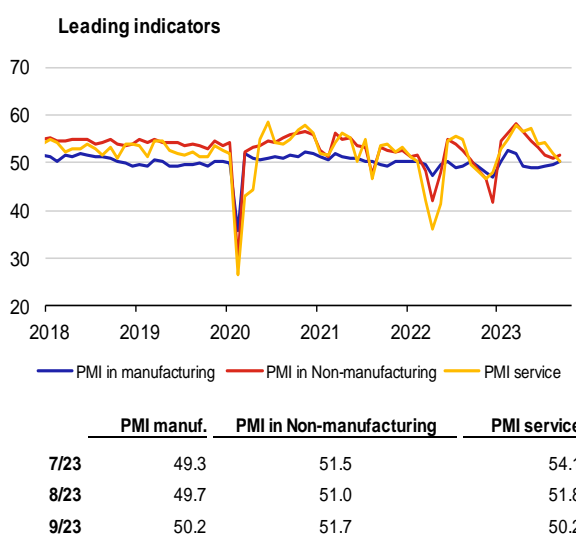
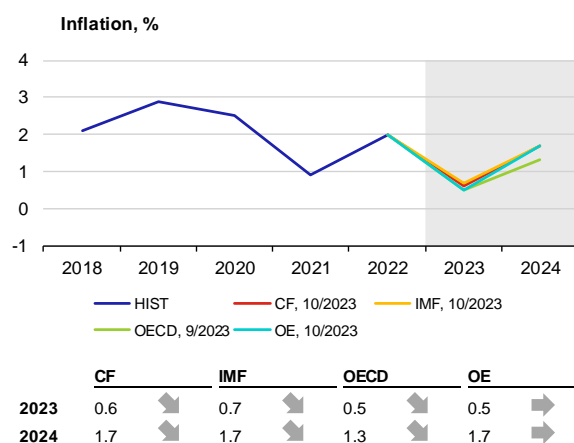
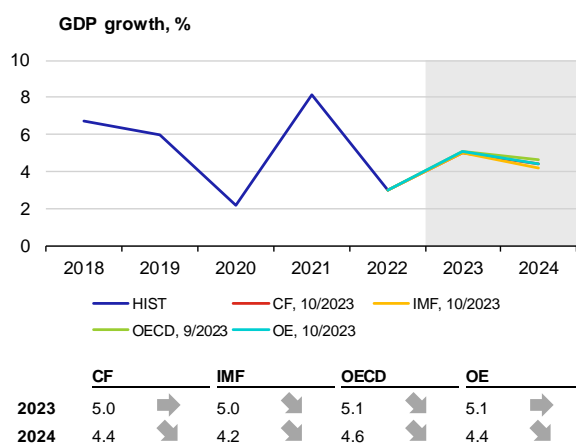
### III.4 China

**Economic activity in China slowed in September according to the most recent indicators.** Industrial production, business loans and retail sales experienced minimal growth or stagnation. The weak growth in new loans is due to banks' increased caution despite the central bank's efforts to soften credit conditions. The crisis in the Chinese real estate sector continues, and impacts the quality of banks' loan portfolios and the finances of provincial governments and municipalities. However, an explicit decline in economic activity is not expected. Especially in retail, the largest year-on-year decline already probably took place at the end of the summer season.

**Corporate confidence indicators fell in late September and early October but remained in the growth area.** The Caixin PMI values in manufacturing and services are at 50.6 and 50.2 points respectively. The values quoted by the National Bureau of Statistics of China are similar, though in this case the PMI in non-manufacturing (51.7 points) is much higher than in manufacturing (50.2 points). Unemployment in urban areas remains low, falling to 5.2% in August. Official government projections for the whole year expect a slightly looser labour market with unemployment at around 5.5%.

**Consumer price inflation was zero in year-on-year terms in September.** This was mostly due to the still falling food prices, while the prices of many services were already rising. However, the deflationary period is likely to end – consumer prices rose by 0.2% month on month. The year-on-year change in producer prices was negative (-2.5%), which meant deflation for the thirteenth month in a row yet at the same time a further moderation in its pace. In month-on-month terms, producer prices rose slightly for the second consecutive month (by 0.4%) in September.

**The external trade balance remained positive in August (USD 68.36 billion) but fell to the levels observed in early summer.** These figures were due to a decline in imports and exports, but exports of precious metals and earths, for example, rose to a record high. Imports of steel products dropped the most in August (by 29% year on year), indicating that sectors dependent on these inputs may contract soon. By contrast, imports of most food commodities increased year on year.

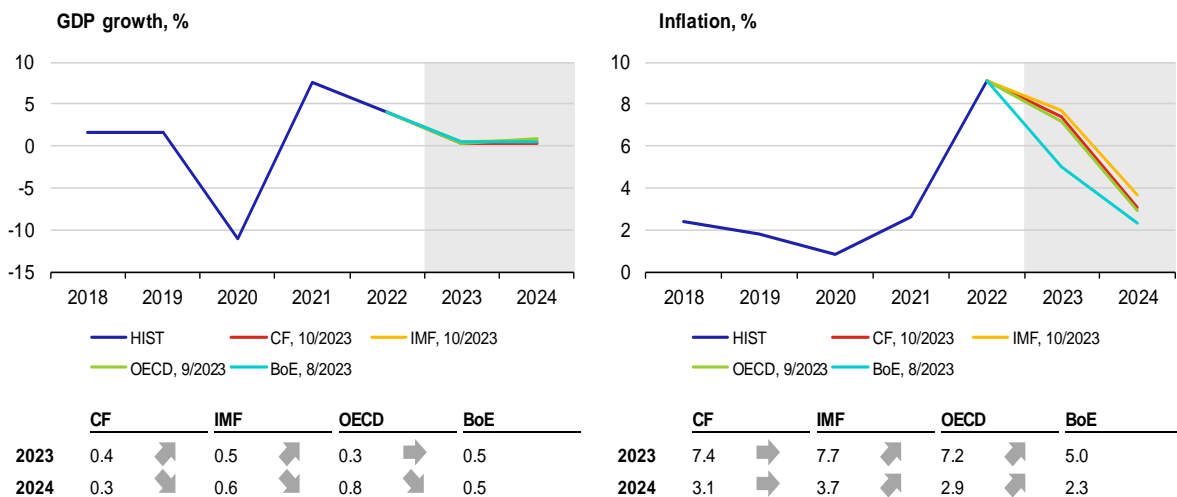


Source: Bloomberg



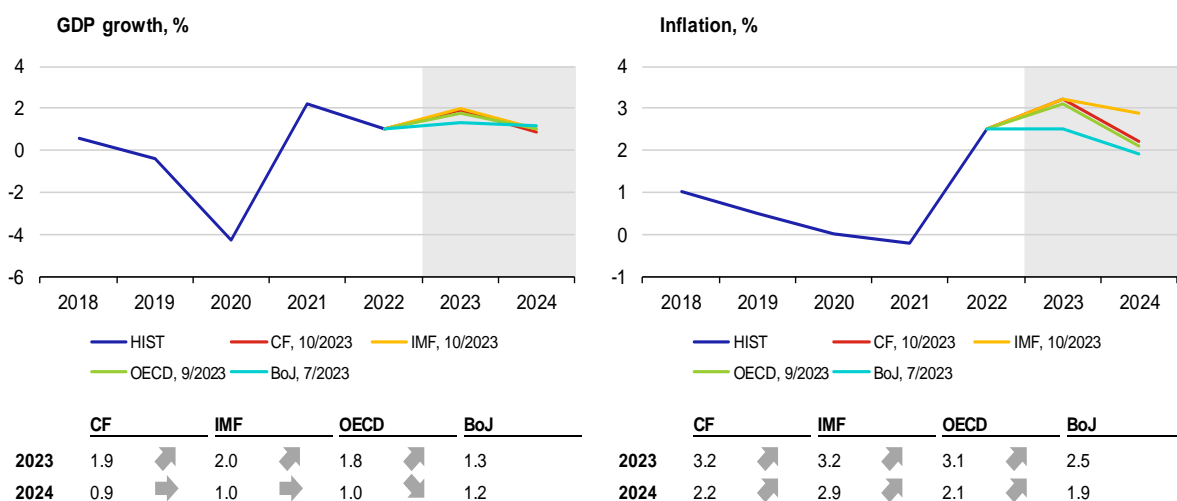
### III.5 United Kingdom

**Consumer prices rose less than expected in August, and the BoE suspended a long series of interest rate increases.** In addition to leaving the rate unchanged at 5.25%, there was also a vote to further reduction in the volume of British government bonds held. According to the BoE, inflation will moderate significantly in the near future, while it reached 6.7% year on year in August thanks to favourable developments in the prices of food and accommodation services (despite rising prices of motor fuels). Key core inflation adjusted for energy and food prices slowed significantly (to 6%), as did growth in services prices. However, given the decline in private sector activity, the risk of recession has not disappeared. The composite PMI fell slightly in September (48.5) on account of a continued decline in manufacturing output, but also a second consecutive decline in activity in the services sector. Business confidence is declining yet consumer confidence increased, although it remains low. The new OECD, IMF and CF forecasts anticipate GDP growth of around 0.5% this year, with growth not exceeding 1% next year, according to the reduced estimates.



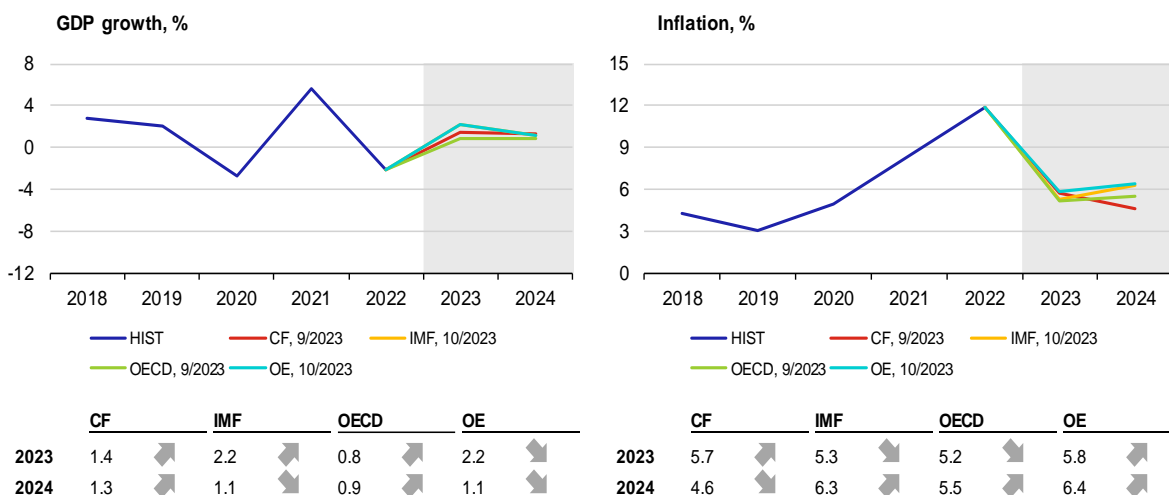
### III.6 Japan

**Favourable business sentiment in Japan suggests that the economy is resilient to the cooling of global demand.** The extensive BoJ Tankan survey showed that the net share of enterprises that consider business conditions to be favourable increased again in Q3. Optimism was particularly surprising in non-industry sectors, where the indicator climbed to its highest level since the early 1990s. Similar sentiment can be seen in financial markets, where major stocks such as Toyota and Honda hit new all-time highs for the first time since the stock market crash more than 30 years ago. Japanese exporters will continue to be supported by the weak yen, which is hovering near the symbolic threshold of 150 yen per dollar, which led to government intervention last year when exceeded. The BoJ unanimously reaffirmed its extremely loose monetary policy stance in September, but market pressure is forcing it to make unplanned purchases of government bonds to maintain its yield curve control policy.



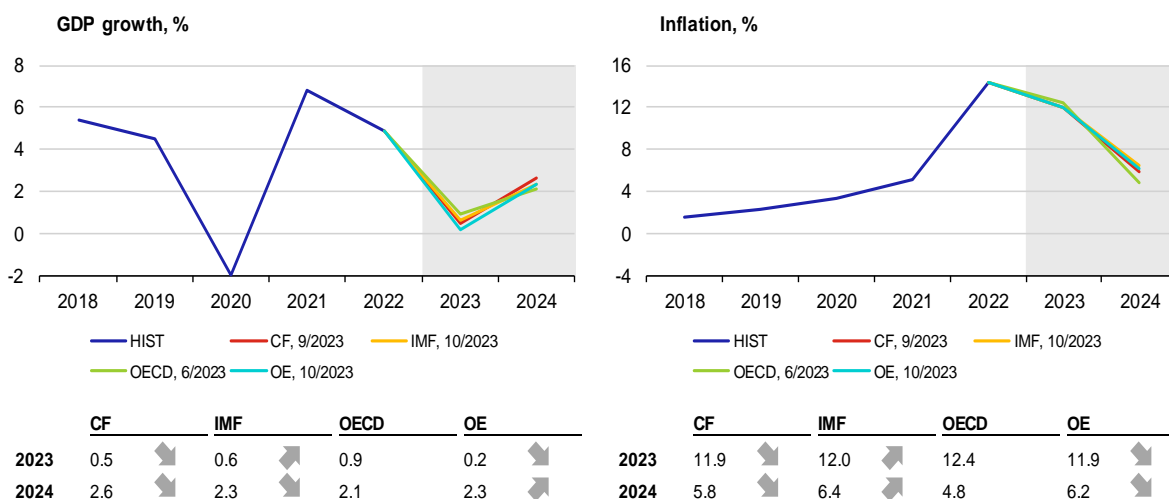
### III.7 Russia

**The rouble continues to weaken despite the hawkish policy of the Russian central bank.** The currency has been oscillating around 100 roubles to the dollar in recent days, making it more difficult to fight inflation. Due to high fuel prices, the government limited and then temporarily prohibited exports of diesel and petrol by sea in September. The ban on the export of most diesel (the part that flows to ports via pipelines) was lifted at the beginning of October but remains in force for petrol. On the other hand, the real sector is showing positive dynamics, driven by strong domestic demand. The September PMI indicates an expansion both in services and especially in manufacturing, where the index rose to its highest values since 2017. The IMF confirmed the trend in a positive revision of its annual GDP growth outlook for this year from 1.5% to 2.2%. As global oil prices surged in the second half of the year, the price of Russian Urals oil moved well above the price ceiling of USD 60 a barrel. This signals the limited effectiveness of this sanction imposed by the G7 at the end of last year, and the parameters of the measures can be expected to change



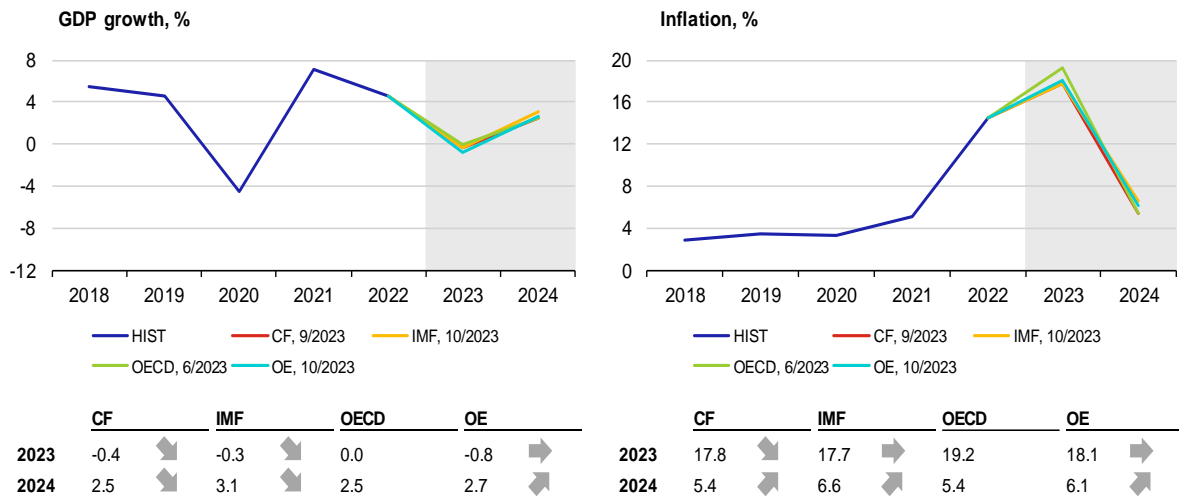
### III.8 Poland

**Inflation in Poland has reached single figures. CF analysts have revised the GDP outlook down by 0.4 pp.** Annual consumer price inflation has returned to single figures for the first time in almost two years (8.2% in September). Prices even fell in month-on-month terms (by 0.4%). Given these favourable price developments, and in line with market expectations, the NBP eased monetary conditions further and reduced its key interest rate to 5.75% in October (6% in September). This step is opportune in an environment of reduced economic activity, when industrial production and retail sales are falling simultaneously. The manufacturing PMI remains in the contraction band for the 17th consecutive month. The weak domestic demand is reflected by a drop in new orders, which are at their lowest levels since the pandemic year of 2020. For this year, CF analysts revised their GDP outlook 0.4 pp lower.



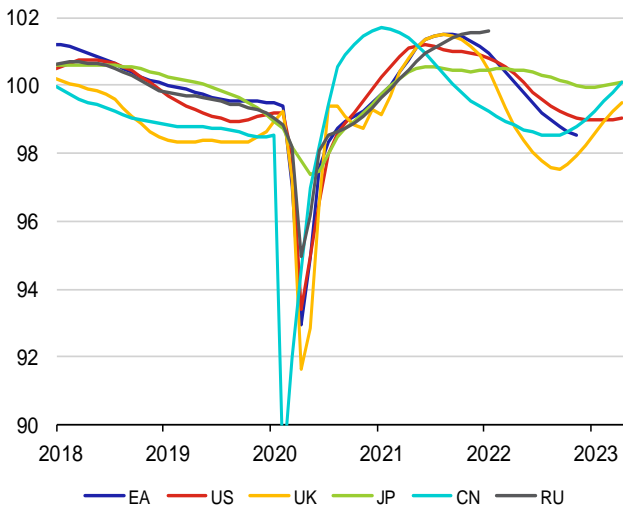
### III.9 Hungary

**In an environment of falling inflation, the MNB is further easing monetary conditions. The GDP outlook for this year have worsened.** As expected, annual consumer price inflation slowed to 12.2% in September (16.4% in August). This sharp decline was mainly due to more moderate growth in food, electricity and gas prices. At its September meeting, in an environment of favourable price developments, the MNB decided to make the last expected reduction in the exceptional interest rate on optional reserves. It thus converged with the key interest rate at 13%. The MNB lowered both the lower and upper bounds of the interest rate range (at 12% and 14% respectively). Following two years of deficits, the current account switched to a surplus in Q2. This was fostered mainly by a positive trade balance, supported in recent months by a weakened forint and subdued domestic demand. Industrial production and retail sales are falling year on year, while the manufacturing PMI remains in the contraction band. CF analysts revised the GDP outlook for this year downwards by 0.3 pp.

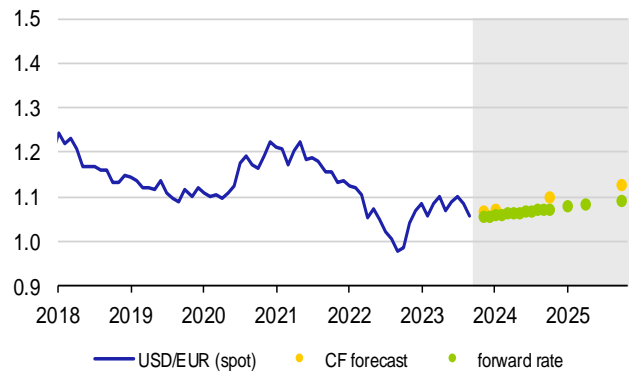


### IV. Leading indicators and exchange rate outlooks

OECD Composite Leading Indicator

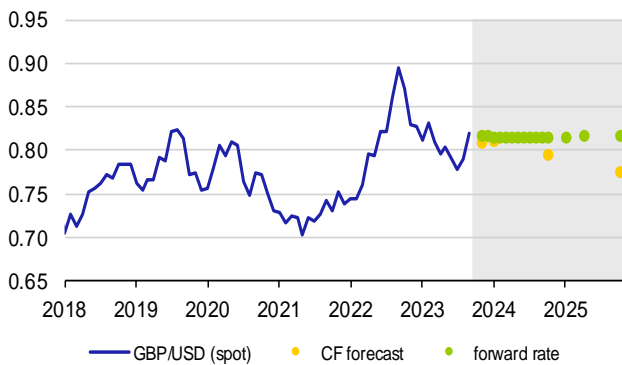


The US dollar (USD/EUR)



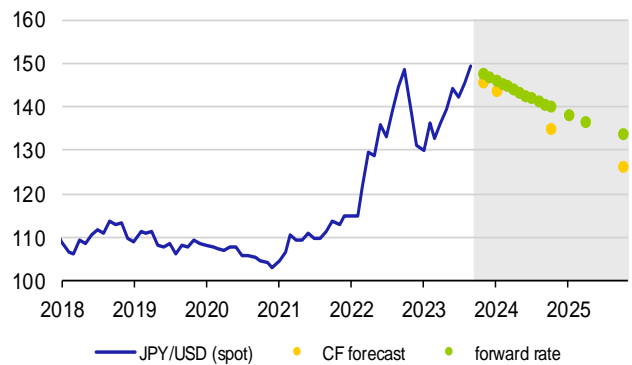
	9/10/23	11/23	1/24	10/24	10/25
spot rate	1.055				
CF forecast		1.068	1.073	1.100	1.129
forward rate		1.058	1.061	1.075	1.092

The British pound (GBP/USD)



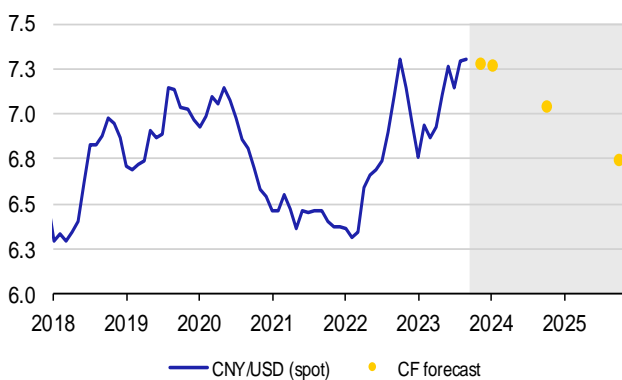
	9/10/23	11/23	1/24	10/24	10/25
spot rate	0.819				
CF forecast		0.810	0.812	0.796	0.776
forward rate		0.817	0.817	0.816	0.818

The Japanese yen (JPY/USD)



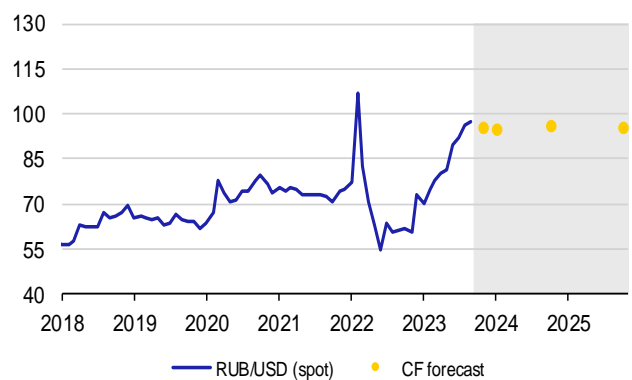
	9/10/23	11/23	1/24	10/24	10/25
spot rate	148.5				
CF forecast		145.7	143.9	135.3	126.6
forward rate		147.7	146.3	140.2	133.8

The Chinese renminbi (CNY/USD)



	9/10/23	11/23	1/24	10/24	10/25
spot rate	7.297				
CF forecast		7.282	7.272	7.041	6.753

The Russian rouble (RUB/USD)



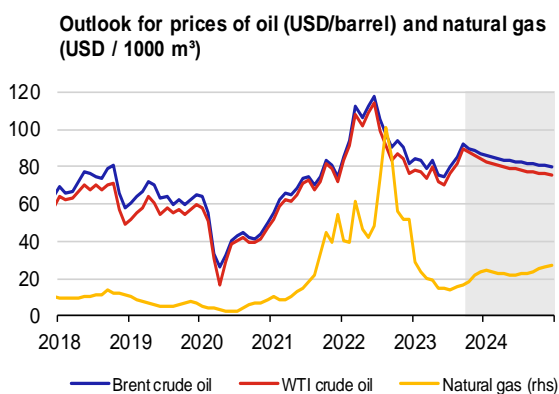
	9/10/23	11/23	1/24	10/24	10/25
spot rate	100.30				
CF forecast		95.84	94.79	96.29	95.60

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

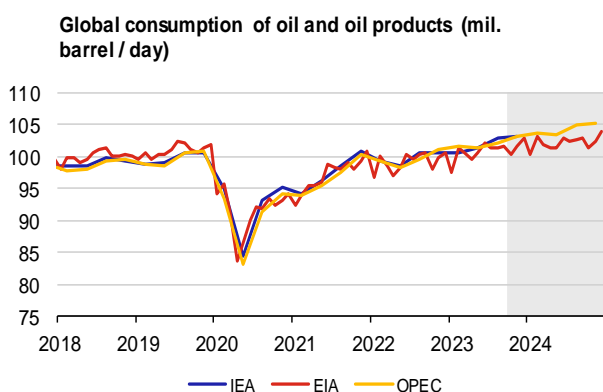
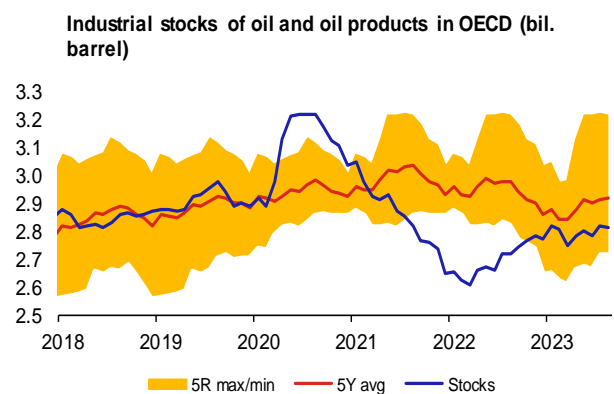
### V.1 Oil

**Brent crude oil price was over USD 95 a barrel at the end of September, then sharply corrected downwards. After the attack on Israel by Palestinian extremists, it resumed growing.** The strong three months long oil price growth due to limited Saudi and Russian production, and extremely low oil and distillates stocks, peaked at the end of September. Later, concerns again prevailed that a prolonged period of high central bank rates would slow global economic growth, also reflected in oil demand. This might be also indicated by US petrol consumption, which fell to the lowest level for this period since 1998 after the end of the motoring season there. Demand also fell in some emerging economies, where the effect of the strong dollar and the unwinding of subsidies led to fuel price rises. The Brent price thus sharply reversed its prior growth, falling to USD 84 a barrel. The Hamas attack on Israel, combined with technical factors, subsequently sent oil prices back up. Though the conflict has not yet limited oil supplies, the IEA estimates it has led to a rise in the risk premium on the market of USD 3–4 a barrel. However, Iran’s later claim that if the blockade of the Gaza Strip continues, Tehran-backed militias could open another front against Israel, added further risk to the conflict, and the Brent price once again rose above USD 90 a barrel. Growth in physical demand for oil remains strong (especially in China, India and Brazil), while the significant growth in Iran oil exports this year partly dampened the production cuts by other OPEC+ countries.

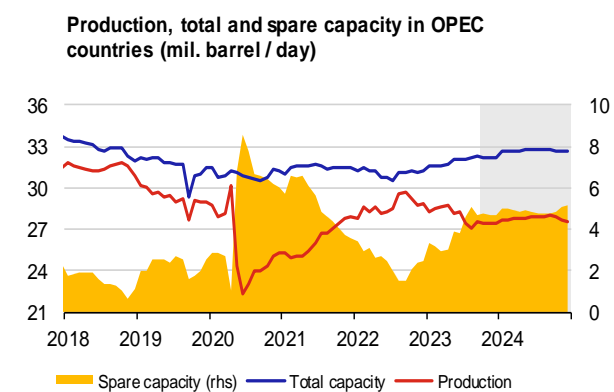
The market curve in mid-October does not yet fully incorporate the impact of the Palestinian-Israeli conflict and has thus shifted slightly downwards. It remains declining, signalling a Brent price of USD 87 a barrel at the end of this year and USD 80 at the end of next year. By contrast, the October CF raised its one-year forecast further to USD 85.5 a barrel. The EIA revised its forecast even further upwards. It expects Saudi Arabia to continue to partially reduce production next year. The market will therefore be in deficit until 2024 Q1, so the Brent price will exceed USD 95 a barrel for most of 2024.



	Brent	WTI	Natural gas
2023	83.66 ↘	79.51 ↘	484.07 ↘
2024	82.66 ↘	78.74 ↘	595.50 ↘



	IEA	EIA	OPEC
2023	102.00 →	100.93 ↘	102.06 →
2024		102.24 ↘	104.30 →



	Production	Total capacity	Spare capacity
2023	27.92 ↘	31.98 ↘	4.05 ↘
2024	27.78 ↘	32.68 ↘	4.90 ↘

Source: Bloomberg, IEA, EIA, OPEC, CNB calculation

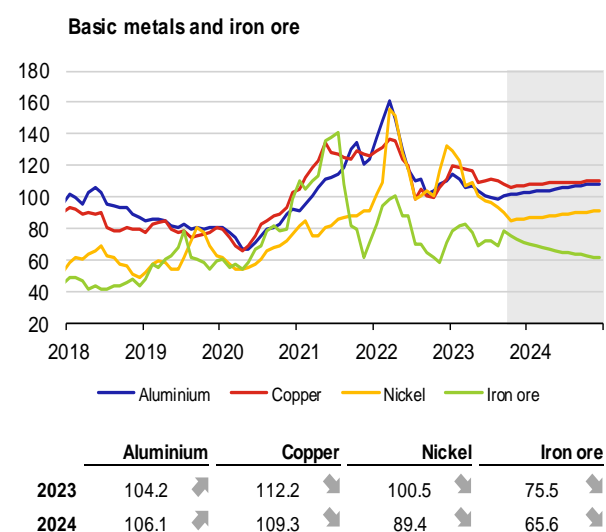
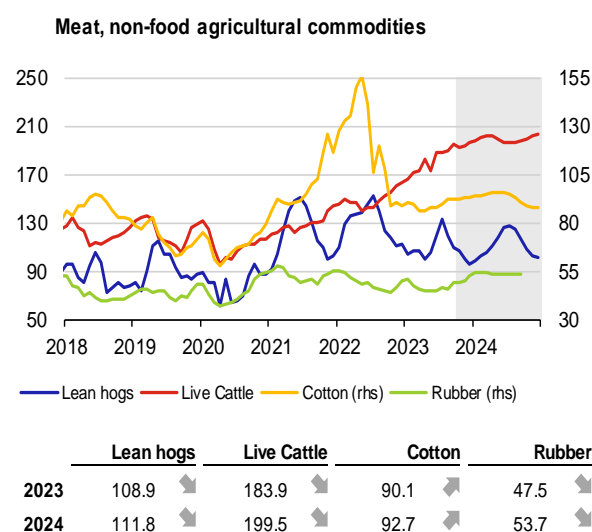
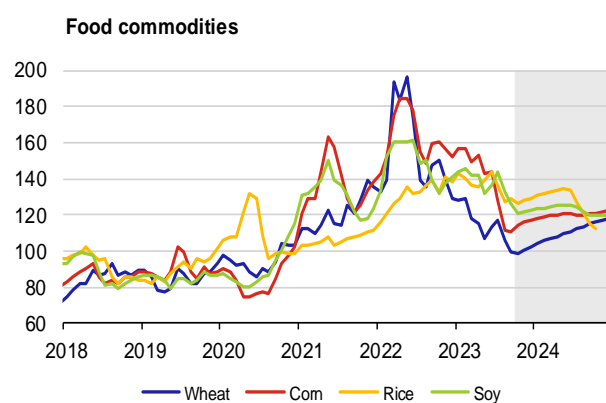
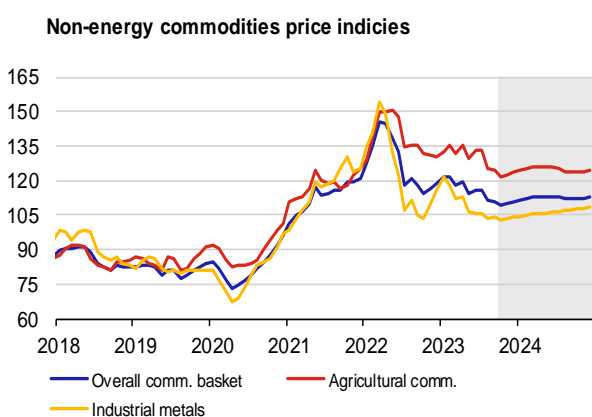
Note: Oil price at ICE, average natural gas price in Europe – World Bank data. Future oil and gas prices (grey area) are derived from futures. Industrial oil stocks in OECD countries – IEA estimate. Production and extraction capacity of OPEC – EIA estimate.

## V.2 Other commodities

**Natural gas prices surged in Europe in the second week of October and climbed back above EUR 50/MWh for the first time since early April.** On the demand side, they were boosted by a forecast of colder weather in Europe, while on the supply side several factors were at work simultaneously: the resuming strike at Australian LNG export terminals, closure of the largest production field in Israel for safety reasons (which could also limit LNG exports from Egypt) and shutdown of the Balticconnector gas pipeline between Finland and Estonia due to leaks (under speculation of intentional damage). Gas storage facilities in Europe were 95% full at the end of September and demand from industry remains weak, but in the event of an extremely cold winter or attacks on gas infrastructure in Europe, the gas price could continue to rise sharply. US gas prices rose sharply due to a drop in local gas extraction and rising exports of LNG and pipeline gas to Mexico. The sharp fall in coal prices in Europe halted in August. Since then, prices have risen slightly due to higher import demand from China.

**The food commodity price index continued to decline in September and the first half of October.** This was mainly due to the prices of wheat (which reached three-year lows in October), soybeans and coffee. By contrast, the price of corn switched to slight growth following a previous decline, and the price of sugar again shifted upwards (to a 12-year high). The price of cocoa has fallen slightly from its all-time high, while the price of beef has risen to a record level.

**After a temporary rise in September, the industrial metals price index edged down in the first half of October.** While the government-stimulated Chinese economy is pushing up metal prices, the weak manufacturing activity elsewhere and the strengthening of the dollar have an opposite effect. In the index, aluminium and iron ore prices increased slightly. Demand for steel in China remains weak due to the bleak construction situation, though this is offset by strong demand from abroad. The government is also planning to further increase investment in infrastructure projects. Copper, nickel and tin prices fell.



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.

## Who will pay the COVID debt?<sup>1</sup>

From the perspective of public finances, the COVID pandemic is reminiscent of a period of war. The sharp and temporary increase in government spending to combat the pandemic was financed in developed countries not from collected taxes, but from debt and money creation. Does this then mean that we will be passing on the “COVID bill” to the coming generations? This article shows that most of the new debt has already been offset by inflation and bond revaluations. COVID expenditure has thus already been partially “paid for” from the investment losses of government bond holders and need not become a burden we are leaving for future taxpayers. However, historical experience shows that the “post-war” years are also of key importance, with high interest and deflation compensating investors for their wartime capital losses. This effect is also apparent in the current high interest rates, yet it is far from targeted deflation. In the long run, it is therefore likely that, like after the Second World War, COVID debt will be reduced by a combination of inflation and growth, while the contribution of surplus budgets (i.e. future taxpayers) will not be large.

### Who pays the state

“Our kids are never gonna forgive us for this.” In the first debate of the candidates for the Republican Party’s nomination for President of the United States in August 2023, politician and former US ambassador to the United Nations Nikki Haley was referring to the dramatic increase in the country’s government debt since the start of the COVID pandemic.<sup>2</sup> Yet is Haley right that we are leaving the COVID debt burden to the coming generations? “It’s time to put an accountant in the White House,” Haley concluded her speech. So let’s start from an accounting perspective.

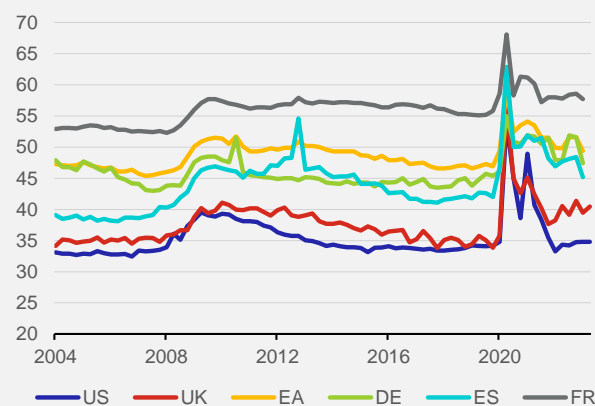
**Every state needs resources to perform its functions, and they acquire them in three ways: by taxing residents, by issuing bonds and by creating money.** In all these cases, the state receives real resources – only the countervalue it offers for them is different. A taxpayer simply hands over part of their wealth to the state. By contrast, a creditor receives a bond for their money, i.e. receives a financial claim of the nominal value of the principal and additionally a promise of interest income. In the third case, the banknote is the countervalue. This is similar to a bond, the difference being that money does not bear interest but can be used to pay for things. Virtually every modern state relies on a combination of all three sources – taxation, bonds and money. However, their relative importance differs significantly, both across states and over time.

**Is debt or monetary financing of public budgets merely deferred taxation?** In normal times, when inflation is low, interest rates do not change much and governments meet their obligations to creditors, bond yields are predictable and money retains relatively stable purchasing power. In such a situation, the government’s debt rises and falls depending on whether the budget is in deficit or surplus, and public finances can only be healed by increasing tax revenues or cutting expenditures. Public debt can indeed be seen as a “burden” that today’s taxpayers create for future taxpayers.<sup>3</sup>

**However, in turbulent times, such as wars in the past in particular, this may not be the case. This is because the taxpayers share the burden with holders of government bonds.** A clear example is the situation in which the state fails to honour its obligations to creditors (e.g. by declaring partial or total insolvency). Yet investors may also suffer losses even in less extreme situations, such as when the market value of the government bonds they hold falls or when unexpected inflation erodes the real value of both principal and interest.

**Chart 1 – The COVID pandemic brings short-term but dramatic growth in government expenditure**

(general government expenditure as a share of GDP, %)



Source: Eurostat, ONS (UK), FRED (US), author’s calculation

<sup>1</sup> Written by Martin Kábrt. The opinions expressed in this article are his own and do not necessarily reflect the official position of the Czech National Bank. The author would like to thank Anna Drahozalová for her research assistance, and colleagues at the CNB for their helpful insights.

<sup>2</sup> Experts, too, are hinting at gloomy prospects. For example, B. Eichengreen and S. Arslanalp (2023) prepared their audience for the “new reality” of high debt in the most discussed contribution to the Jackson Hole central bankers’ symposium.

<sup>3</sup> Albeit with three reservations. First, residents are not only the debtors, but also the creditors of public debt, as the vast majority of government bonds are held directly or indirectly by domestic investors (see, e.g., Frait, Komárková and Szabo, 2021). Thus, both debts and financial claims are left to “future generations”. Second, the growing prosperity of the economy reduces this future “burden”. If GDP grows faster than interest accumulates, it will be easier for future generations to repay the debt than it would be for today’s generation. However, this condition often does not hold in developed countries (Checherita-Westphal, 2019). Third, unlike households, the state is “immortal”. It can refinance its debts forever and never has to repay them – meaning each future generation can pass on the debts to the one coming after them. Beyond a certain level, however, debt can limit the government’s fiscal space or even enter an unsustainable trajectory. These considerations are discussed in more detail in an earlier issue of Global Economic Outlook (Komárek, 2019).

## The COVID bill has already arrived

**The COVID-19 pandemic led to a sharp increase in government spending** (Chart 1). This short-term but dramatic increase in government expenditure was similar to what happens during a war. Hall and Sargent (2022), for example, show that the increase in federal spending in the USA in 2020 and 2021 was similar to that in the two world wars. Likewise, the proportion of people who did not work during the COVID shutdowns and received contributions from the state was comparable to the proportion of the population that served in the army during the Second World War.

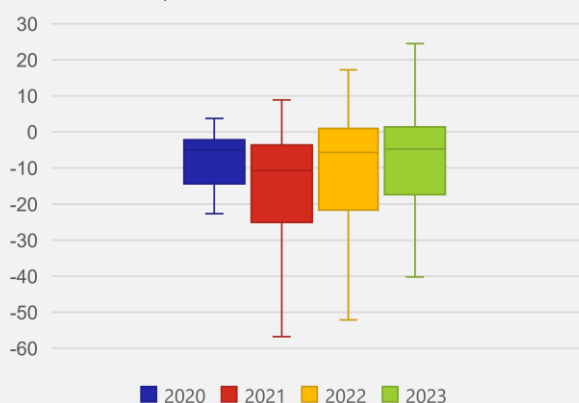
**As government revenues did not increase, the COVID “war” expenditure led to a significant increase in the already high debt levels in developed countries.** The way the pandemic expenditure was financed thus also has a close parallel in past wars. There has been practically no increase in taxes to cover the COVID expenditure. All developed countries financed the expenditure shock by issuing new bonds and money.<sup>4</sup>

**It may therefore seem strange that financial markets and rating agencies have shrugged off the risks of public debt.** The price of CDS credit derivatives, which are de facto insurance against sovereign default, actually decreased for the median developed country in 2020 and remained below pre-pandemic levels in 2021 and 2022 (Chart 2). A similar picture is painted by rating agencies, which improved the ratings of developed countries more often than downgrading them over this period.<sup>5</sup> Part of the explanation may lie in the record easing of monetary policies during COVID, pushing the interest costs of public debt to historic lows. Yet why did nothing change even in 2022, when central banks changed course and initiated the sharpest increase in the cost of borrowing since the 1980s?

**This is because most of the “COVID bill” has already been repaid. So it will not necessarily require future increases in taxation or cuts.** One useful example is provided by the USA. Chart 3 shows the evolution of the federal debt from the beginning of 2019 to the first quarter of 2023. The blue line shows that if neither the size of the economy nor prices had grown since 2019, the volume of debt would have risen from 100% of GDP at the end of 2019 to almost 135% of GDP at

**Chart 2 – In spite of the sharp rise in public debt, insurance against sovereign defaults has not become more expensive**

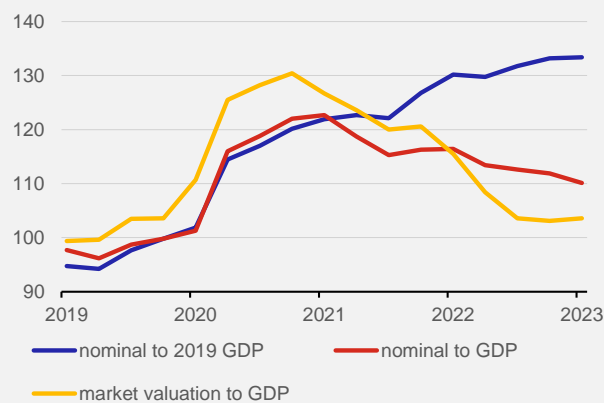
(CDS spread in bp; deviation from the 2015–2019 average; developed countries, 2020–2023)



Source: Refinitiv, author's calculation

**Chart 3 – Repayment of the US federal debt would require the same proportion of the country's economic output as before the pandemic**

(development of the US federal debt, % of GDP)



Source: BIS, author's calculation

the end of March 2023. The red line shows the ratio of debt to actual GDP, which first rose sharply but then fell again to 110% of GDP due to economic growth and (especially) inflation. The yellow line shows the same but uses its market value instead of the nominal valuation of the debt. This can be thought of as the amount the US government would need if it wanted to repay all of its debts.<sup>6</sup> Expressed in this way, the ratio of federal debt to the size of the economy is at roughly the same level as before COVID. In other words, if the USA wanted to repay its entire public debt, it would now need the same proportion of the country's economic output as before it increased its debt during the “war” against COVID.

<sup>4</sup> Such a response is also recommended in the literature, because a sharp increase in taxes would create distortions in the economy and deepen an already serious economic crisis (e.g. Barro, 1979).

<sup>5</sup> For example, Moody's upgraded its ratings for seven countries and downgraded only one (Britain). Fitch made four upgrades and one downgrade (Slovakia).

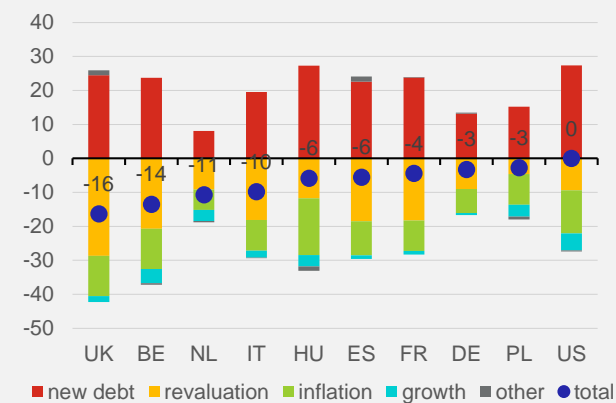
<sup>6</sup> By contrast, the nominal value is the amount (principal) borrowed by the US government. On the one hand, the nominal value of the debt underestimates the actual debt burden, as it does not take into account the interest (coupon rate) that the government has to pay regularly. On the other hand, it overestimates the nominal value of the debt burden, as it does not in any way discount the principal that may be payable decades into the future. The market value of the debt takes into account coupon rates and discounting.



**How is this possible? COVID expenditure has been repaid by holders of government bonds through investment losses and inflation** (Hall and Sargent, 2023a). During the COVID years, government bond investors lent to developed countries at extraordinarily low – and even negative – interest rates. The subsequent sharp rise in rates caused a sharp fall in the value of such securities, i.e. a loss for investors. The loss in real terms was exacerbated by inflation, which eroded the purchasing power of the currency in which the investments were denominated.

**Chart 4 – COVID expenditure has (so far) been paid by investors in government bonds**

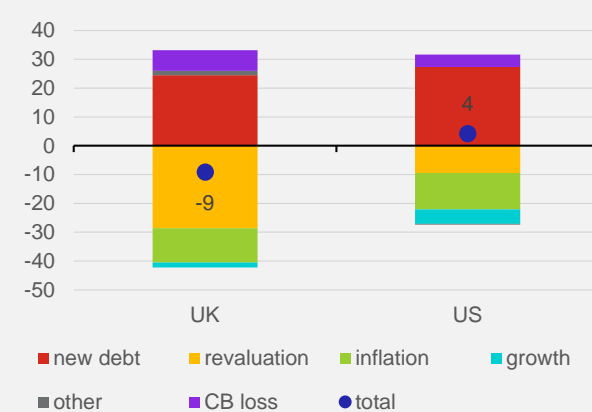
(breakdown of changes in public debt in market valuation to GDP, 2019 Q4 – 2023 Q1, pp)



Source: BIS, ONS, FRED, Eurostat, author's calculation

**Chart 5 – However, central banks also incurred part of the investment losses**

(breakdown of changes in net government and CB debt in market valuation to GDP, 2019 Q4 – 2023 Q1, pp)



Source: BIS, ONS, FRED, Eurostat, HM Treasury, FED, CNB, author's calculations

Note: The ECB does not disclose the market value of its QE portfolio, so the size of the bank's (unrealised) losses cannot be estimated.

**However, this effect was felt differently across countries depending on the size and structure of the government debt, interest rate developments and inflation.** Chart 4 breaks down the changes in the debt-to-GDP ratio (market value) between the end of 2019 and the first quarter of 2023 for ten selected economies. The UK's long average bond maturity, for example, has caused more severe revaluation than in other economies (because it will take investors much longer to swap the old, low-interest bonds for new, high-interest bonds). In Italy, France, Spain and Belgium, higher public debt contributed to greater revaluation. In Poland and Hungary, the real debt burden was pushed down mainly by inflation. In addition to inflation and revaluation, which shift the "burden" of COVID debt to investors, economic growth has also contributed to partial deleveraging in some countries. This does not shift the burden, but reduces it – making it easier for society as a whole to pay for the COVID expenditure.

**Investor participation in financing wars has been common in history.** Hall and Sargent (2021 and 2023b) use examples of American and British wars since the 19th century to document the development of investment yields on government bonds during and after these wars. According to their research, up to the First World War it was common for wartime inflation to wipe out much of the public debt (in real terms) and for investors to suffer large losses. In the post-war period, however, economic policy sought a return to the gold standard (i.e. pre-war prices). The combination of deflation and high interest rates enabled investors to achieve high returns. Such compensation of investors for their wartime capital losses was intentional. It was designed to ensure that investors were willing to finance the next war as well. In the end, the final bill for the war (after taking into account the post-war years) fell to the taxpayers. It was not until the Second World War that this historical pattern was disrupted, after which countries no longer sought to return to pre-war prices. By contrast, high inflation continued in the post-war years and contributed significantly to the reduction of the debt burden. Real growth was the second, comparably important, effect. By contrast, the contribution of surplus budgets – i.e. taxpayers – was significantly smaller both in the USA (Hall and Sargent, 2021) and in Britain (Wickens, 2022).

**The "post-war" compensation of investors for their COVID losses is already under way – at least in part.** The fierce fight by the major central banks to tame inflation from 2022 onwards, which has also driven long-term government bond yields high, will lead to relatively generous (real) investment returns in the decade after the pandemic.<sup>7</sup> Yet these efforts are far from managed deflation. As in the aftermath of the Second World War, investors will most likely not be fully compensated and the COVID debt will remain "amortised" primarily by a combination of inflation and growth, while the contribution of surplus budgets (i.e. taxpayers) will be less important.

<sup>7</sup> At the end of September 2023, ten-year US bond yields are close to 4.6%, although the financial markets expect average inflation to be just above the Fed's 2% target in the same period. Similar real yields are implied by the prices of US inflation-linked bonds.

### What if the state borrows from itself?

**However, the current episode is still unusual in historical context. Central banks today are important creditors of many countries.** In the aftermath of the global financial crisis and again in response to the outbreak of the pandemic, the central banks of many developed countries launched extensive quantitative easing programmes, during which they purchased securities, most often their own government bonds, using the newly created liquidity. The public sector as a whole thus de facto exchanged the government's long-term liabilities for the central bank's short-term liabilities.

**Then, when the value of long-term government bonds fell in 2022, the central banks bore part of the investment losses.** The distinction whether a loss occurs in government or central bank accounts can, for many accounting and legal reasons, play a role.<sup>8</sup> From a fundamental economic point of view, however, the central bank is part of the public sector, so its financial results ultimately affect public finances – directly or indirectly.<sup>9</sup> Therefore, if we want to estimate the part of the public COVID debt paid by private investors through their asset losses, the original estimate needs to be adjusted for the investment losses incurred by taxpayers through the central bank. Chart 5 shows the original breakdown of the debt-to-GDP changes for the UK and the USA, adjusted for the accounting loss of the central bank arising from the revaluation of the portfolio of securities holdings.

**In the case of the United States and Britain, while the inclusion of the central bank reduces the contribution of private investors to government “deleveraging”, it remains clear.** Even when the central bank's loss is taken into account, the conclusion that the COVID debt has already been largely “repaid” through the investment losses of private holders of government bonds remains true for these countries.

### Conclusion

**To avoid any misunderstanding, this article does not describe the long-term evolution of public debt, which is likely to continue to grow in the coming years (Gaspar et al., 2023).** It focuses solely on the COVID episode that led to a sharp one-off rise in debt at record-low interest rates. In the USA, the United Kingdom, the euro area and the other countries under comparison, it has already been significantly reduced through revaluation and inflation – i.e. by the investment losses of the debt creditors – and need not be a burden for future generations.

**However, the final distribution of the COVID burden will also depend on the post-pandemic period.** Not all investment losses have been realised, and future developments in interest rates and inflation may redistribute wealth back to investors at the expense of taxpayers. Indications so far are that part of the investment losses will return to holders of government bonds over the next decade, which, according to the financial markets, will be characterised by low inflation and fairly high real yields. However, these will not be able to fully reverse the inflation episode and the majority of the COVID debt (in real terms) is likely to be amortised by inflation and real growth (as in the aftermath of the Second World War).

**Who will ultimately pay the COVID debt plays a role.** The average bond holder is wealthier than the average taxpayer, which is why the current inflation and revaluation of bonds has led to a redistribution of wealth in favour of poorer households that benefited from government support programmes during the COVID period. Further redistribution may take place between residents and non-residents. This is because investors in government bonds are often non-resident, while taxes are almost exclusively paid by residents.

### References

- Barro, R. J. (1979), “On the determination of the public debt”, *Journal of Political Economy* 87(5): 940-971.
- Arslanalp, S. and Eichengreen, B. (2023), “Living with High Public Debt”, Working Paper presented at the Jackson Hole Economic Policy Symposium, August 2023.
- Frait, J., Komárková, Z. and Szabo, M. (2021), “Rostoucí zadlužení státu, provázanost mezi vládním a finančním sektorem a rizika pro finanční stabilitu”, *cnblog*, [https://www.cnb.cz/cs/o\\_cnb/cnblog/Rostouci-zadluzeni-statu-provazanost-mezivladnim-a-financnim-sektorem-a-rizika-pro-financni-stabilitu/](https://www.cnb.cz/cs/o_cnb/cnblog/Rostouci-zadluzeni-statu-provazanost-mezivladnim-a-financnim-sektorem-a-rizika-pro-financni-stabilitu/).
- Gaspar, V., Poplawski-Ribeiro, M. and Yoo, J. (2023), “Global Debt Is Returning to its Rising Trend”, *IMF blog*, 13 September 2023, <https://www.imf.org/en/Blogs/Articles/2023/09/13/global-debt-is-returning-to-its-rising-trend>.
- Hall, G. J. and Sargent, T. (2021), “Debt and Taxes in Eight U.S. Wars and Two Insurrections”, chapter 27 of *The Handbook of Historical Economics* (editors Alberto Bison and Giovanni Federico), Academic Press, 2021.
- Hall, G. J. and Sargent, T. (2022), “Three World Wars: Fiscal-Monetary Consequences”, *Proceedings of the National Academy of Sciences*, Vol. 119, No 18, 3 May 2022.

<sup>8</sup> A central bank cannot, for example, become insolvent – it can always meet its obligations by creating new money. Unlike the government, it also determines how it will remunerate its obligations. In practice, however, the use of these privileges to repay its own debt is incompatible with the price stability mandate.

<sup>9</sup> Central banks usually distribute their profits to public budgets. Losses are treated differently in different jurisdictions – either they are paid by the government (and affect public budgets immediately) or remain on the central bank's balance sheet and are covered by its future profits (thus affecting future public budgets through lower central bank profit levies).

Hall, G. J. and Sargent, T. (2023a), “Fiscal Consequences of the US War on COVID”, paper presented at the 2023 Bank of Korea International Conference, 15 May 2023.

Hall, G. J. and Sargent, T. (2023b), “Financing Big U.S. Federal expenditures Surges: COVID-19 and Earlier U.S. Wars”, Chapter 10 in How Monetary Policy Got behind the Curve – And How to Get Back (editors Michael D. Bordo, John H. Cochrane, and John B. Taylor) Stanford, CA: Hoover, 2023.,

Checherita-Westphal, C. (2019), “Interest rate-growth differential and government debt dynamics”, ECB Economic Bulletin, Issue 2/2019, [https://www.ecb.europa.eu/pub/economic-bulletin/focus/2019/html/ecb.ebbox201902\\_06~0c96ee6f7c.en.html](https://www.ecb.europa.eu/pub/economic-bulletin/focus/2019/html/ecb.ebbox201902_06~0c96ee6f7c.en.html).

Komárek, L. (2019), “[How heavy a fiscal burden are we carrying to interest rate base camp? The fiscal and monetary space in OECD countries](#)”, Global Economic Outlook 3/2019, Czech National Bank.

Wickens, M. R. (2022), “How may the UK’s Debt-GDP ratio be reduced? Evidence from the last 120 years”, CEPR Discussion Paper DP17172, ISSN 0265-8003.

### **Keywords**

public debt, inflation, central banks

### **JEL Classification**

E58, F34, F62

## A1. Change in predictions for 2023

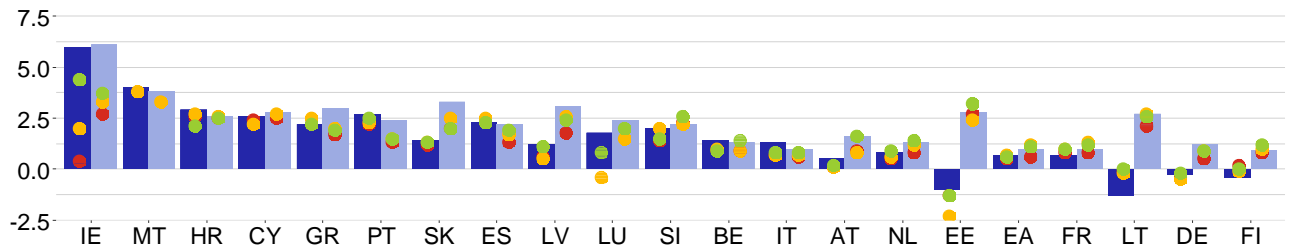
	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / OE	CF	IMF	OECD	CB / OE
EA	0	-0.2	-0.3	-0.2	+0.1	+0.3	-0.3	+0.2
US	+0.1	+0.3	+0.6	+1.1	0	-0.4	-0.4	+0.1
UK	+0.1	+0.1	0	+0.2	0	+0.9	+0.3	0
JP	+0.1	+0.6	+0.5	-0.1	+0.1	+0.5	+0.3	+0.7
CN	0	-0.2	-0.3	0	-0.1	-1.3	-1.6	0
RU	+0.4	+0.7	+2.3	-0.2	+0.3	-1.7	-0.2	+0.2

## A2. Change in predictions for 2024

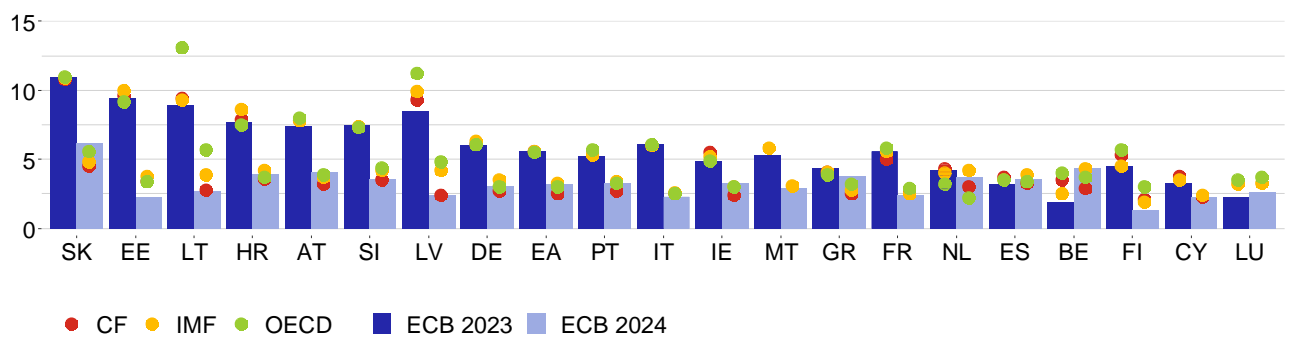
	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / OE	CF	IMF	OECD	CB / OE
EA	-0.1	-0.3	-0.4	-0.5	0	+0.4	-0.2	+0.2
US	+0.1	+0.5	+0.3	+0.4	+0.1	+0.5	0	0
UK	-0.1	-0.4	-0.2	-0.3	0	+0.7	+0.1	0
JP	0	0	-0.1	0	+0.2	+0.7	+0.1	-0.1
CN	-0.1	-0.3	-0.5	-0.2	-0.1	-0.5	-0.7	0
RU	+0.1	-0.2	+1.3	-0.1	-0.2	+1.7	+0.3	+1.1

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

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



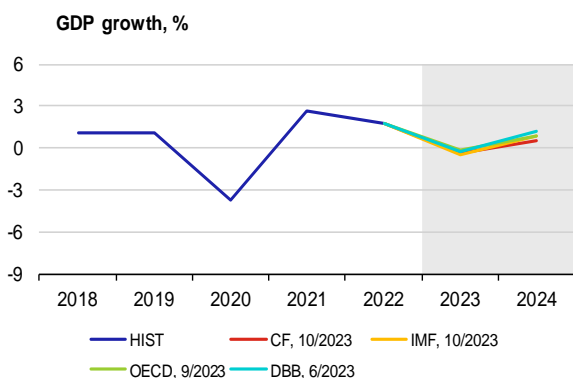
Inflation in the euro area countries in 2023 and 2024, %



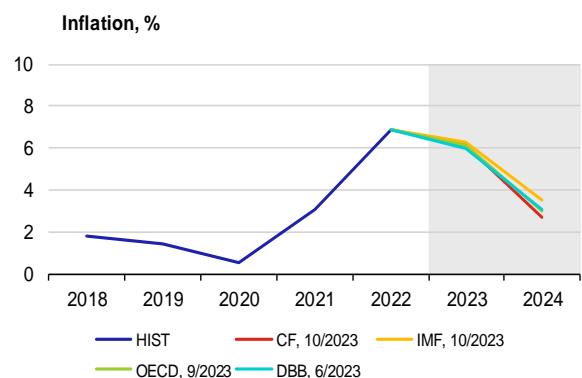
Note: Charts show institutions' latest available outlooks of for the given country.

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

#### Germany

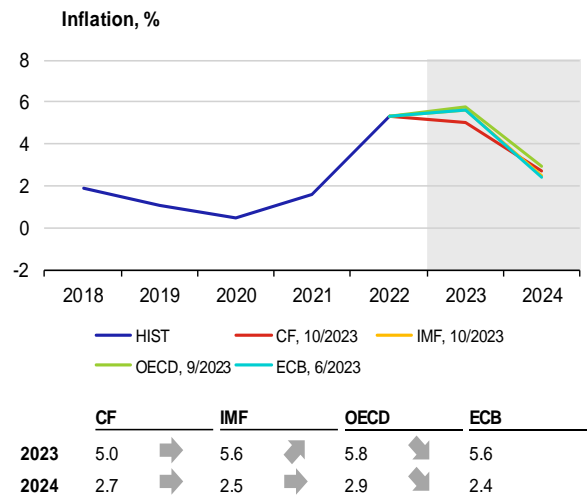
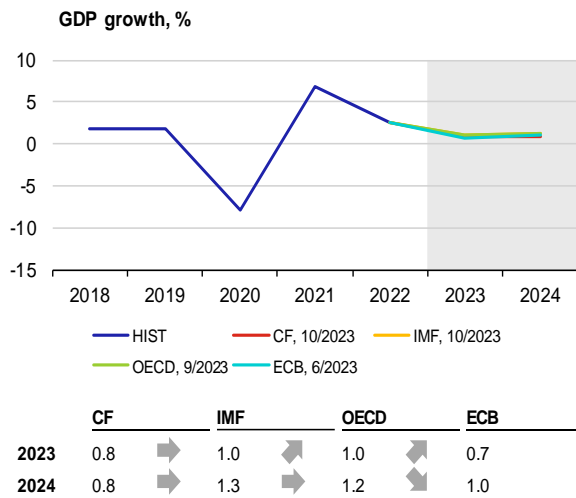


	CF	IMF	OECD	DBB
2023	-0.4	-0.5	-0.2	-0.3
2024	0.5	0.9	0.9	1.2

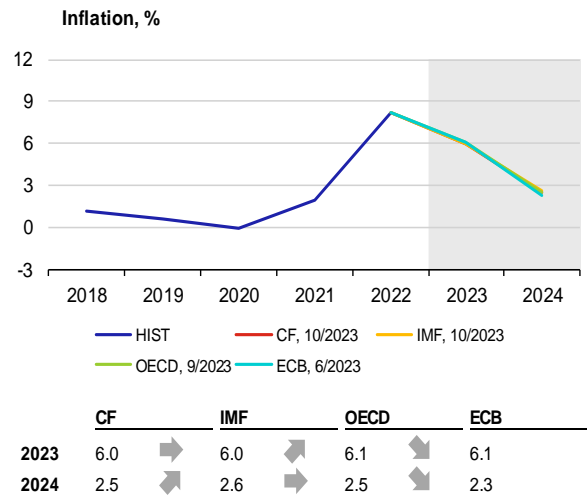
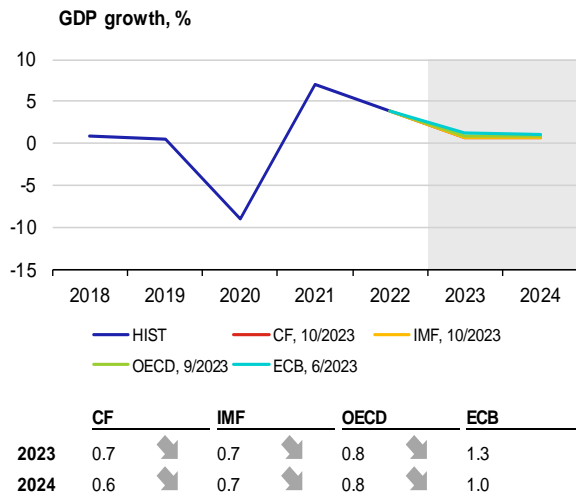


	CF	IMF	OECD	DBB
2023	6.1	6.3	6.1	6.0
2024	2.7	3.5	3.0	3.1

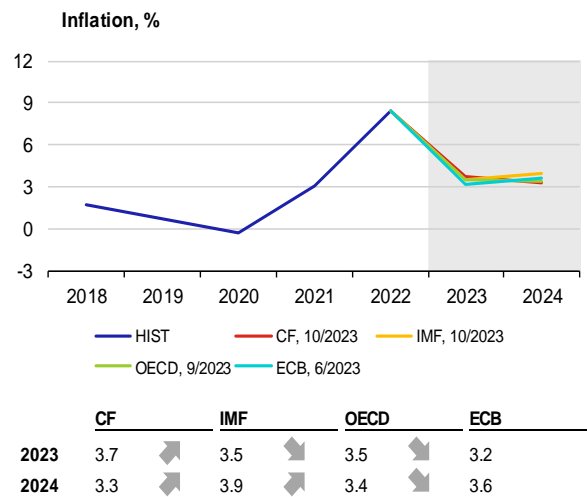
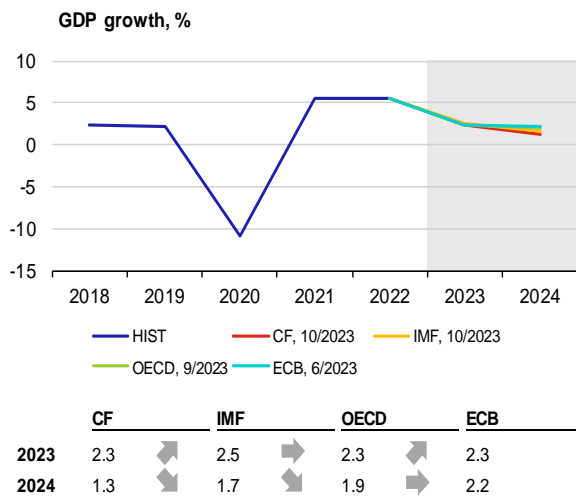
## France



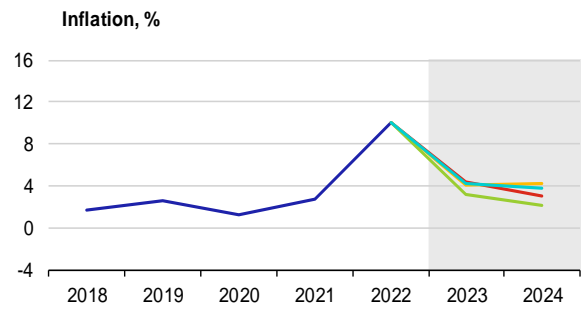
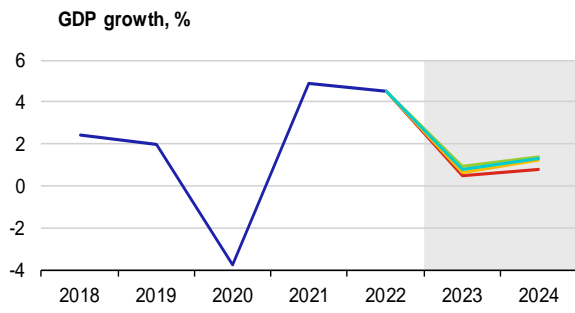
## Italy



## Spain



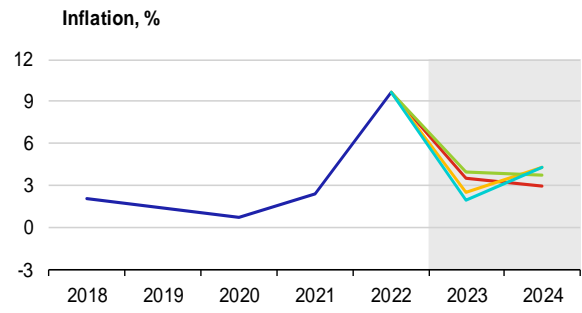
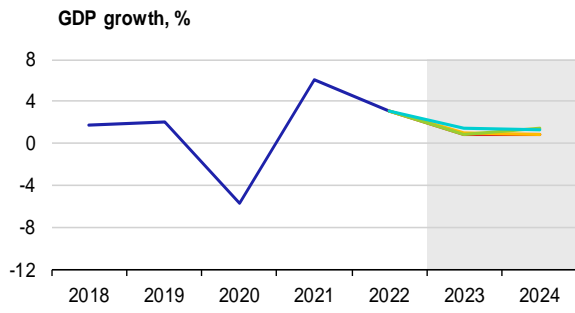
## Netherlands



	CF	IMF	OECD	ECB
2023	0.5	0.6	0.9	0.8
2024	0.8	1.2	1.4	1.3

	CF	IMF	OECD	ECB
2023	4.3	4.0	3.2	4.2
2024	3.0	4.2	2.2	3.7

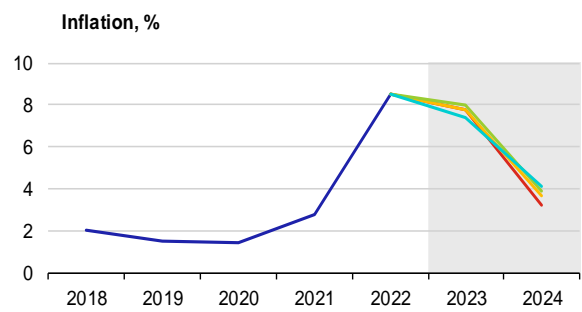
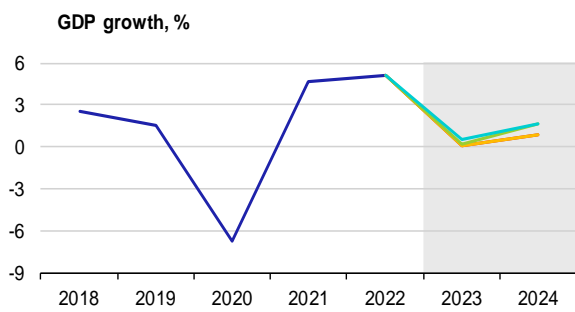
## Belgium



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

	CF	IMF	OECD	ECB
2023	3.5	2.5	4.0	1.9
2024	2.9	4.3	3.7	4.3

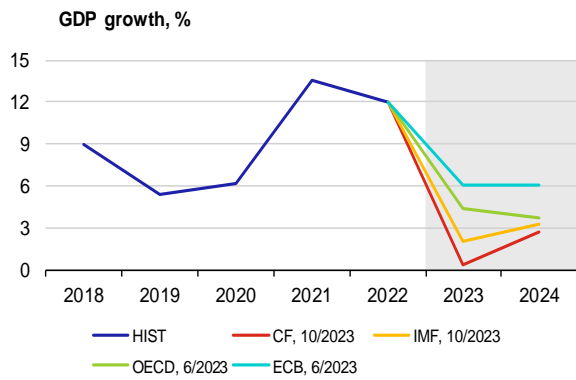
## Austria



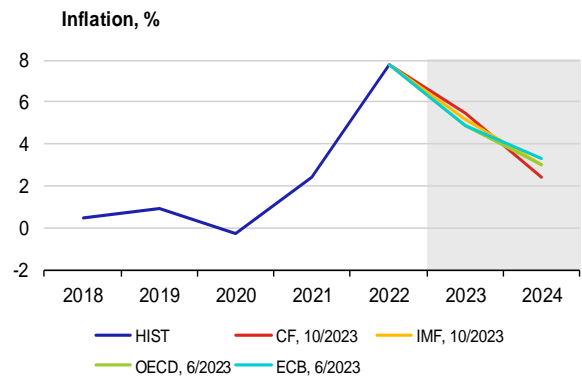
	CF	IMF	OECD	ECB
2023	0.1	0.1	0.2	0.5
2024	0.9	0.8	1.6	1.6

	CF	IMF	OECD	ECB
2023	7.8	7.8	8.0	7.4
2024	3.2	3.7	3.9	4.1

## Ireland

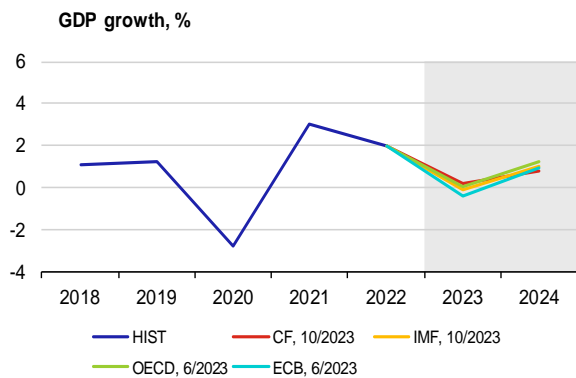


	CF	IMF	OECD	ECB
2023	0.4	2.0	4.4	6.0
2024	2.7	3.3	3.7	6.1

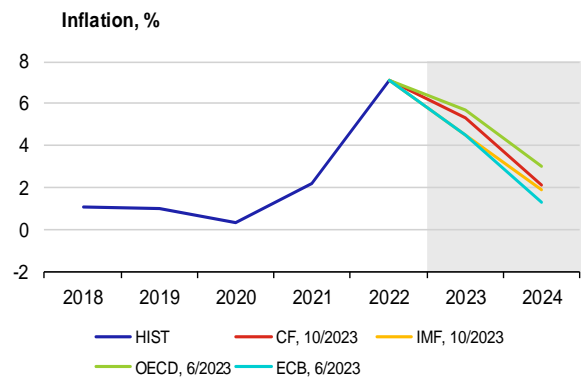


	CF	IMF	OECD	ECB
2023	5.5	5.2	4.9	4.9
2024	2.4	3.0	3.0	3.3

## Finland

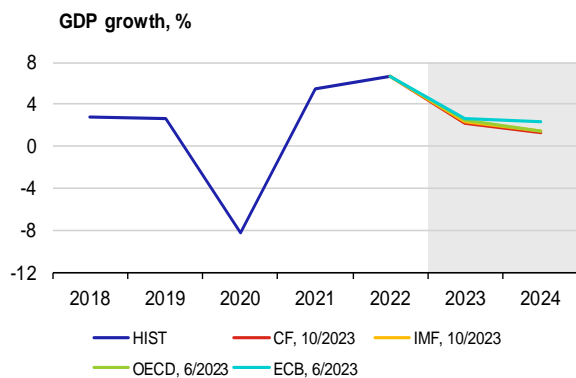


	CF	IMF	OECD	ECB
2023	0.2	-0.1	0.0	-0.4
2024	0.8	1.0	1.2	0.9

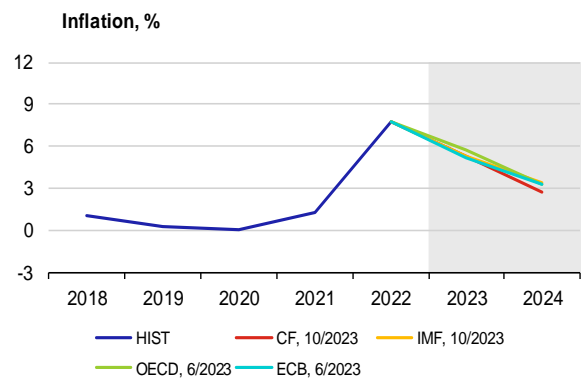


	CF	IMF	OECD	ECB
2023	5.3	4.5	5.7	4.5
2024	2.1	1.9	3.0	1.3

## Portugal



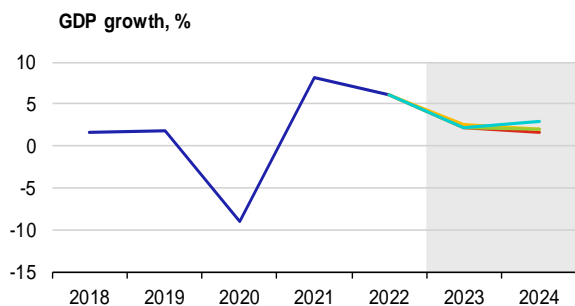
	CF	IMF	OECD	ECB
2023	2.2	2.3	2.5	2.7
2024	1.3	1.5	1.5	2.4



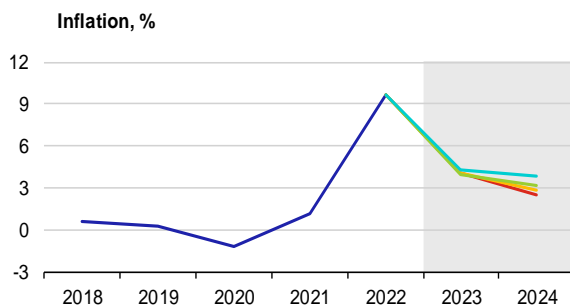
	CF	IMF	OECD	ECB
2023	5.3	5.3	5.7	5.2
2024	2.7	3.4	3.3	3.3



### Greece

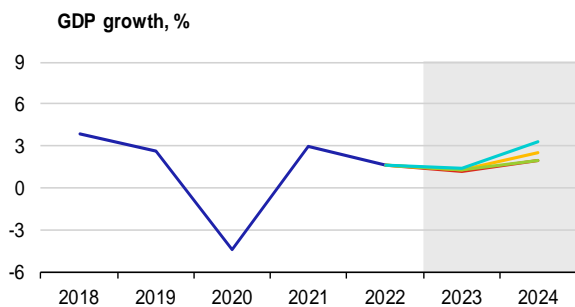


	CF	IMF	OECD	ECB
2023	2.2	2.5	2.2	2.2
2024	1.7	2.0	1.9	3.0

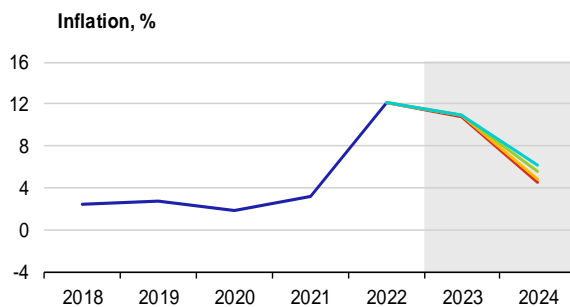


	CF	IMF	OECD	ECB
2023	4.1	4.1	3.9	4.3
2024	2.5	2.8	3.2	3.8

### Slovakia

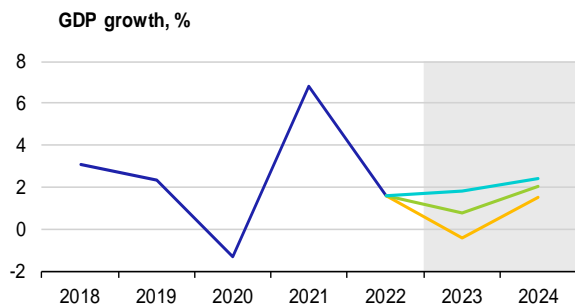


	CF	IMF	OECD	ECB
2023	1.2	1.3	1.3	1.4
2024	2.0	2.5	2.0	3.3

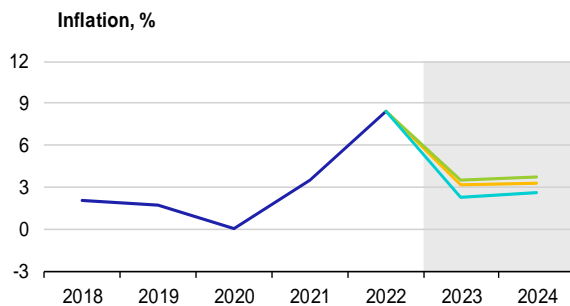


	CF	IMF	OECD	ECB
2023	10.8	10.9	11.0	11.0
2024	4.5	4.8	5.6	6.2

### Luxembourg

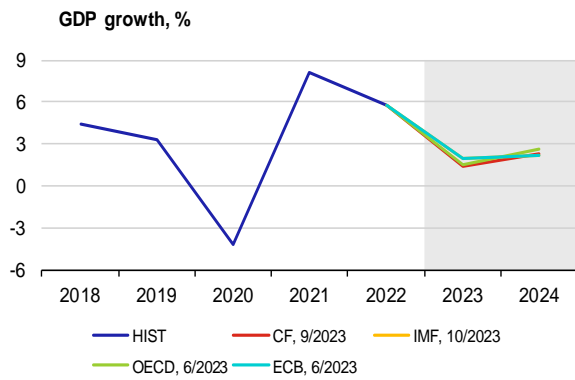


	CF	IMF	OECD	ECB
2023	n. a.	-0.4	0.8	1.8
2024	n. a.	1.5	2.0	2.4

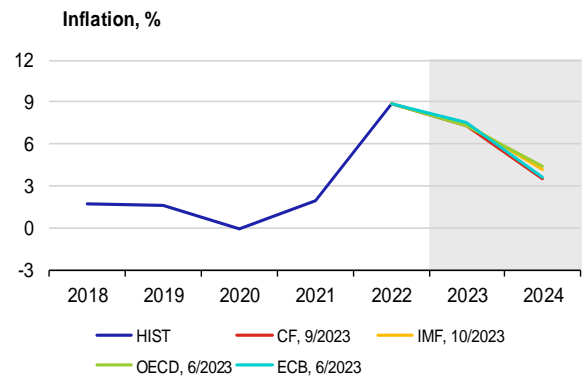


	CF	IMF	OECD	ECB
2023	n. a.	3.2	3.5	2.3
2024	n. a.	3.3	3.7	2.6

## Slovenia

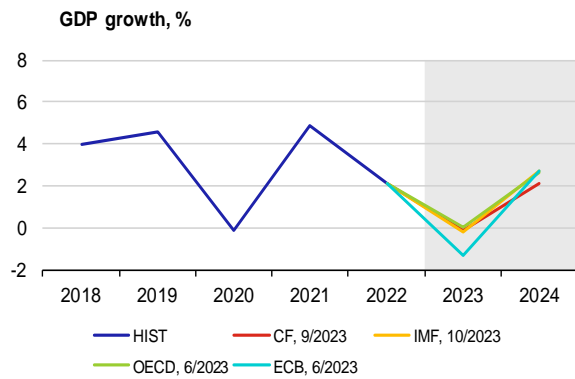


	CF	IMF	OECD	ECB
2023	1.4	2.0	1.5	2.0
2024	2.3	2.2	2.6	2.2

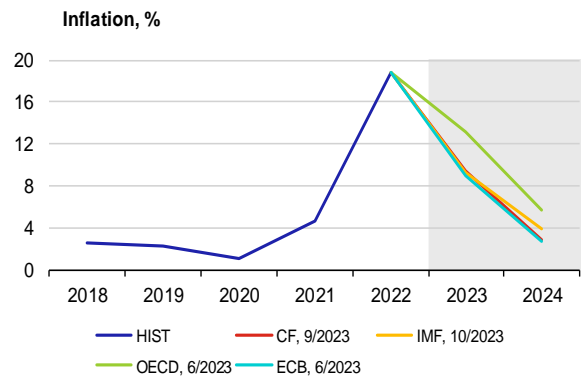


	CF	IMF	OECD	ECB
2023	7.3	7.4	7.3	7.5
2024	3.5	4.2	4.4	3.6

## Lithuania

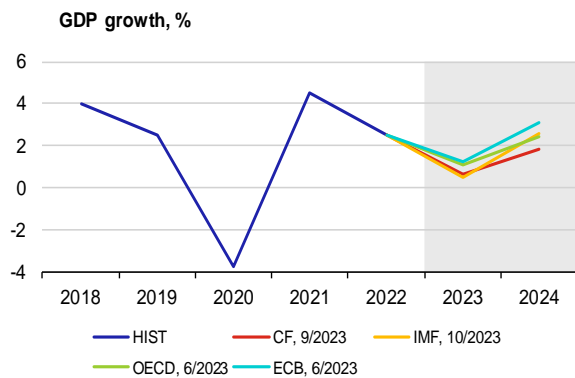


	CF	IMF	OECD	ECB
2023	-0.1	-0.2	0.0	-1.3
2024	2.1	2.7	2.6	2.7

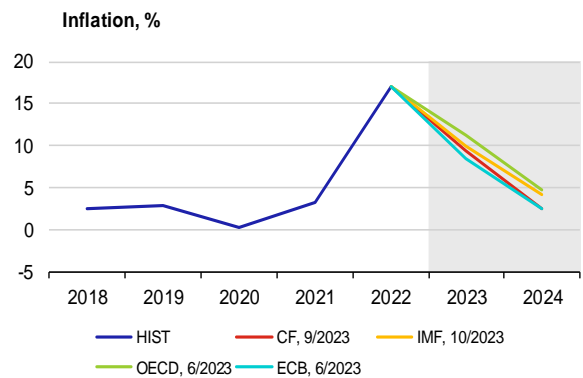


	CF	IMF	OECD	ECB
2023	9.4	9.3	13.1	8.9
2024	2.8	3.9	5.7	2.7

## Latvia

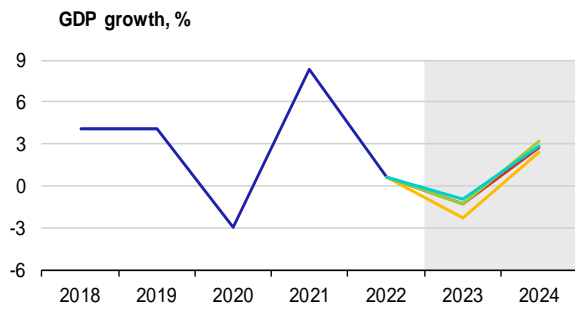


	CF	IMF	OECD	ECB
2023	0.6	0.5	1.1	1.2
2024	1.8	2.6	2.4	3.1

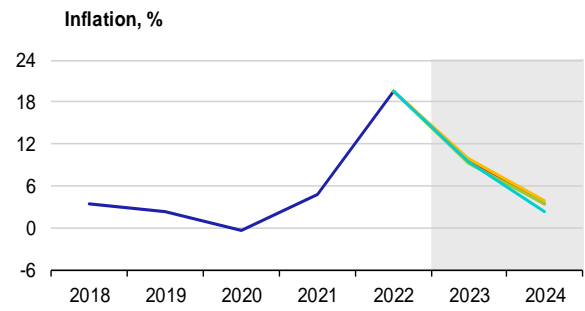


	CF	IMF	OECD	ECB
2023	9.3	9.9	11.2	8.5
2024	2.4	4.2	4.8	2.4

## Estonia

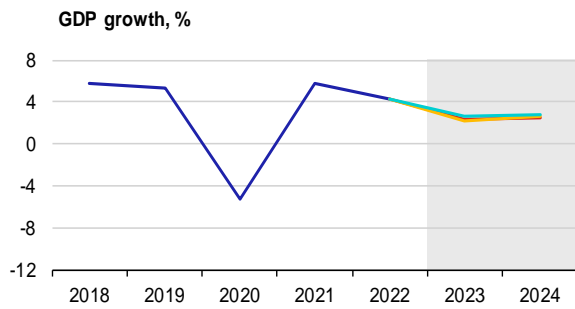


	CF	IMF	OECD	ECB
2023	-1.3	-2.3	-1.3	-1.0
2024	2.7	2.4	3.2	2.8

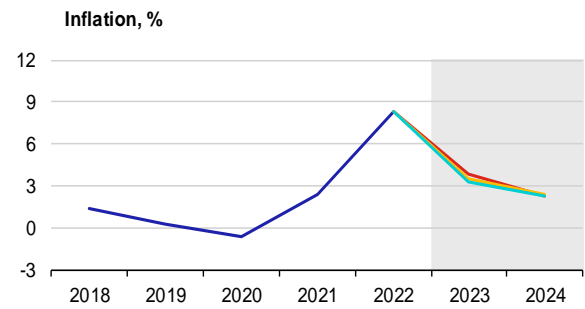


	CF	IMF	OECD	ECB
2023	9.6	10.0	9.2	9.4
2024	3.4	3.8	3.4	2.3

## Cyprus

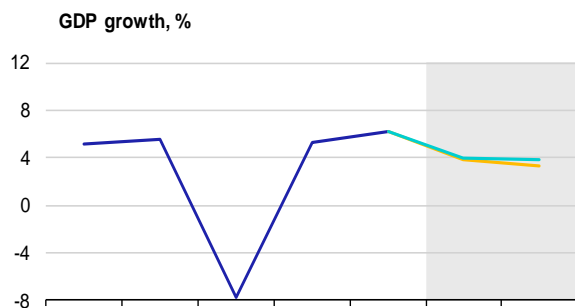


	CF	IMF	OECD	ECB
2023	2.4	2.2	n. a.	2.6
2024	2.5	2.7	n. a.	2.8

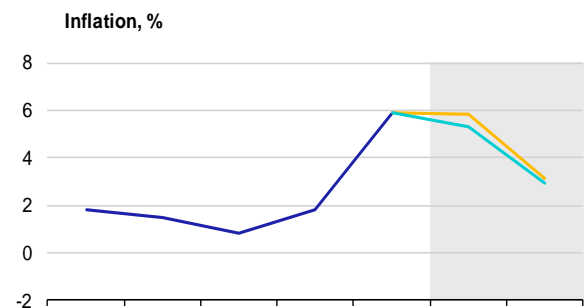


	CF	IMF	OECD	ECB
2023	3.8	3.5	n. a.	3.3
2024	2.3	2.4	n. a.	2.3

## Malta



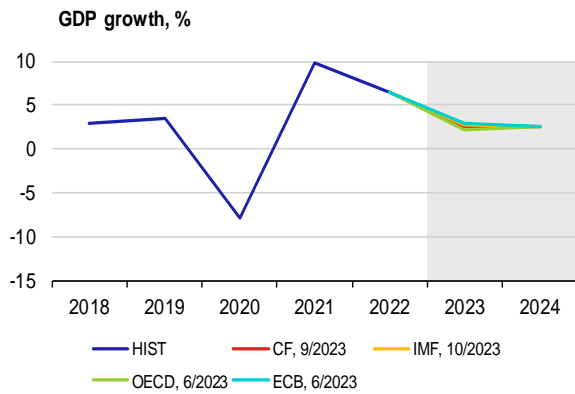
	CF	IMF	OECD	ECB
2023	n. a.	3.8	n. a.	4.0
2024	n. a.	3.3	n. a.	3.8



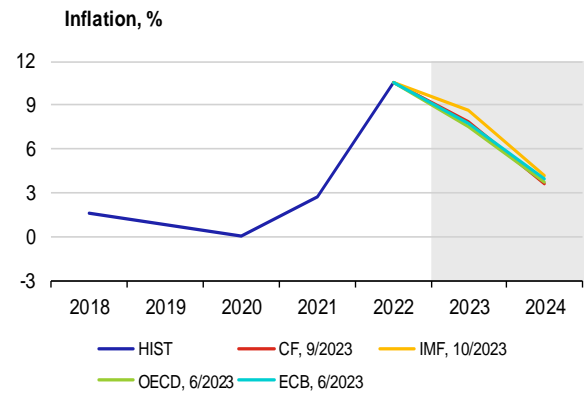
	CF	IMF	OECD	ECB
2023	n. a.	5.8	n. a.	5.3
2024	n. a.	3.1	n. a.	2.9

Ddd

## Croatia



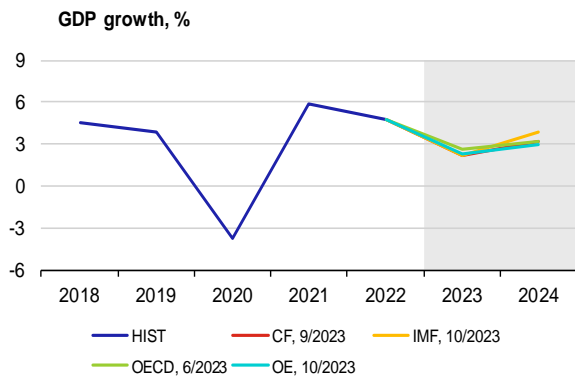
	CF	IMF	OECD	ECB
2023	2.6	2.7	2.1	2.9
2024	2.5	2.6	2.5	2.6



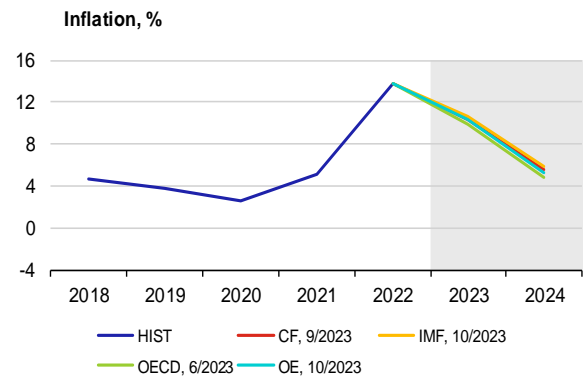
	CF	IMF	OECD	ECB
2023	7.9	8.6	7.5	7.7
2024	3.6	4.2	3.7	3.9

## A5. GDP growth and inflation in other selected countries

### Romania



	CF	IMF	OECD	OE
2023	2.2	2.2	2.6	2.3
2024	3.2	3.8	3.2	3.0



	CF	IMF	OECD	OE
2023	10.4	10.7	9.9	10.4
2024	5.6	5.8	4.8	5.2

## A6. List of abbreviations

<b>AT</b>	Austria	<b>IRS</b>	Interest Rate swap
<b>bbi</b>	barrel	<b>ISM</b>	Institute for Supply Management
<b>BE</b>	Belgium	<b>IT</b>	Italy
<b>BoE</b>	Bank of England (the UK central bank)	<b>JP</b>	Japan
<b>BoJ</b>	Bank of Japan (the central bank of Japan)	<b>JPY</b>	Japanese yen
<b>bp</b>	basis point (one hundredth of a percentage point)	<b>LIBOR</b>	London Interbank Offered Rate
<b>CB</b>	central bank	<b>LME</b>	London Metal Exchange
<b>CBR</b>	Central Bank of Russia	<b>LT</b>	Lithuania
<b>CF</b>	Consensus Forecasts	<b>LU</b>	Luxembourg
<b>CN</b>	China	<b>LV</b>	Latvia
<b>CNB</b>	Czech National Bank	<b>MKT</b>	Markit
<b>CNY</b>	Chinese renminbi	<b>MNB</b>	Magyar Nemzeti Bank (the central bank of Hungary)
<b>ConfB</b>	Conference Board Consumer Confidence Index	<b>MT</b>	Malta
<b>CXN</b>	Caixin	<b>NBP</b>	Narodowy Bank Polski (the central bank of Poland)
<b>CY</b>	Cyprus	<b>NIESR</b>	National Institute of Economic and Social Research (UK)
<b>DBB</b>	Deutsche Bundesbank (the central bank of Germany)	<b>NKI</b>	Nikkei
<b>DE</b>	Germany	<b>NL</b>	Netherlands
<b>EA</b>	euro area	<b>OE</b>	Oxford Economics
<b>ECB</b>	European Central Bank	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>EE</b>	Estonia	<b>OECD-CLI</b>	OECD Composite Leading Indicator
<b>EIA</b>	Energy Information Administration	<b>OPEC+</b>	member countries of OPEC oil cartel and 10 other oil-exporting countries (the most important of which are Russia, Mexico and Kazakhstan)
<b>ES</b>	Spain	<b>PMI</b>	Purchasing Managers' Index
<b>ESI</b>	Economic Sentiment Indicator of the European Commission	<b>pp</b>	percentage point
<b>EU</b>	European Union	<b>PT</b>	Portugal
<b>EUR</b>	euro	<b>RU</b>	Russia
<b>EURIBOR</b>	Euro Interbank Offered Rate	<b>RUB</b>	Russian rouble
<b>Fed</b>	Federal Reserve System (the US central bank)	<b>SI</b>	Slovenia
<b>FI</b>	Finland	<b>SK</b>	Slovakia
<b>FOMC</b>	Federal Open Market Committee	<b>SPF</b>	Survey of Professional Forecasters
<b>FR</b>	France	<b>TTF</b>	Title Transfer Facility (virtual trading point for natural gas in the Netherlands)
<b>FRA</b>	forward rate agreement	<b>UK</b>	United Kingdom
<b>FY</b>	fiscal year	<b>UoM</b>	University of Michigan Consumer Sentiment Index - present situation
<b>GBP</b>	pound sterling	<b>US</b>	United States
<b>GDP</b>	gross domestic product	<b>USD</b>	US dollar
<b>GR</b>	Greece	<b>WEO</b>	World Economic Outlook
<b>HICP</b>	Harmonised Index of Consumer Prices	<b>WTI</b>	West Texas Intermediate (crude oil used as a benchmark in oil pricing)
<b>HR</b>	Croatia	<b>ZEW</b>	Centre for European Economic Research
<b>ICE</b>	Intercontinental Exchange		
<b>IE</b>	Ireland		
<b>IEA</b>	International Energy Agency		
<b>IFO</b>	Leibniz Institute for Economic Research at the University of Munich		
<b>IMF</b>	International Monetary Fund		

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

Contact:  
ODBOR KOMUNIKACE SEKCE KANCELÁŘ  
Tel.: 224 413 112  
Fax: 224 412 179  
[www.cnb.cz](http://www.cnb.cz)