

Global Economic Outlook

November 2024



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Cut-off date for data

15 November 2024

CF survey date

11 November 2024

GEO publication date

22 November 2024

Notes to charts

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

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

Leading indicators are taken from Bloomberg and Refinitiv Datastream.

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

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I. Introduction

Peace in Ukraine sooner after the US presidential election? After the convincing victory of Donald Trump, there is a debate in the media whether the intended appointment of a peace envoy will lead to an early end to the Russian aggression in Ukraine. Donald Trump has said that he could end the war in one day, or that he would end it by the time of his inauguration. Commentators have indicated that he will try to freeze the conflict, give in to Russia and let the Europeans oversee the ceasefire.

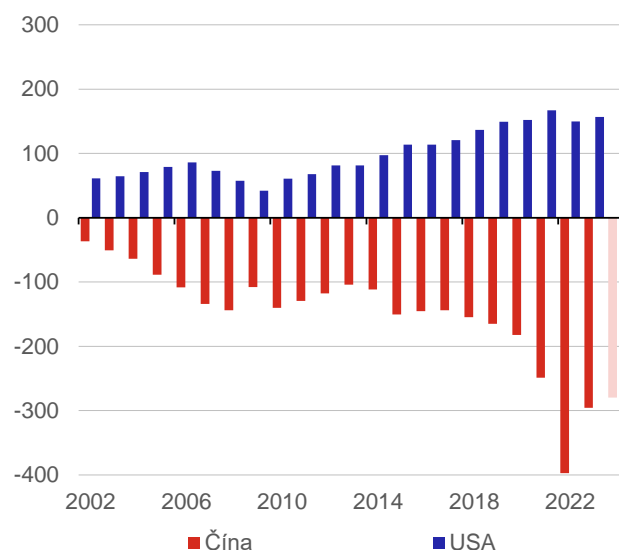
In its autumn forecast, the European Commission slightly lowered the outlook for GDP growth in the EU. EU growth should reach only 0.9% this year and 1.5% next year.

According to the Commission's new forecast, euro area countries will show even lower growth, at 0.8% this year and 1.3% next year. Weak economic performance persists in Germany. According to the Commission's outlook, it should decline slightly this year (-0.1%) and show growth of 0.7% next year. Given the size of the German economy, this will drag down the overall results for the euro area and the EU. Average EU inflation is expected to be 2.6% this year. It is expected to fall further next year, to 2.4%. However, this is a slight increase compared to the Commission's outlook from this spring. Inflation in the euro area will reach 2.4% this year and 2.1% next year, which are also the expected inflation values for Germany. The Commission's autumn forecast covered ad hoc topics, namely [India's economic rise](#), revised estimates of the [cost of persisting uncertainty in the global economy](#) and, important for Europe, the [relationship between productivity growth and employment growth](#).

The chart in the current issue shows the development of the EU's trade balance in goods with its largest trading partners – the USA and China. EU countries tend to export to the USA and import from China over the long term. In recent years, trade between the EU and the USA has risen markedly, with imports to the EU up by 42% and exports up by 37% compared to 2019. Trade with China is also growing – in the same period, imports from China rose by 37% but exports by just 10%. Exports to China are thus falling in real terms. President-elect Donald Trump plans to impose tariffs on goods imports to the USA, including from the EU. This would significantly affect European exporters, who export goods to the USA worth over EUR 500 billion.

The November issue also contains an analysis: '[Critical materials and commodities](#)'. The article focuses on general issues related to the use of critical materials and commodities in energy and other industries, including possible geopolitical risks and the approaches taken by the EU and the USA to minimise them.

European Union trade balance in goods, EUR billions



Source: Eurostat

Note: For 2024, this is the outlook based on available data until August 2024.

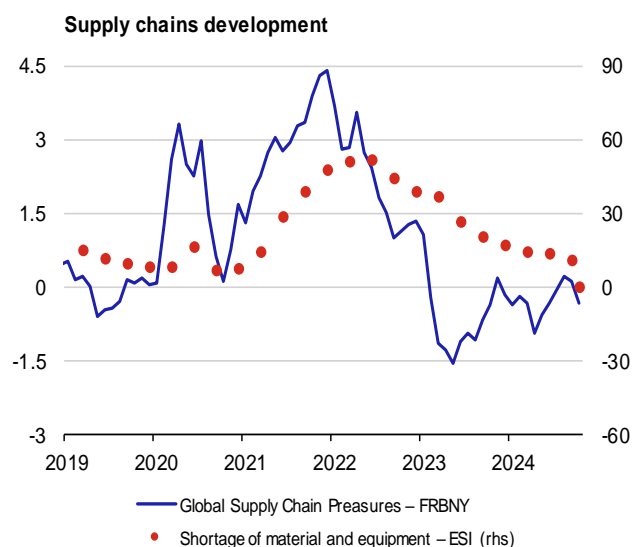
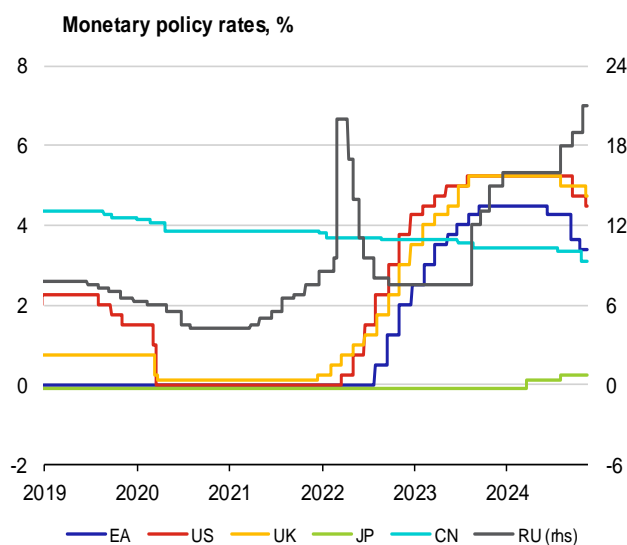
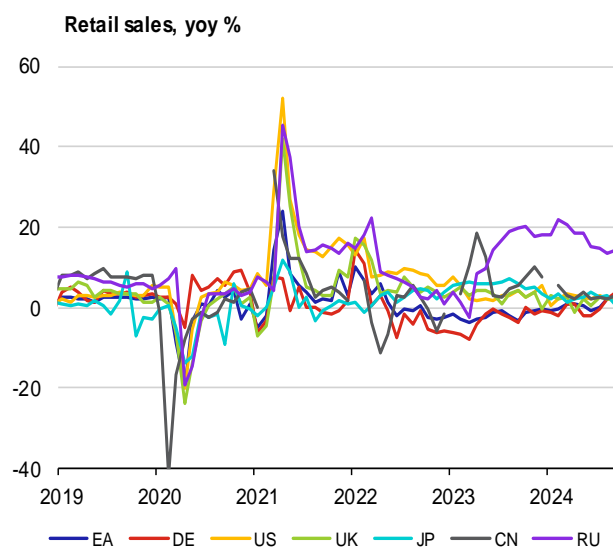
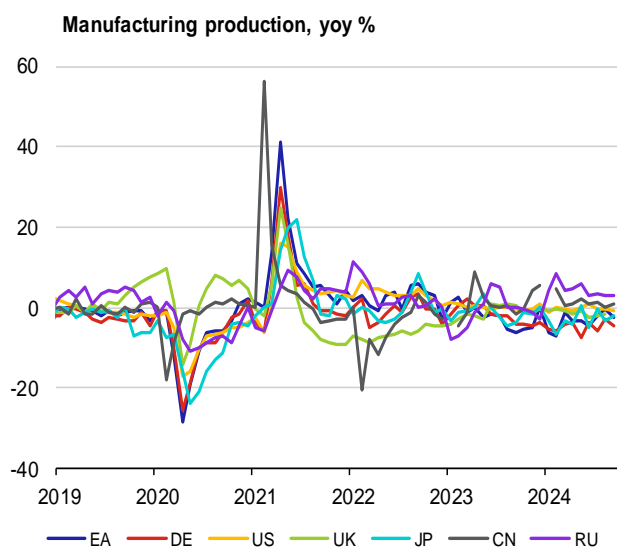
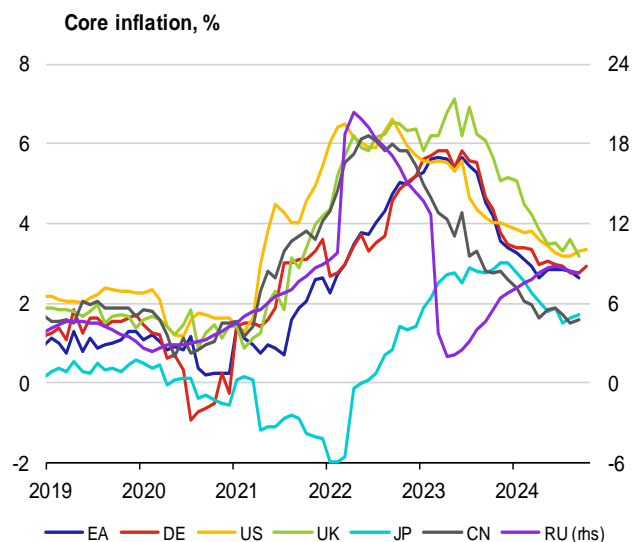
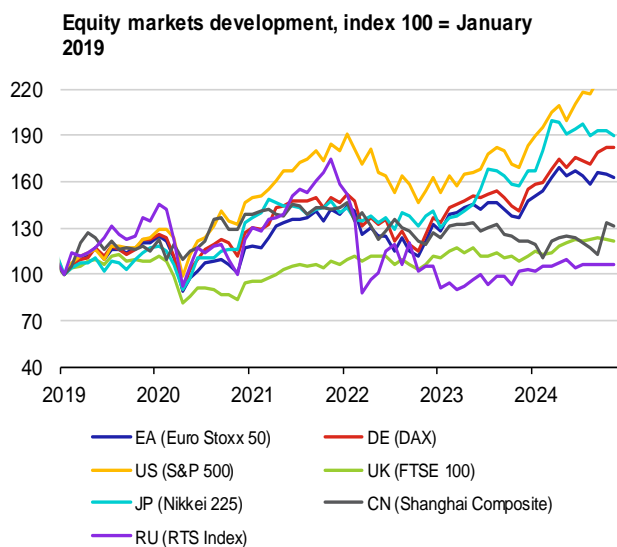
GEO barometer for selected countries

		EA	DE	US	UK	JP	CN	RU
GDP (%)	2024	0.8 ↗	-0.1 ↘	2.7 ↗	0.9 ↗	-0.1 ↘	4.8 ↗	3.5 ↗
	2025	1.1 ↗	0.6 ↗	1.9 ↗	1.3 ↗	1.2 ↗	4.5 ↗	1.6 ↗
Inflation (%)	2024	2.4 ↗	2.3 ↗	2.9 ↗	2.6 ↗	2.6 ↗	0.4 ↘	7.5 ↗
	2025	1.9 ↗	2.0 ↗	2.3 ↗	2.4 ↗	2.1 ↗	1.1 ↘	5.2 ↗
Unemployment (%)	2024	6.5 ↗	6.0 ↗	4.1 ↗	4.3 ↗	2.5 ↘	3.4 ↗	2.6 ↗
	2025	6.5 ↘	6.1 ↗	4.4 ↗	4.3 ↗	2.4 ↘	3.3 ↗	2.6 ↗
Exchange rate (against USD)	2024	1.09 ↘	1.09 ↘		1.30 ↘	142.2 ↗	7.13 ↗	95.0 ↗
	2025	1.11 ↘	1.11 ↘		1.31 ↘	136.8 ↗	7.11 ↗	98.8 ↗

Source: Consensus Forecasts (CF)

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

II. Macroeconomic barometer

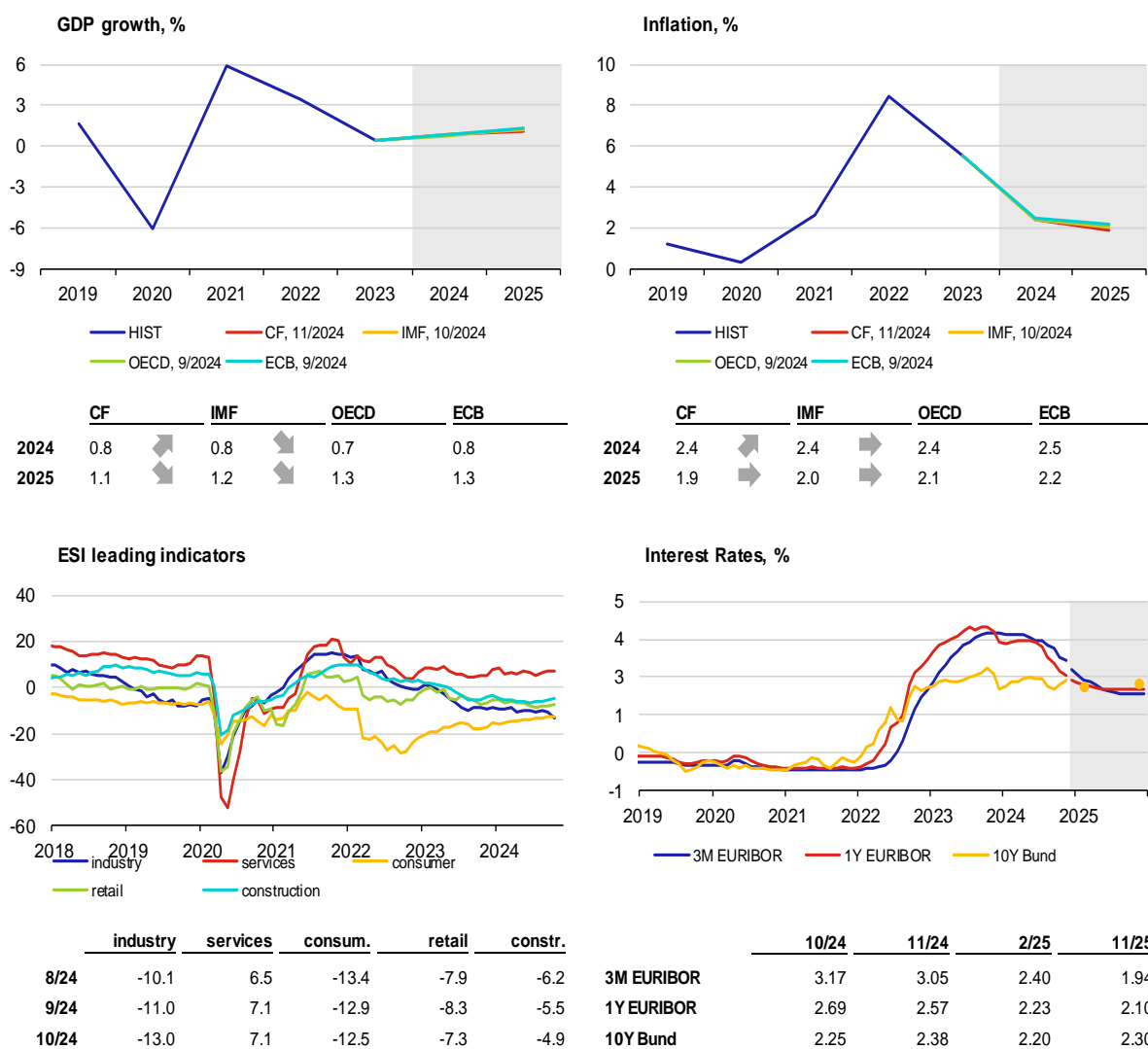


Source: Refinitiv Datastream, European Commission.

III.1 Euro area

The outlook for economic growth in the euro area is still slightly better this year but remains fragile. GDP growth of 0.4% in Q3 exceeded expectations, yet maintaining such high momentum is not certain given the unfavourable situation in industry, which is still showing signs of recession. Moreover, one-off consumption support from the Olympic Games in France and accounting effects on the performance of Irish companies significantly contributed to this growth. The manufacturing PMI rose to 46.0 points in October, signalling an improvement compared to previous months but remaining below the 50-point mark that separates expansion from contraction. The situation in German industry remains particularly unfavourable, with production falling by 2.5% month on month in September, reflecting persistent problems, especially in the manufacturing sector. By contrast, the labour market remains relatively stable, although the pace of job creation is slowing and the workforce shift from industry to the services sector continues. Continued growth in retail sales is being supported by improved household incomes. However, a significant part of these incomes is still being channelled into savings due to consumer caution.

The inflation outlook remains uncertain. Inflation reached 2.0% year on year in October. Inflation was driven upwards mainly by food and energy, while core inflation was flat at 2.7%. The ECB expects inflation to stay above the inflation target in the coming months, although it is expected to slow during the first half of next year. Given the continued upward pressure on prices in services and the elevated rate of wage growth, the ECB is stressing caution in cutting rates, and it is likely that the next cut in December will be only 0.25 percentage point. At its October meeting, the ECB reaffirmed its commitment to monetary support for the economic recovery, but the build-up of inflationary pressures is postponing more radical measures. Another significant risk for the euro area remains the possibility of new trade tariffs by the USA, which would have a significant impact on German industry in particular, as its exports to the USA account for around 10% of its total exports. The risk of tariffs being introduced could lead to a further weakening of euro area investment activity, requiring further action by the ECB to support the economy.

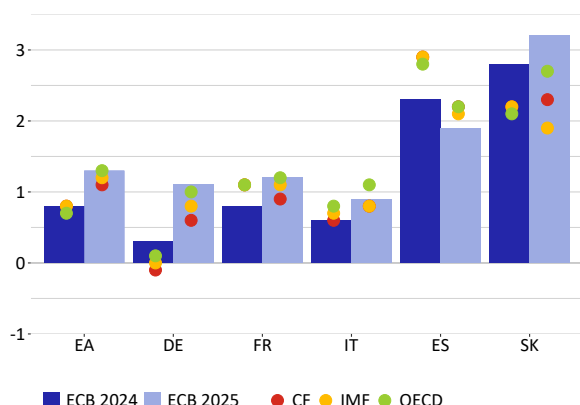


III.2 Germany

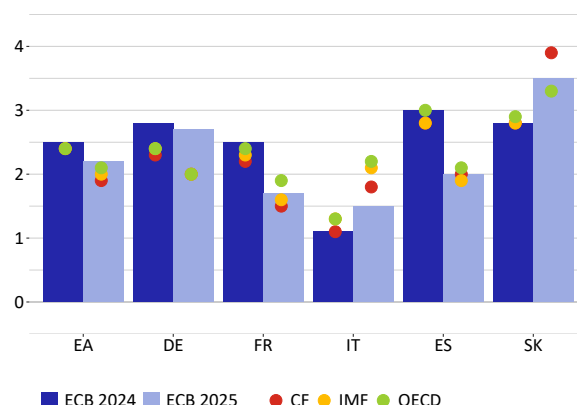
The German economy avoided a technical recession, thus defying pessimistic expectations. According to an initial estimate by the Federal Statistical Office, GDP grew by 0.2% q-o-q in Q3, while the economy grew mainly due to a rise in general government and household final consumption expenditures. However, the performance of the economy in Q2 was revised lower, and it eventually contracted by 0.3% after growing 0.2% at the start of the year. The composite PMI indicator recorded a slight improvement in October, rising to 48.6 points, pointing to a slight moderation in the decline in private sector activity, now ongoing for the fourth consecutive month. Business sentiment improved in October following several consecutive declines, according to the Ifo index. Businesses were more satisfied with their current situation, but expectations were also better, as the German economy has stopped its decline for now. Also, according to GfK, October brought a continued recovery in consumer sentiment, with income expectations more optimistic in particular, while the willingness to save is declining slightly. On the political front, Germany has experienced the collapse of the governing coalition, with early parliamentary elections to take place in February next year, the main topic of which will be the economy. It is not in the best shape and is heading for a decline for the second year in a row, with a particularly noticeable downturn in industry, especially the automotive industry, with both Volkswagen and Mercedes-Benz reporting a decline in profits. The CF now predicts a decline in GDP of 0.1% this year and growth of 0.6% in 2025, while the IMF is a bit more optimistic, forecasting stagnation this year.

After falling below 2% in September, consumer price inflation rose again in October. Harmonised prices thus again accelerated above the inflation target, to 2.4% year on year. Inflation was mainly supported by growth in food prices and the continued above-average growth in services prices. By contrast, energy prices again had a dampening effect on inflation rates, albeit less so than in previous months. Core inflation adjusted for food and energy also accelerated slightly, to 2.9%. New forecasts from the CF and the IMF predict inflation around 2.3% this year and its slowdown to 2% next year. The decline in industrial producer prices accelerated slightly to 1.4% year on year in September, mainly due to lower energy prices.

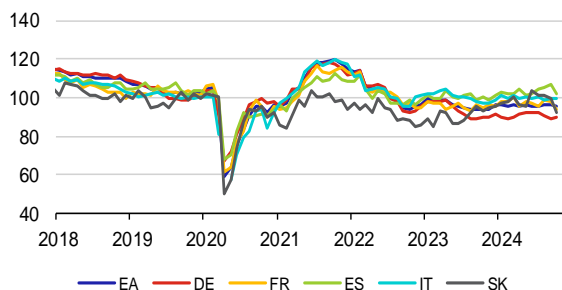
GDP growth in selected euro area countries in 2024 and 2025, %



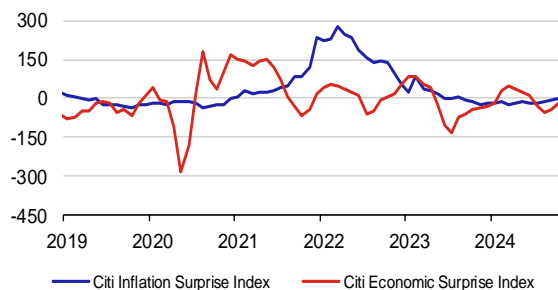
Inflation in selected euro area countries in 2024 and 2025, %



ESI leading indicators



Economic and inflation surprises in the euro area, %



	EA	DE	FR	ES	IT	SK
8/24	96.4	90.6	98.8	105.3	98.8	101.0
9/24	96.3	89.4	98.3	107.2	100.0	99.3
10/24	95.6	90.2	93.6	102.4	99.5	92.0

Inflation expectations based on 5year inflation swap and SPF

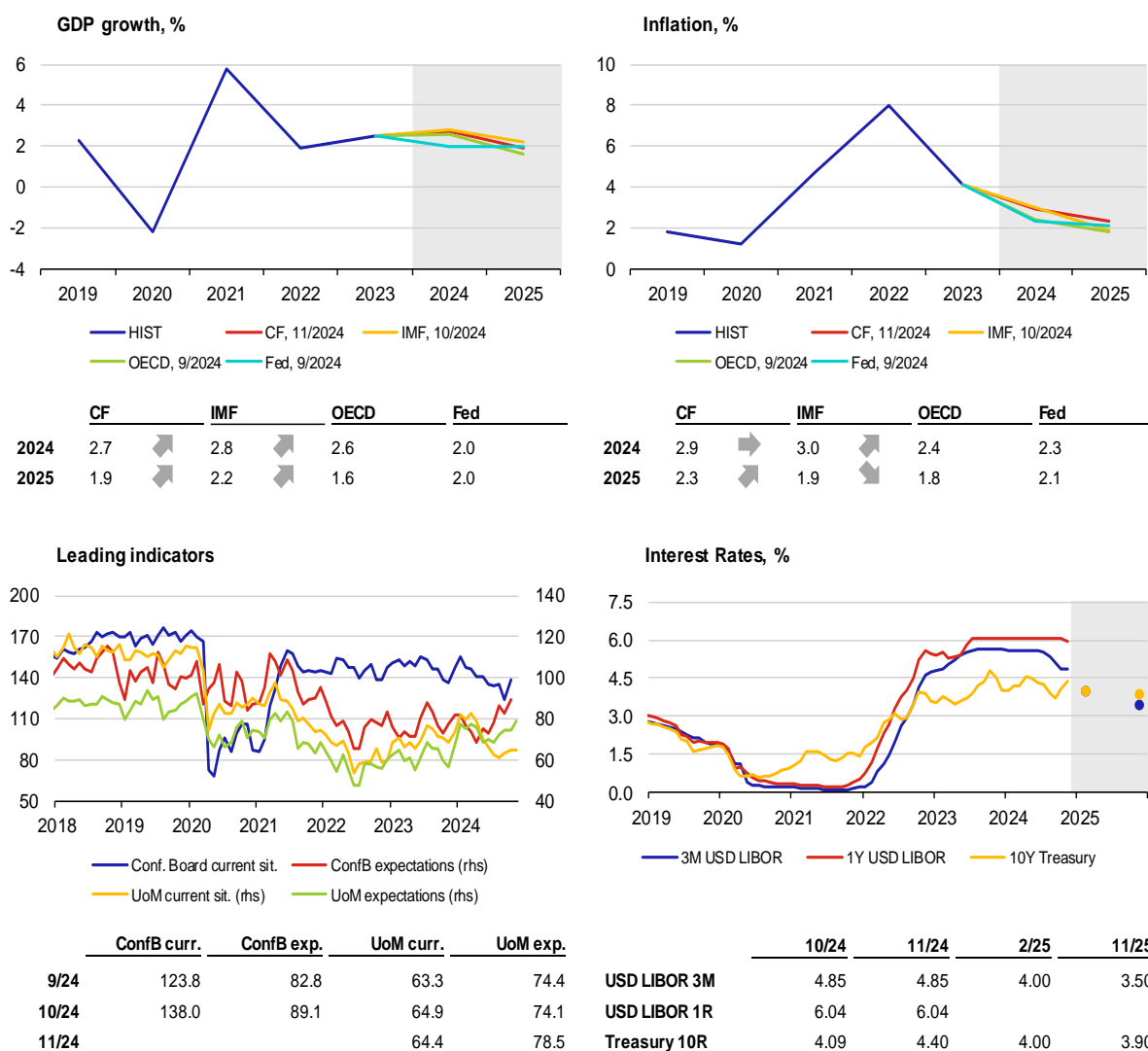
	5y5y	SPF
9/24	2.09	2.02
10/24	2.15	2.01
11/24	2.14	2.01

III.3 United States

The IMF's new GDP growth outlook expects 2.8% this year and 2.2% next year. Economic growth slowed to 2.8% in the third quarter from its previous 3%, which was slightly below expectations. Growth is expected to slow further in the fourth quarter due to geopolitical and regulatory uncertainties. Inflation has remained relatively stable – in October, the consumer price index rose to 2.6% year on year, while core inflation has now remained at 3.3% for three months. The housing category accounts for a significant share of the rise in inflation, while most other categories have recorded disinflation. Inflation is expected to be close to the inflation target next year.

At the beginning of November, Republican Donald Trump was clearly elected as the new president of the United States, defeating the Democratic candidate Kamala Harris. The US election was closely watched around the world, as during the presidential campaign, Donald Trump said that after his election he would make tax cuts and increase tariffs, especially on Chinese goods, and that he also wants to significantly tax imports of goods from Europe. These measures could support domestic GDP growth, but for trading partners it means high risk of a fall in trade and thus a negative economic impact. Betting odds had predicted victory, yet polls forecasted that the election race would be close.

The labour market continued to cool slightly. The October employment report showed weaker numbers, due to both natural disasters and strikes and layoffs in the automotive industry. Unemployment, which had reached 4.3% in July, fell to 4.1%, but analysts expect it to rise again. As expected, the US Federal Reserve cut interest rates by 25 basis points to a range of 4.5% to 4.75% in early November, while a further cut is expected in December. After the new president was elected, the markets shifted their rate outlook upwards. Long-term government bond yields also went up.



III.4 China

Since the summer, economic activity in China has been strongly supported by both fiscal and monetary policy. According to observers, the stimulus intends to prevent too much undershooting of the official growth target of about 5% by the end of year. Industrial production grew by 5.4% year on year and 0.6% month on month in September. This is higher than in the summer and likely reflects, among other things, the government's support of industry. Retail sales rose by 0.4% month on month in September, much higher than in the summer. With property prices still falling, the first year-on-year growth in sales of new houses and apartments since May 2023 was also seen, due to government stimulus for the housing market.

The industrial PMI (official National Bureau of Statistics index) just exceeded the 50-point mark (50.1) in October for the first time since April. The PMI in non-manufacturing sectors was similarly anaemic in October (50.2 points), only weaker this year in September. The overall PMI for October was slightly more optimistic (50.8 points). By contrast, new orders have still not emerged from the contraction zone (49.9 points in September) due to unfavourable external demand.

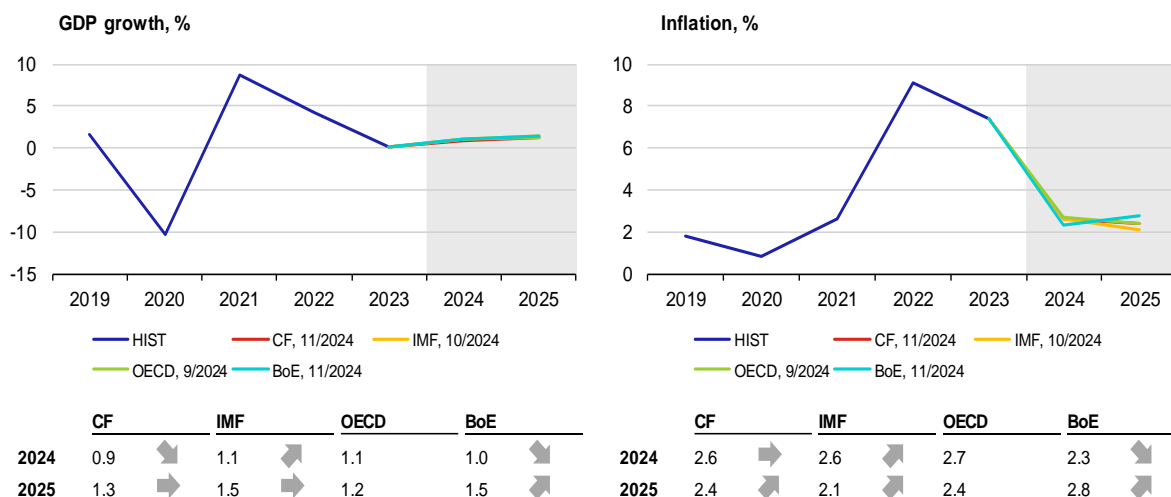
Consumer price inflation was 0.3% year on year in October, 0.1% less than a month earlier. In the background, after price stagnation in September, we find a month-on-month decline of 0.3% in the consumer price index, marking the end of the summer inflation. Transport and housing prices continued to fall, while prices of food and other consumer goods rose, but at a much slower pace than in the summer. Core inflation rose by 0.1% in October compared to September (to 0.2% year on year), but lagged behind the summer values. The decline in the PPI index also deepened in October (to -2.9% year on year).

Exports grew strongly in October (12.7% year on year) compared with the previous month's weak figures. Analysts gave the reason as efforts by exporters to speed up deliveries before expected further restrictions by the EU and especially the USA when the former president returns. Exports to Russia grew most strongly, as they have throughout the past year. After stagnation in the last two months, imports saw a year-on-year decline (-2.3%) in October. Imports from the EU, UK and Japan dropped most, while imports from Hong Kong, South Korea, the USA and ASEAN countries increased year on year.



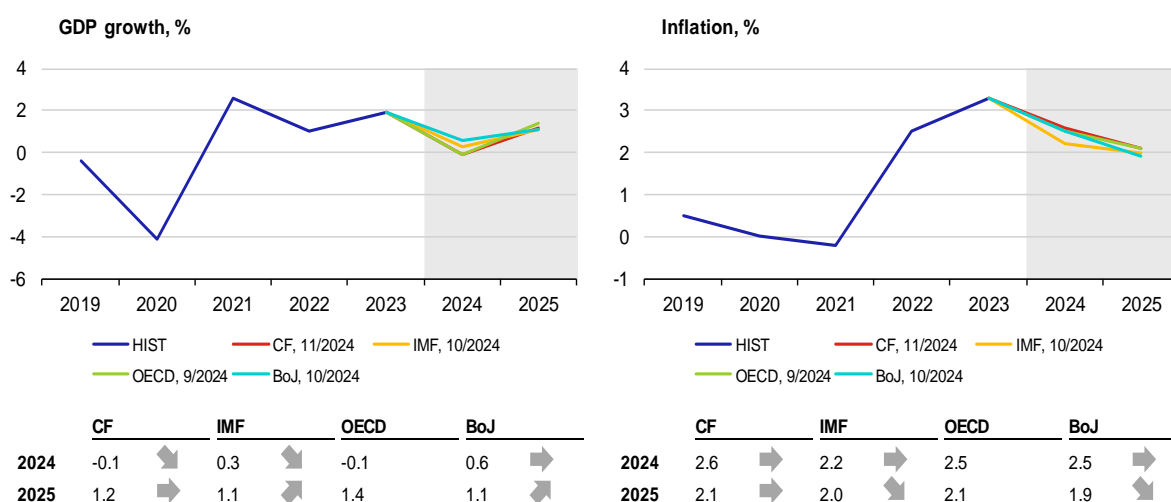
III.5 United Kingdom

The BoE responded to the continued progress in disinflation by cutting the key interest rate to 4.75% in November. At the same time, the central bank is signalling that another rate cut is unlikely before next year due to the forecast of increased inflationary pressures resulting from the newly presented autumn budget, in which Chancellor Rachel Reeves announced tax increases and fiscal policy easing. Although inflation fell to 1.7% in September, it is expected to rise to around 2.5% by the end of the year. According to new forecasts from the IMF and CF, inflation should be 2.6% this year and slow down next year, while the BoE sees the situation the other way around. Economic growth is expected to reach around 1% this year and accelerate to 1.5% in 2025. However, initial data indicate that the British economy recorded only modest quarterly growth (0.1%) in the third quarter, as the dominant services sector lost momentum. The composite PMI fell slightly again in October (51.8), bringing private-sector growth to an eleven-month low, with the manufacturing and services sectors doing worse.



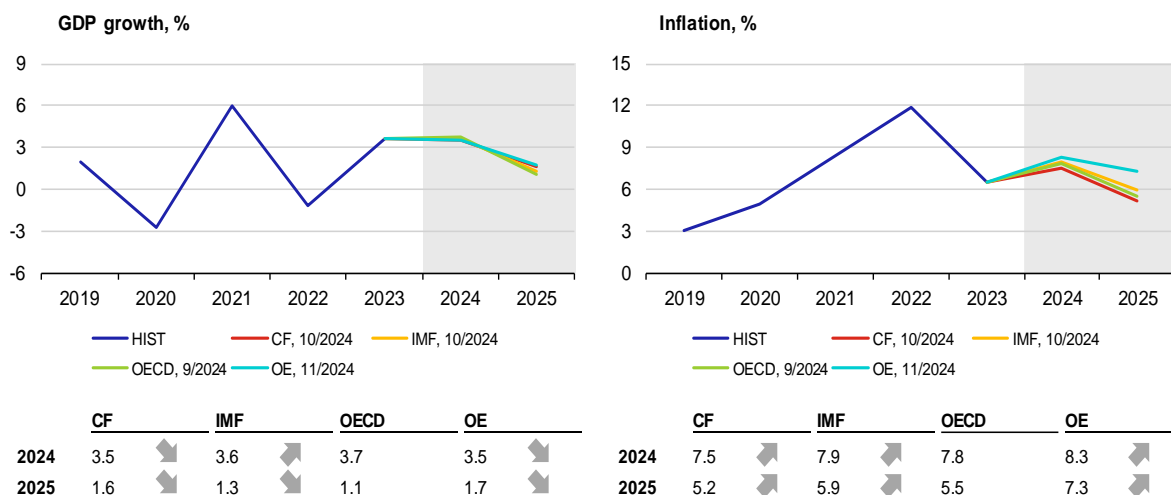
III.6 Japan

The Japanese economy continues to grow at a moderate rate, supported by improving labour market conditions and income growth. The month-on-month increase in industrial production of 1.4% in September after the previous declines caused by natural disasters was also positive. Although retail sales declined over the same period, they are expected to return to growth as vehicle manufacturing resumes. Inflation reached 2.5% in September, mainly due to higher services prices reflecting a 2.8% year-on-year increase in wages. The weakened yen, influenced, among other things, by US policy, and its influence through import prices, may further support inflation. The Bank of Japan left interest rates unchanged at 0.25% and continues to cautiously monitor external risks, which remain inflationary. BoJ Governor Kazuo Ueda has indicated that a rate adjustment could take place in December or early next year if economic indicators develop as expected. In the short term, the Japanese economy is expected to continue to recover, with both industry and the services sector expected to support GDP growth in the fourth quarter. The BoJ's next steps will depend on the development of wages, inflation and the stability of the global economy.



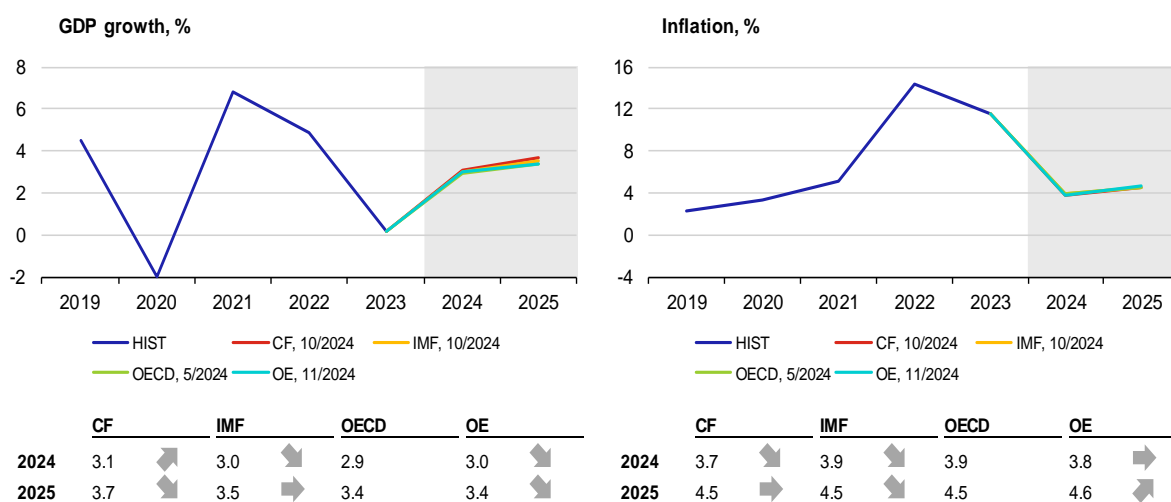
III.7 Russia

The CBR unexpectedly raised its benchmark interest rate by 200 basis points to an all-time high of 21% in October, and the expectation is that it will continue tightening monetary policy in December. Annual inflation stood at 8.5% in October. According to Bloomberg, this slight downward surprise could weaken the CBR's determination to raise rates further in December. The rate hike was a response to the persistence of high inflation caused by increasing difficulties in expanding the production of goods and services due to limited labour resources. This has been compounded by the government's decision to further increase public spending this year, along with recycling fees and customs duties, as well as rapidly growing lending activity. Preliminary data indicate that annual GDP growth slowed to 3.1% in the third quarter of 2024, slightly below CBR expectations. One factor was a decline in demand for goods by China, whose economy is also slowing. Discussions now focus on striking a balance between supporting economic growth and returning inflation to its target.



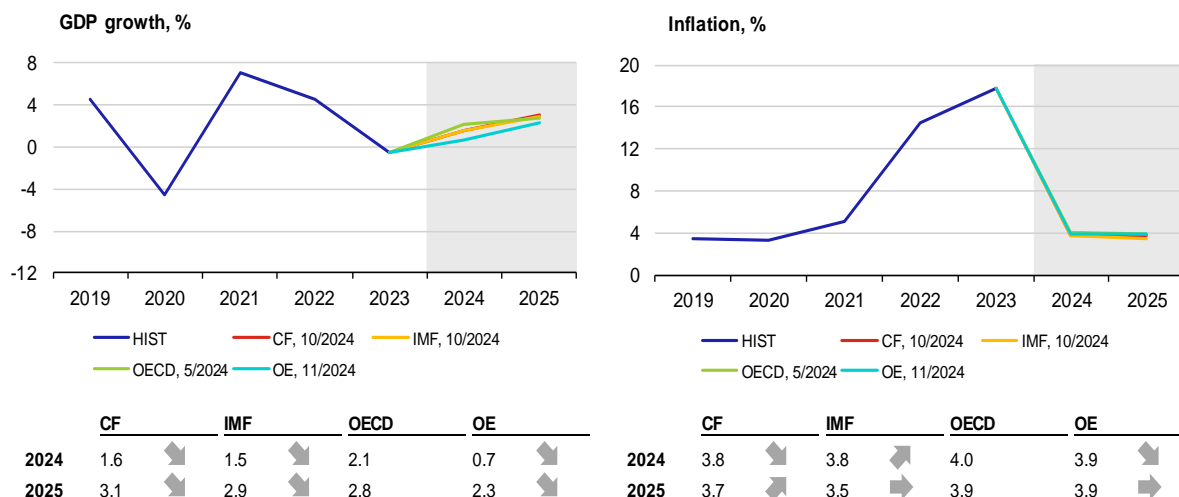
III.8 Poland

According to preliminary data, Polish GDP growth was 2.7% in Q3, 0.2 percentage point below the analysts' forecasts. However, Bloomberg analysts expect a positive correction in Q4. At its November meeting, the NBP again left interest rates at 5.75%, though inflation rose to 5% year on year in October, while the government continued to ease fiscal policy. The government budget amendment adopted at the end of October increased this year's state borrowing requirement by PLN 56.3 billion. Expectations for monetary policy easing remain unchanged, with rate cuts expected to take place in 2025 Q1. The current account showed a deficit of PLN 6.1 billion in September compared to the previous year's surplus. Though the aggregate current account balance for the past 12 months remains positive, the financial account recorded a decline in foreign direct investment, which returned to the annual low of 2% of GDP experienced during the pandemic. Polish exports fell by 6.5% year on year in September. Poland's economic development remains uncertain due to Germany's continued stagnation and the potential imposition of tariffs on China and Europe by the new US administration. Along with other emerging market currencies, the Polish zloty weakened in response to Donald Trump's victory in the US election.



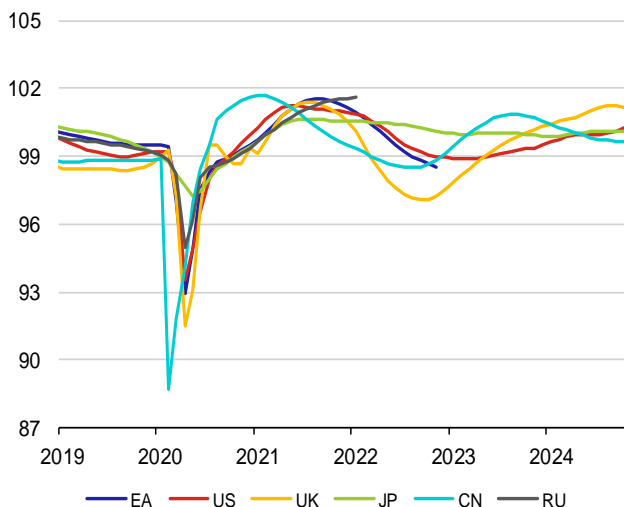
III.9 Hungary

GDP developments in Hungary lagged significantly behind market expectations in the third quarter, falling by 0.8% year on year. The annual inflation rate in Hungary rose to 3.2% in October and the September figure (3%) thus remains the lowest since the beginning of 2021. The slight acceleration in annual growth was due to an increase in food prices, especially flour and milk. By contrast, the decline in energy commodity prices continued to work in the opposite direction. The CF and IMF analysts have uniformly revised their outlooks for consumer price growth to 3.8% for 2024. GDP fell in the third quarter compared to last year (by 0.8%) and compared to the previous quarter (by 0.7%), thus lagging far behind market expectations (year-on-year growth of 1.3%) and the previous quarter (year-on-year growth of 1.5%). The decline in GDP in the third quarter was mainly due to the worsening situation in the agriculture, industry and construction sectors, while a similar development can be expected at the end of this year given the weakening consumer confidence, numbers of new orders and industrial production. The CF, IMF and OE analysts therefore revised the GDP growth outlook lower for both years.

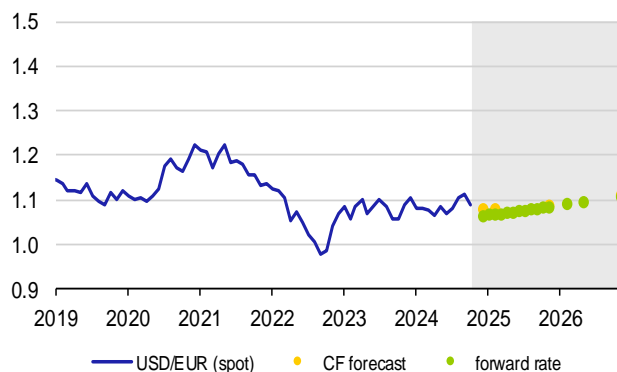


IV. Leading indicators and exchange rate outlooks

OECD Composite Leading Indicator

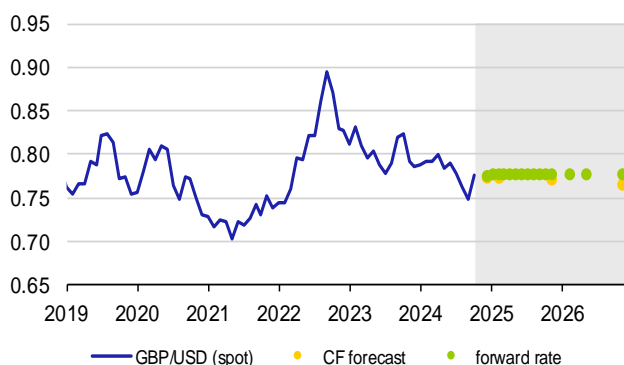


The US dollar (USD/EUR)



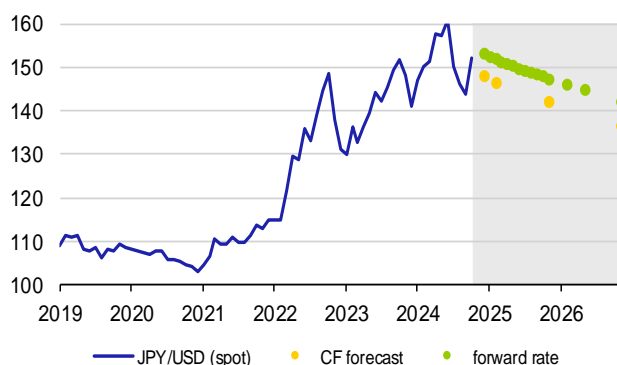
	11/11/24	12/24	2/25	11/25	11/26
spot rate	1.065				
CF forecast		1.082	1.082	1.090	1.112
forward rate		1.067	1.070	1.087	1.110

The British pound (GBP/USD)



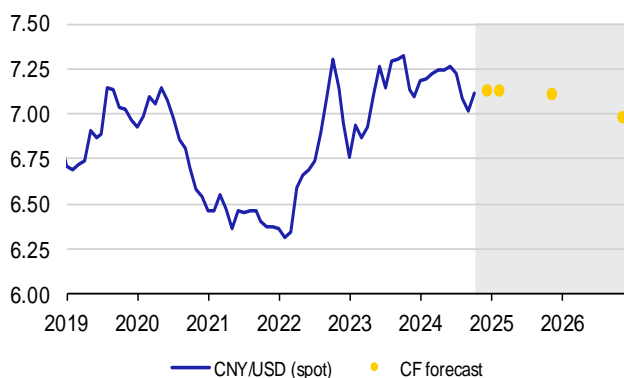
	11/11/24	12/24	2/25	11/25	11/26
spot rate	0.777				
CF forecast		0.773	0.775	0.772	0.766
forward rate		0.777	0.777	0.778	0.779

The Japanese yen (JPY/USD)



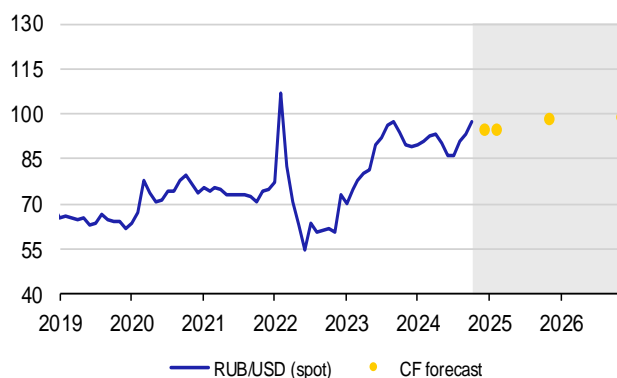
	11/11/24	12/24	2/25	11/25	11/26
spot rate	153.9				
CF forecast		148.1	146.7	142.2	136.8
forward rate		153.1	151.9	147.5	142.2

The Chinese renminbi (CNY/USD)



	11/11/24	12/24	2/25	11/25	11/26
spot rate	7.190				
CF forecast		7.131	7.131	7.119	6.991

The Russian rouble (RUB/USD)



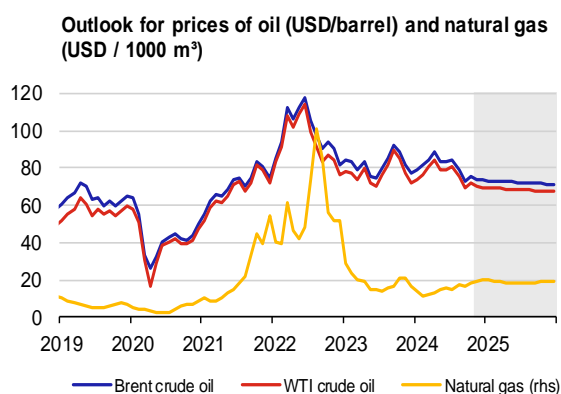
	11/11/24	12/24	2/25	11/25	11/26
spot rate	97.80				
CF forecast		94.98	95.34	98.81	99.08

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

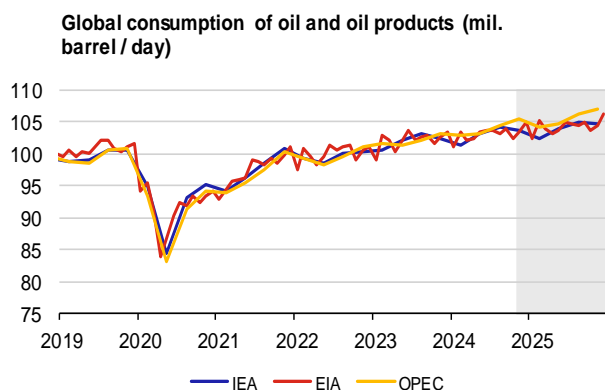
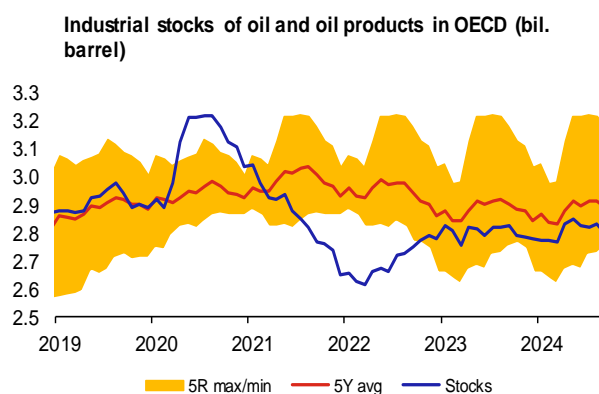
V.1 Oil

The price of Brent crude oil fell from over USD 80 a barrel to almost USD 70 a barrel in October as tensions in the Middle East eased. There was a brief correction above USD 75 a barrel in early November, but by mid-month the price was nearer USD 72 a barrel. The market cannot yet agree on the new US administration's impact on the price of oil, so it was again dominated by rather negative sentiment due to next year's expected oil surplus. The length of speculative contracts for Brent crude oil has again reached historic lows. The disruptions in oil supplies from Libya and the Gulf of Mexico have subsided, and the price of oil (and other commodities) is also being pushed down by the strong dollar. China's oil imports have been lower year on year for several months, and India should take over the role of driver, accounting for about 25% of global oil demand growth this year and next. OPEC's November report lowered the outlook for global oil demand growth for the fourth month in a row, and the OPEC+ alliance once again postponed the planned start of production increases (to January 2025 at the earliest). However, thanks to strong production growth especially on the American continent (about 1.5 million barrels a day both this year and the next), the IEA expects oil supply to exceed demand (which should grow at only 0.9 and 1.0 million barrels a day, respectively) next year, even if the alliance does not increase production.

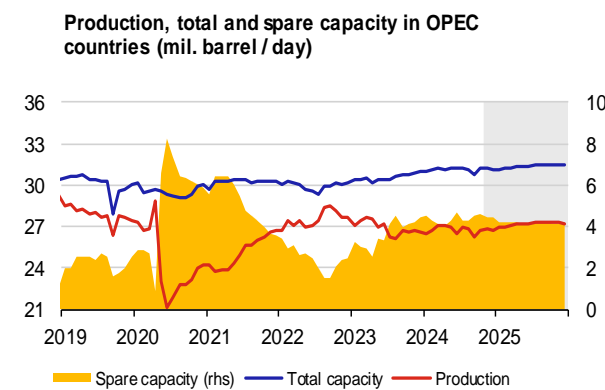
The market outlook for Brent crude oil from the first half of November is lower than last month. It is still declining, at USD 71.2 and USD 69.9 a barrel at the end of 2025 and 2026, respectively. The EIA also lowered its forecast, though it expects global crude oil inventories to keep declining (albeit at an increasingly slower rate) until 2025 Q1 and the price to rise from its current levels to USD 79 a barrel in March, then to start falling towards USD 72 a barrel at the end of next year. Lower is also the November CF forecast, which is practically horizontal with an expected price at the one-year horizon of USD 76.4 a barrel.



	Brent		WTI		Natural gas	
2024	79.90	↗	75.79	↗	393.07	↗
2025	72.20	↘	68.35	↘	469.08	↘



	IEA		EIA		OPEC	
2024	103.06	↗	103.14	↗	104.03	↗
2025	104.00	↘	104.36	↘	105.55	↘



	Production		Total capacity		Spare capacity	
2024	26.75	↗	31.12	↗	4.37	↗
2025	27.18	↘	31.36	↗	4.18	↘

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.

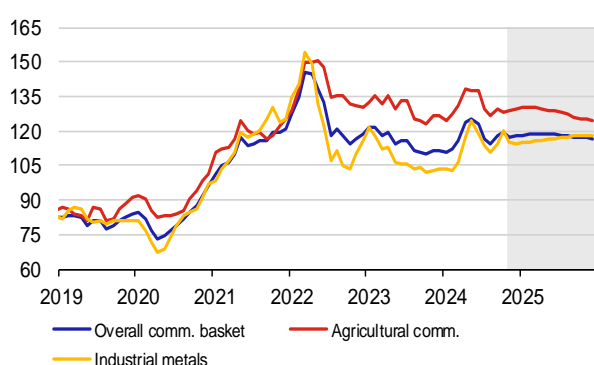
V.2 Other commodities

Natural gas prices in Europe rose sharply to a one-year high (above EUR 45/MWh) in the first half of November. Cold weather in Europe led to an early start of the heating season and the pumping of gas from storage facilities, compounded by weak generation from German wind (and solar) power plants, which increased demand from gas-fired power plants. It is still uncertain how Europe will cope with the end of Russian gas transit through Ukraine at the end of 2024. However, supplies of pipeline gas from Norway and LNG are still stable. Though Asian coal prices have fallen since the start of October, they have generally stagnated at a relatively high level in Europe due to increased demand from power plants and rising gas prices.

The industrial metals price index fell in the first half of November after two months of strong growth, mainly due to the sharply strengthening dollar. However, concerns that the Chinese government's stimulus policy is not sufficiently aimed at supporting weak domestic demand or domestic manufacturing, but rather at easing the debt burden of local governments, also contributed to the decline. Virtually all base metals showed a strong price drop at the beginning of November, with only aluminium experiencing a subsequent price increase due to the blocking of bauxite ore exports from Guinea and the subsequent sharp rise in its price. The price of steel fell as production in China rose for the first time in four months, despite weak domestic demand. China thus flooded export markets, despite the growing trade barriers. There was also a slight decrease in the price of iron ore due to strong exports from Australia. The outlook for the industrial metals price index is slightly rising over the course of next year, after which it should be broadly flat.

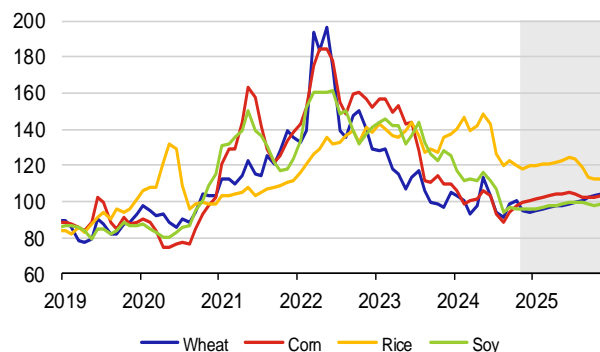
The food commodity price index fell slightly in October, then got some of that decline back in early November. A relatively strong drop is expected. The prices of individual commodities showed mixed trends. Wheat prices fell throughout October and further in early November in response to the stronger dollar and an improvement in the harvest outlook for the USA and the Black Sea area. Sugar prices also fell slightly, while the prices of corn, coffee, cocoa and beef rose.

Non-energy commodities price indices



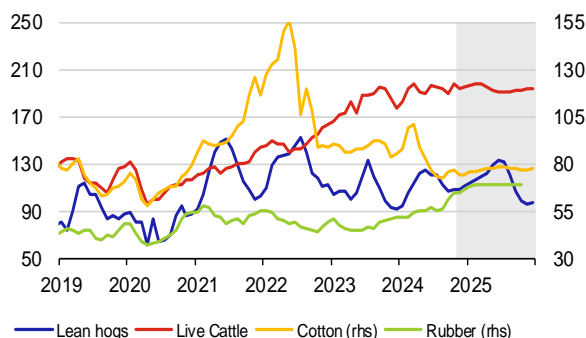
	Overall	Agricultural	Industrial
2024	117.9	130.7	113.5
2025	118.0	127.8	116.8

Food commodities



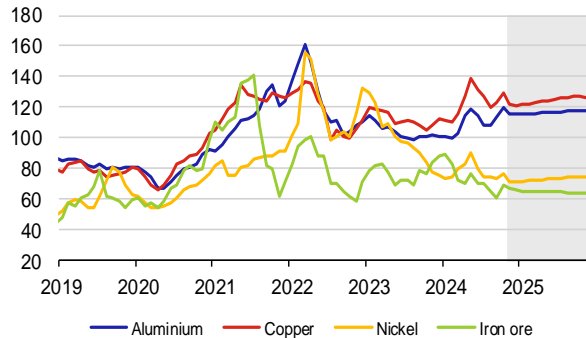
	Wheat	Corn	Rice	Soy
2024	98.6	99.1	132.1	105.5
2025	99.7	103.2	119.2	98.2

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2024	112.4	192.9	81.9	57.7
2025	115.3	193.6	77.3	68.9

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2024	111.1	123.1	77.3	71.7
2025	117.1	125.0	73.7	64.8

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.

Critical materials and commodities¹

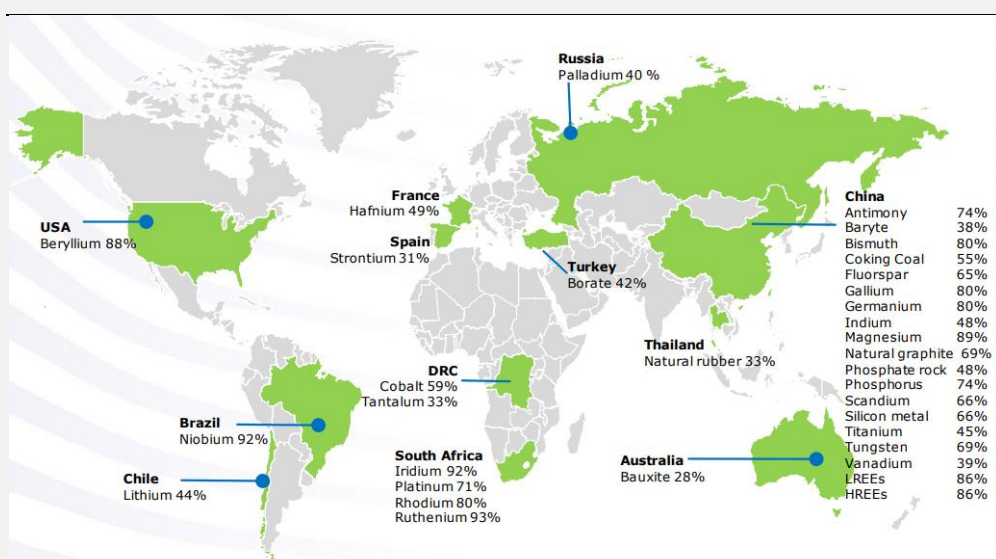
The availability of critical materials and commodities is increasingly being discussed, especially in connection with the surge in technologies focusing on renewable energy generation and the massive deployment of electromobility. The critical materials often occur only in limited quantities and in a limited number of locations, so their extraction and use can have strategic and geopolitical aspects in addition to economic ones. The issue of critical materials was partly discussed in the September GEO, in particular from the point of view of their use in the transition to renewable energy sources. Yet critical materials are important in many other industries besides the energy sector. In this article, we will therefore focus more on general issues related to the use of critical materials and commodities, including possible geopolitical risks and the approaches taken by the EU and the USA to minimise them.

Introduction

In the past, interest in classic commodities generally prevailed on the commodity markets. Examples include energy commodities (oil, gas, coal and fuels), agricultural commodities (food and non-food), common industrial metals and their ores, and precious metals. The markets for these commodities are liquid and involve producers and processors/consumers as well as a large number of financial investors/speculators.

At present, however, demand for ‘critical materials and commodities’ is also rising rapidly. These commodities are crucial for the development of modern economies, technological progress and the sustainability of societal development, and their importance is evident in a wide range of industries, from electronics and automotive, to renewable energy and medical technologies. However, they are typically only extracted in a limited number of locations (see Chart 1). Geopolitical and environmental aspects underline the need for sustainable approaches and strategic resource management. The efficient use and management of critical materials will be essential to ensure stable and sustainable economic growth in the future.

Chart 1 – Concentration of critical material extraction



Source: EC (2020)

Definition of critical minerals and materials

There are a large number of criteria according to which minerals and materials can be classified as ‘critical’. However, they can in principle be summarised as follows:

Critical minerals and materials are metallic and non-metallic elements, commodities and materials that are important for modern technologies and national security, while being difficult to replace and having supply chains highly susceptible to disruption.

These materials and commodities are therefore essential for the development of modern economies and important for strategic industrial sectors. There are limited options for replacing them in technological processes, and their availability and supply are exposed to risks such as geopolitical conflicts, limited resources, political instability in producer countries, and trade restrictions. Table 1 provides examples of critical materials².

¹ Written by Jan Hošek. The opinions expressed in this article are his own and do not necessarily reflect the official position of the Czech National Bank.

² Rare earth elements (metals) are a group of 17 elements in the periodic table. These elements are not so much ‘rare’ as scattered, which means that to obtain them in usable quantities and purity, a huge amount of rock must be processed, which necessarily comes with high costs. For more, see: https://en.wikipedia.org/wiki/Rare-earth_element

Main areas of use of critical materials

Electrical engineering: rare earth elements such as neodymium and dysprosium are crucial for the production of permanent magnets used in electronic devices.

Automotive: lithium and cobalt are crucial for the production of batteries for electric vehicles, the production of which is growing due to demand for more sustainable transport solutions.

Energy: critical materials contribute to the development of more energy-efficient technologies, crucial for reducing global greenhouse gas emissions and fighting climate change:

- *Solar panels:* materials such as indium and tellurium are used to produce thin-film solar cells.
- *Wind turbines:* permanent magnets containing rare earth elements are crucial for the efficient operation of wind turbines.
- *High-efficiency batteries:* lithium and cobalt are essential for the development and production of batteries with higher energy density and longer lifespans.
- *Production of hydrogen and synthetic hydrocarbons:* platinum, ruthenium and iridium are important for the catalytic electrolysis of water, while nickel and cobalt are used as catalysts for the synthesis of hydrocarbons from carbon monoxide (CO) and hydrogen (H₂).

Telecommunications: rare earth elements are essential for the production of optical fibres and electronics in communication equipment.

Medical technologies: materials such as tantalum are used in medical implants and electronic medical devices.

Nanotechnology: some rare metals and rare earth elements are important for the development of nanomaterials with unique properties.

Development of new materials: the development of new, advanced materials with specific properties, such as high-temperature superconductors, also relies on a number of critical minerals and materials.

Table 1 – Examples of critical materials

- *Rare earth elements:* A group of 17 chemical elements used in electronics, magnets, batteries and other technologies.
- *Cobalt:* Used in batteries, especially lithium batteries for electric vehicles and electronics.
- *Lithium:* A key element for the production of batteries for electric vehicles and renewable energy sources.
- *Tantalum:* Used in capacitors and other electronic components.
- *Tungsten:* Important for industrial tools and electronics.

Main producers/suppliers and geopolitical aspects

The extraction and production of critical materials is often concentrated in only a few countries, increasing the risk of dependence on these regions. For example:

- *China:* the dominant producer of rare earths, accounting for over 80% of global production.
- *Democratic Republic of Congo:* the main source of cobalt, producing over 60% of the global supply.
- *Chile:* the largest lithium producer, followed by Australia and Argentina.

Geopolitical stability and the trade policies in major producing countries can significantly affect the availability of critical materials. For example, trade disputes between the USA and China have a direct impact on the rare earth market. Instability in the Democratic Republic of Congo increases the risk associated with the supply of cobalt. Some countries maintain strategic stockpiles of critical materials to minimise the risks associated with their limited availability and geopolitical factors. This allows countries to better face potential supply-chain crises.

Environmental and social impacts

The extraction and processing of critical materials often cause significant environmental problems:

- *Water and soil pollution:* Chemicals used in mining and processing can contaminate water sources and soil.
- *Landscape degradation:* Intensive mining activities lead to land erosion and biodiversity loss.

The growing demand for critical materials emphasises the need for sustainable approaches:

- *Recycling:* Increasing recycling rates for materials such as batteries and electronics can reduce dependence on primary sources.
- *Alternatives:* Research into, and the development of, alternative materials that can replace critical raw materials in some applications can help minimise environmental impacts and increase sustainability.

Extraction is associated with serious social and ethical problems in some regions:

- *Child labour:* For example, child labour is often used in cobalt mines in the Democratic Republic of Congo.
- *Working conditions:* Miners often work in dangerous and unhealthy conditions for low wages.

Future perspectives, challenges and trends

The prices of critical materials can be highly volatile due to changes in supply and/or demand, geopolitical events and national and international regulations. This creates risks for industrial companies dependent on these raw materials. It will therefore be necessary to support a number of measures to mitigate such risks.

Innovation in research into materials and mining and processing technologies will play an important role in meeting the rapidly growing demand.

- *New materials:* The development of those will make it possible to replace, or reduce demand for critical raw materials.
- *Advanced extraction and processing technologies:* The development of new extraction and processing methods will lead to reductions in environmental impacts, greater economic efficiency and the use of hitherto unused deposits.

Diversification of supply will be important for both countries and individual companies.

- *Geographical diversification:* Finding new sources in different regions of the world can reduce dependence on specific countries.

Policy and regulatory changes and international cooperation and coordination can significantly affect the critical materials market.

- *Green policies:* Initiatives aimed at reducing the carbon footprint and protecting the environment can promote the recycling and substitution of critical raw materials.
- *International regulation:* Cooperation between countries to establish standards for responsible extraction and processing can help address global challenges.
- *Trade agreements:* International trade agreements can improve supply stability and predictability.
- *Regulation:* Establishing international standards for responsible extraction and processing can help minimise negative impacts.

Current market developments

The soaring demand for critical materials is due mainly to the rapid adoption of green technologies (see GEO 9/2024 for details). According to the IEA (2024³), in 2023 alone, the output of photovoltaic power stations rose by 85%, that of wind power plants by 60%, sales of electric motor vehicles by 35%, electrolyser output by 360% and battery storage capacity by 45%.⁴ Naturally, demand for critical materials increased alongside this. The demand for lithium rose by 30%, and the demand for nickel, cobalt and graphite rose by 8% to 10%.

Nevertheless, the prices of the majority of critical materials declined in 2023, offsetting the previous surge in 2021 and 2022. Only the price of copper remains elevated. The decline in the prices of critical materials is of course beneficial for the further introduction of green technologies, but on the other hand could lead to insufficient investment by producers and thus create problems in the future.

Expected demand outlook

A medium- and long-term outlook for the demand for critical materials and their predicted supply can be found, for example, in IEA (2024) (there is a summary in GEO 9/2024). The Agency focuses in particular on the materials needed for the energy transformation and the transition to renewable energy sources, and envisages three future development scenarios:

- *STEPS (Stated Policies Scenario)* – an outlook based on the current actual policies, including energy, climate and industrial.
- *APS (Announced Pledges Scenario)* – this scenario assumes that all national energy and climate targets declared by governments will be fully met by the required deadlines. However, even this may not lead to the achievement of the goal in the following scenario
- *NZE (Net Zero Emissions by 2050 Scenario)* – this scenario assumes the implementation of all available measures to achieve net-zero emissions by 2050 and limit global warming to 1.5°C

The European Union's approach to the issue of critical materials

Back in 2008, the European Commission adopted the Raw Materials Initiative (EC, 2008), which introduced an integrated strategy to address the various challenges related to access to non-energy and non-agricultural raw materials. The initiative should ensure a level playing field in access to resources in third countries, promote the sustainability of the supply of raw materials from European sources and increase resource-use and recycling efficiency. In principle, critical raw materials are those that pose a particularly high risk of supply shortages in the next 10 years yet are very important for the value chain. The risk associated with their supply is related to the concentration of production in only a few countries and the poor political and economic stability of some suppliers. Low substitutability and recycling rates often add to this risk. In many cases, a stable supply is important for meeting climate policy goals and for technological innovation.

³ For data from previous years, see IEA, 2023

⁴ Although electric-vehicle batteries account for 85% of total battery capacity, battery storage capacity is gradually increasing, and almost doubled in 2023

In 2011, the European Commission published its first list of critical materials (EC, 2011). Fourteen raw materials were selected from 41 materials and material groups. For each material, a list of the main producers and main suppliers to the EU, the EU's degree of dependence on its import, the degree of substitutability and the degree of its possible recycling are also provided. Since then, the list has been updated every three years in response to production and market developments and technological developments. The number of critical materials included is gradually growing and the methodology for their selection is also changing.

The latest list, from 2023 (EC, 2023), already includes 34 critical materials (selected from 67 potential materials and three material groups⁵). It also includes a list of 16 strategic raw materials that are considered to be important for the green and digital transformations, and for defence and space applications. A detailed analysis of individual critical materials, including use, global production and reserves, consumption in the EU, substitution and recycling options, economic and market data, is given, for example, in EC (2020).

How does the USA approach this issue?

In response to geopolitical challenges and technological change, the United States is actively developing a comprehensive strategy to secure access to critical materials. This strategy includes strengthening domestic production, international cooperation and innovation. In 2017, President Donald Trump signed an executive order that mandated the Department of the Interior to identify critical minerals on which the USA depends. A list of 35 critical minerals that need to be the focus of investment, extraction and processing projects was then created. This list was published in a 2019 report by the Department of Commerce, along with a strategy to reduce US reliance on critical materials and related recommendations. The list includes information on US dependence on imports of the relevant mineral, the main sources of imports and the estimated import quantities.

The Department of Energy has been issuing strategic documents on critical materials since 2010. In 2019, it published an updated Critical Materials Strategy Report, which included proposals to increase domestic production, develop alternative technologies, and promote recycling. This report has been updated several times, most recently in 2024, to reflect current needs and technological advances. In 2020, the Department of State released the National Strategy for Critical and Emerging Technologies, which identifies key technologies and materials critical to national security. This document includes recommendations for making supply chains more resilient, and increasing both domestic production of critical raw materials and investment in research and innovation. The report was last updated in 2024.

Under the amended Defense Production Act of 1950, the United States can use state funds to support the extraction and processing of critical materials domestically. That law was updated in 2018 to allow the government to increase the production and processing of materials critical to the production of military equipment and other key sectors. The Energy Act of 2020 contains specific provisions to encourage recycling and the development of new technologies for processing critical materials. It also supports research and development in innovative technologies that could reduce dependence on foreign supplies of these raw materials. The CHIPS and Science Act of 2022 provides billions in subsidies to develop domestic semiconductor manufacturing that requires critical materials. The law focuses on reducing dependence on foreign suppliers and securing supply chains for this key technology.

In 2024, a new National Strategy on Global Development was introduced, emphasising the importance of a sustainable approach to the extraction and processing of critical materials. This strategy emphasises cooperation with international partners and the promotion of innovation in the recycling and substitution of rare raw materials. The United States has also strengthened cooperation with the European Union through the Trade and Technology Council, with the two sides agreeing to strengthen critical raw materials supply chains and to cooperate on research and development.

The U.S. Geological Survey provides regular reports on the extraction and availability of critical materials. The latest update to this list was in 2022 and includes 50 mineral commodities, with 15 new commodities added compared to the previous list from 2018. This increase is partly due to the division of groups of rare earths and platinum metals into individual items. Nickel and zinc, for example, have been added to the list, while helium, potash, rhenium and strontium have been removed. The list of critical minerals is therefore not static and will be updated regularly to reflect current data on supply, demand, production concentration and current policy priorities. In addition to a number of internal measures, the USA is strengthening cooperation and entering into strategic partnerships with countries such as Australia, Canada, Japan and the European Union to diversify the supply chains for critical raw materials. The goal is to reduce these countries' dependence on supplies from China, which dominates global production of many of these materials.

Fragmentation of the global market for critical materials

The global economic environment has changed significantly in recent decades due to various economic and geopolitical factors. Since the end of the Cold War, trade liberalisation, technological innovation and declining transportation costs have led to the significant integration of primary commodity markets, leading in turn to a decline in raw material prices and an acceleration of global growth. However, this trend reversed with the outbreak of the conflict in Ukraine, when a process of market fragmentation and deglobalisation started. Many countries are now seeking to reintroduce parts of production chains that had been relocated to countries with cheaper labour or other competitive advantages to protect their national interests and for geopolitical reasons (nearshoring).

⁵ Ten heavy and five light rare earth elements and five platinum metals.

Estimates of the long-term economic costs of this development differ considerably depending on the assumptions.

According to the International Monetary Fund, they are in the range of 0.2% to 12% of global GDP (WEO, 2023). The paper also concludes that commodity markets are particularly prone to fragmentation and that this fragmentation has been intensifying since the outbreak of the conflict in Ukraine. Fragmented markets are smaller and more likely to lead to imbalances between supply and demand, and thus to strong price volatility for the commodities concerned, including those critical for the transition to renewable energy. The newly emerging geopolitical blocs and alliances mean that prices in individual blocs can vary significantly and strong supply shocks can occur, increasing uncertainty and threatening fiscal, monetary and financial stability in many countries. Restrictions on mutual trade between competing blocs can be expected, and will necessarily lead to increased economic losses. Given that both net commodity exporters and net importers may be present within the same bloc, the macroeconomic effects may be partially offset within the same bloc.

Conclusion

Critical materials are crucial for modern economies, technological progress and the sustainable development of global society. Their importance is evident in a wide range of industries, from electronics and automotive to renewable energy and medical technologies. Their availability and sustainable efficient use are key to further technological progress and stable economic growth.

The challenges related to their extraction, processing and supply will require coordinated efforts on an international level, including recycling, research into alternative materials, diversification of sources and the implementation of responsible extraction and processing practices. Conflicts around the world are causing fragmentation of commodity markets for critical materials. Given the expected strong growth in demand for critical materials in the coming years, this may significantly complicate the transition of the global economy to renewable energy, while also making it much more expensive.

Sources

CHIPS (2022): The CHIPS and Science Act of 2022, August 2022, <https://www.govinfo.gov/content/pkg/PLAW-117publ167/pdf/PLAW-117publ167.pdf>

DOC (2019): A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals, U.S. Department of Commerce, June 2019, https://www.commerce.gov/sites/default/files/2020-01/Critical_Minerals_Strategy_Final.pdf

DOE (2019): Critical Materials Strategy, U.S. Department of Energy, February 2019, <https://www.energy.gov/sites/default/files/2023-05/2019-critical-materials-strategy.pdf>

DOS (2020): National Strategy for Critical and Emerging Technologies, U.S. Department of State, October 2020, <https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/10/National-Strategy-for-CET.pdf>

DPA (2018): The Defense Production Act, August 2018, https://www.fema.gov/sites/default/files/2020-03/Defense_Production_Act_2018.pdf

EA (2020): Energy Act of 2020, December 2020, <https://republicans-science.house.gov/cache/files/f/3/f3916ab1-1d9b-428c-9f81-bbc33d9b5b55/501924497A34C21E5EF3C335F2BE370C.division-z---energy-act.pdf>

EC (2011): Tackling the Challenges in Commodity Markets and on Raw Materials, European Commission, February 2011, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0025>

EC (2020): Study on the EU's list of Critical Raw Materials, European Commission, 2020, <https://ec.europa.eu/docsroom/documents/42883/attachments/1/translations/en/renditions/native>

EC (2023): Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials, European Commission, March 2023, <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52023PC0160>

EC (2024): Critical Raw Materials, European Commission, continuously updated, https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en

IEA (2023): Critical Minerals Market Review 2023, International Energy Agency, July 2023, <https://iea.blob.core.windows.net/assets/c7716240-ab4f-4f5d-b138-291e76c6a7c7/CriticalMineralsMarketReview2023.pdf>

IEA (2024): Global Critical Minerals Outlook 2024, International Energy Agency, May 2024, <https://iea.blob.core.windows.net/assets/ee01701d-1d5c-4ba8-9df6-abeecac9de99a/GlobalCriticalMineralsOutlook2024.pdf>

PD (2017): A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals, Executive Order 13817, December 2017, <https://www.govinfo.gov/content/pkg/FR-2017-12-26/pdf/2017-27899.pdf>

WEO (2023): World Economic Outlook – Analytical Chapter 3: Fragmentation and Commodity Markets: Vulnerabilities and Risks, International Monetary Fund, October 2023,

Keywords

critical minerals, raw materials, market fragmentation

JEL Classification

Q54, Q42, Q34

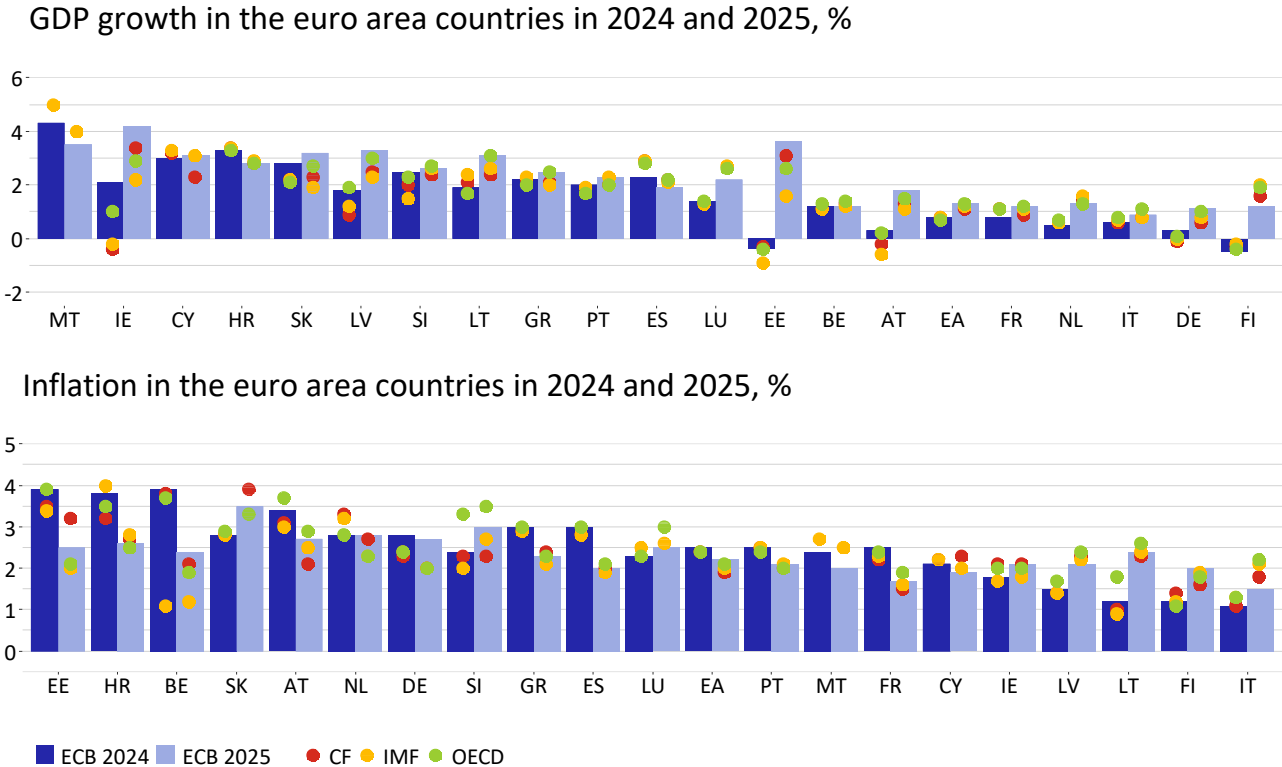
A1. Change in predictions for 2024

	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / OE	CF	IMF	OECD	CB / OE
EA	+0.1 2024/11 2024/10	-0.1 2024/10 2024/7	0 2024/9 2024/5	-0.1 2024/9 2024/6	+0.1 2024/11 2024/10	0 2024/10 2024/4	+0.1 2024/9 2024/5	0 2024/9 2024/6
US	+0.1 2024/11 2024/10	+0.2 2024/10 2024/7	0 2024/9 2024/5	-0.1 2024/9 2024/6	0 2024/11 2024/10	+0.1 2024/10 2024/4	-0.1 2024/9 2024/5	-0.3 2024/9 2024/6
UK	-0.1 2024/11 2024/10	+0.4 2024/10 2024/7	+0.7 2024/9 2024/5	-0.3 2024/11 2024/8	0 2024/11 2024/10	+0.1 2024/10 2024/4	-0.1 2024/9 2024/5	-0.5 2024/11 2024/8
JP	-0.1 2024/11 2024/10	-0.4 2024/10 2024/7	-0.6 2024/9 2024/5	0 2024/10 2024/7	0 2024/11 2024/10	0 2024/10 2024/4	+0.4 2024/9 2024/5	0 2024/10 2024/7
CN	0 2024/11 2024/10	-0.2 2024/10 2024/7	0 2024/9 2024/5	0 2024/11 2024/10	-0.1 2024/11 2024/10	-0.6 2024/10 2024/4	0 2024/9 2024/5	-0.2 2024/11 2024/10
RU	-0.1 2024/10 2024/9	+0.4 2024/10 2024/7	+1.1 2024/9 2024/5	-0.1 2024/11 2024/10	+0.2 2024/10 2024/9	+1.0 2024/10 2024/4	+0.6 2024/9 2024/2	+0.2 2024/11 2024/10

A2. Change in predictions for 2025

	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / OE	CF	IMF	OECD	CB / OE
EA	-0.1 2024/11 2024/10	-0.3 2024/10 2024/7	-0.2 2024/9 2024/5	-0.1 2024/9 2024/6	0 2024/11 2024/10	0 2024/10 2024/4	-0.1 2024/9 2024/5	0 2024/9 2024/6
US	+0.1 2024/11 2024/10	+0.3 2024/10 2024/7	-0.2 2024/9 2024/5	0 2024/9 2024/6	+0.1 2024/11 2024/10	-0.1 2024/10 2024/4	-0.3 2024/9 2024/5	-0.2 2024/9 2024/6
UK	0 2024/11 2024/10	0 2024/10 2024/7	+0.2 2024/9 2024/5	+0.5 2024/11 2024/8	+0.1 2024/11 2024/10	+0.1 2024/10 2024/4	+0.1 2024/9 2024/5	+0.5 2024/11 2024/8
JP	0 2024/11 2024/10	+0.1 2024/10 2024/7	+0.3 2024/9 2024/5	+0.1 2024/10 2024/7	0 2024/11 2024/10	-0.1 2024/10 2024/4	+0.1 2024/9 2024/5	-0.2 2024/10 2024/7
CN	+0.1 2024/11 2024/10	0 2024/10 2024/7	0 2024/9 2024/5	+0.3 2024/11 2024/10	-0.1 2024/11 2024/10	-0.3 2024/10 2024/4	-0.3 2024/9 2024/5	+0.1 2024/11 2024/10
RU	-0.1 2024/10 2024/9	-0.2 2024/10 2024/7	+0.1 2024/9 2024/5	-0.1 2024/11 2024/10	+0.3 2024/10 2024/9	+1.4 2024/10 2024/4	+0.2 2024/9 2024/2	+0.6 2024/11 2024/10

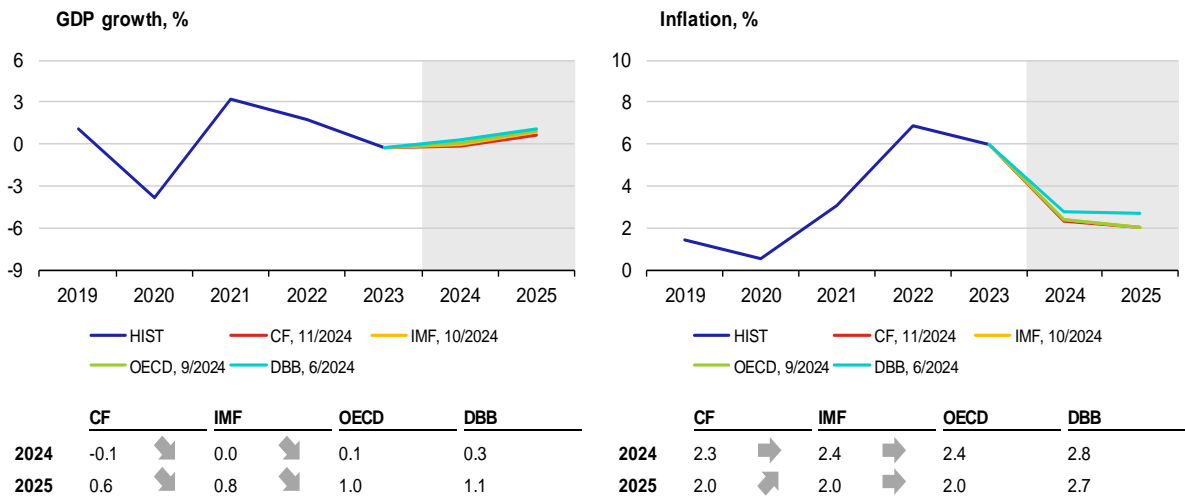
A3. GDP growth and inflation outlooks in the euro area countries



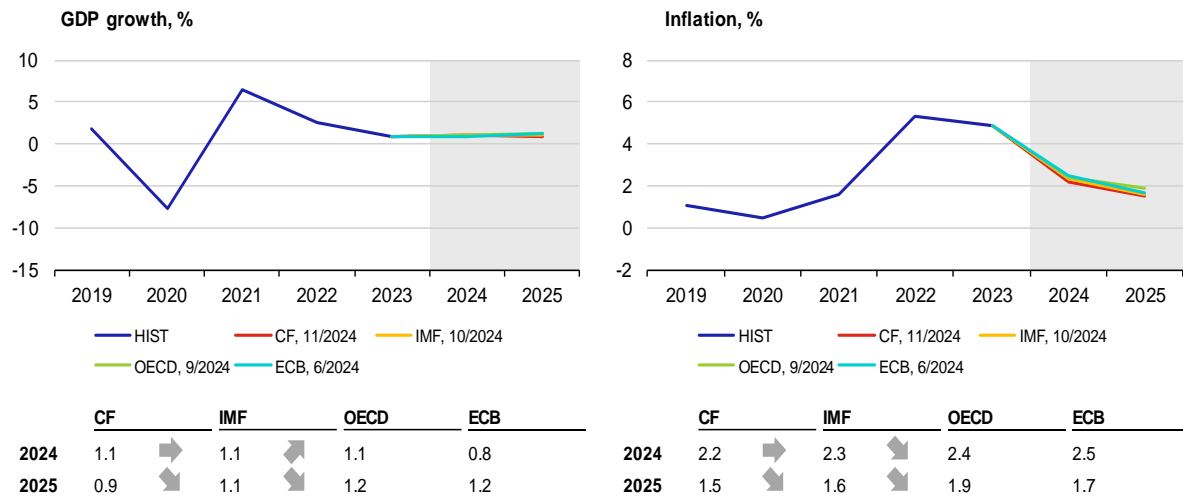
Note: Charts show institutions' latest available outlooks of for the given country.

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

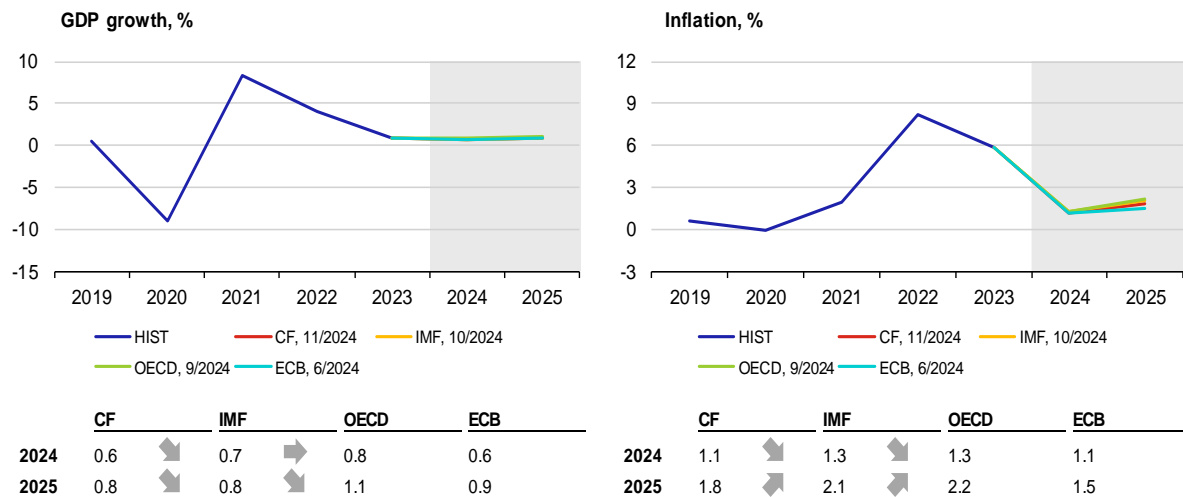
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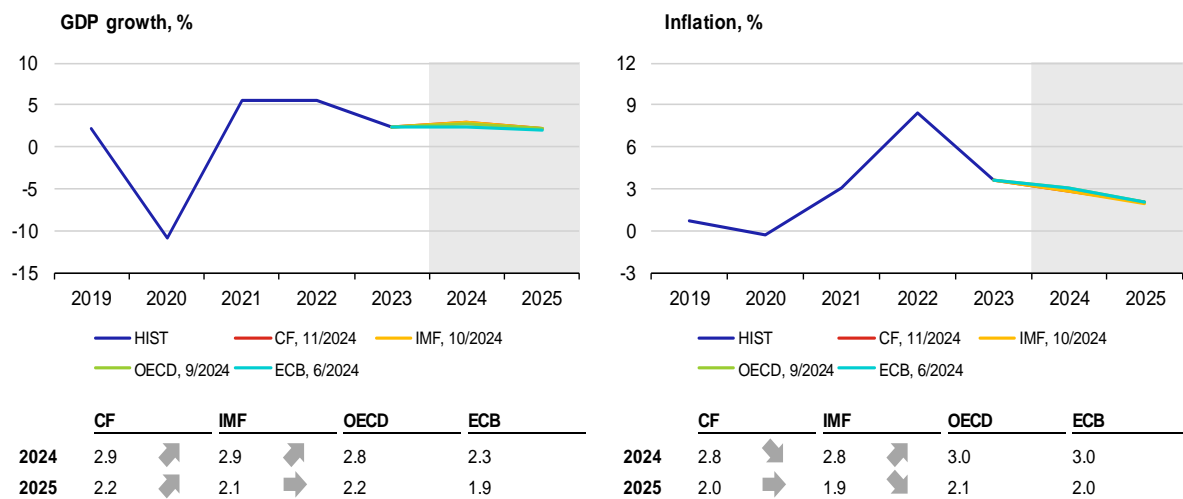
France



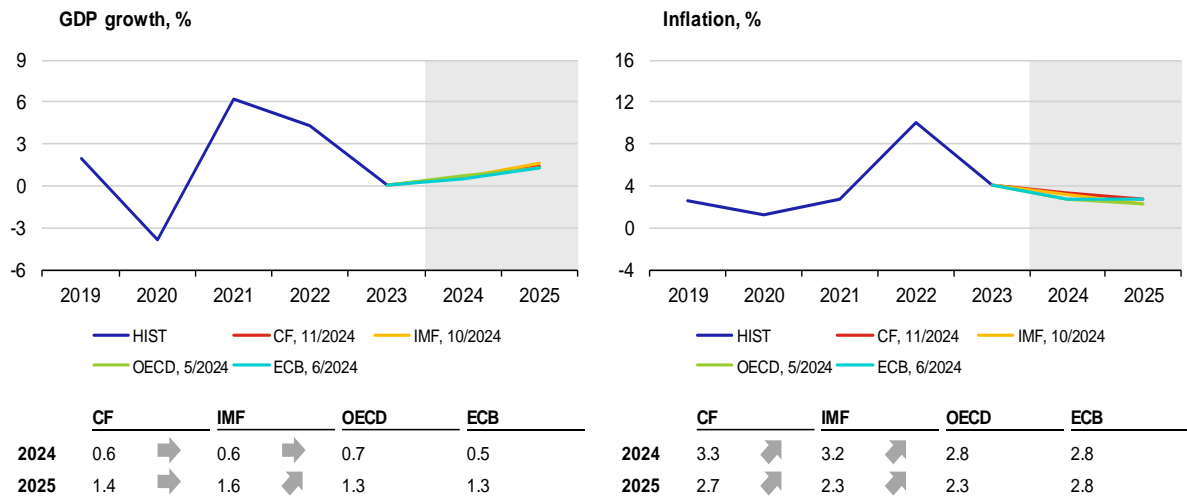
Italy



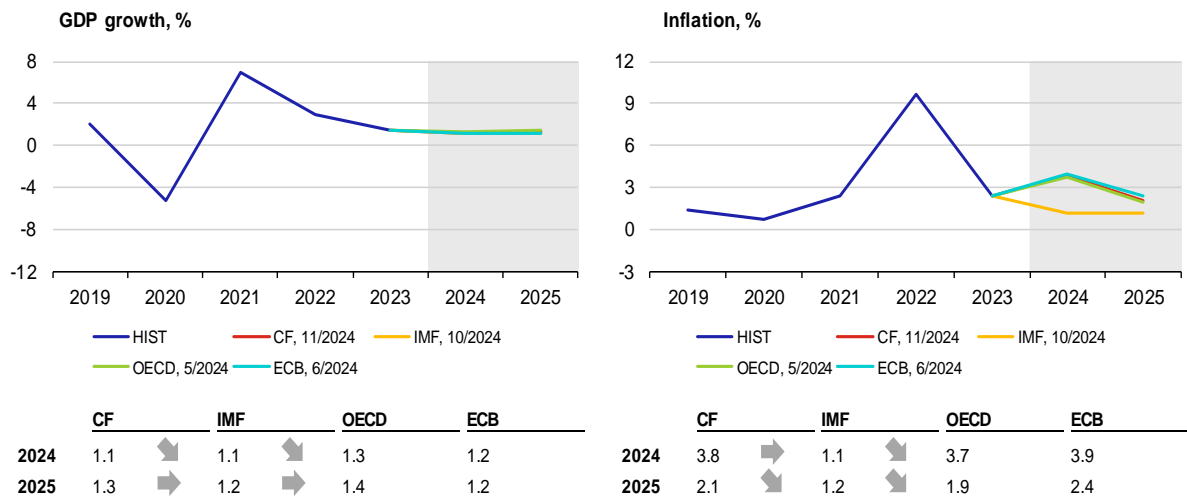
Spain



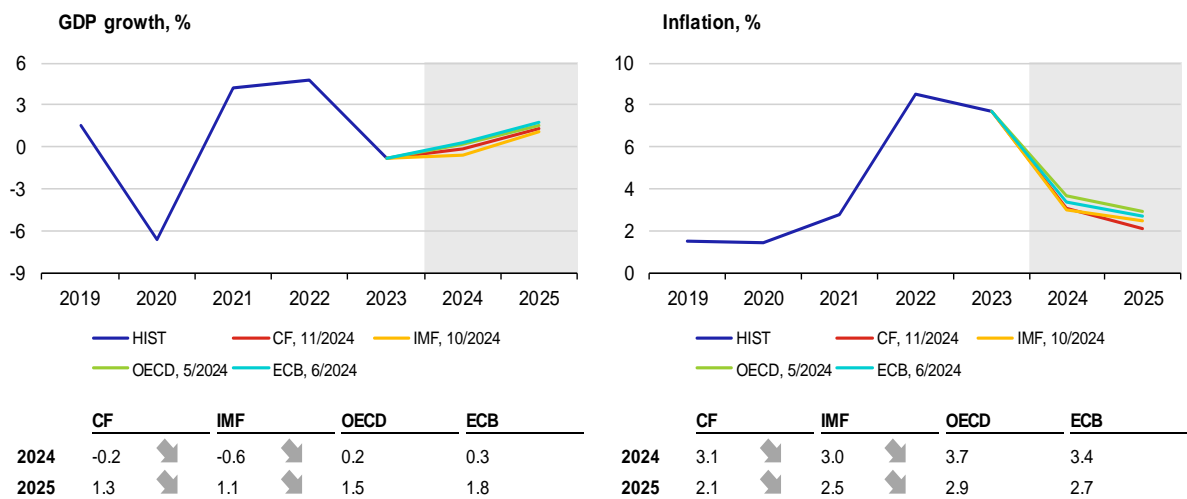
Netherlands



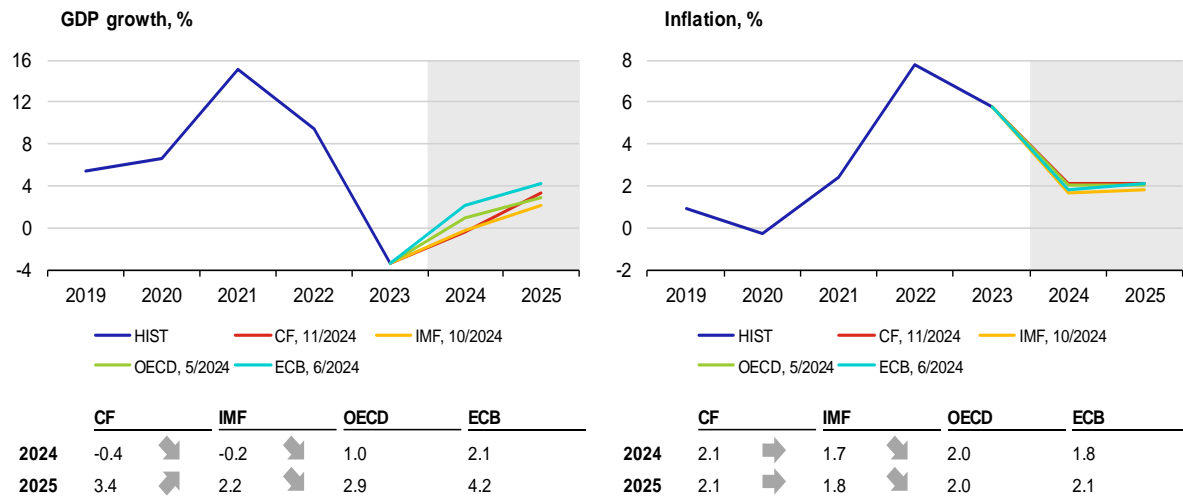
Belgium



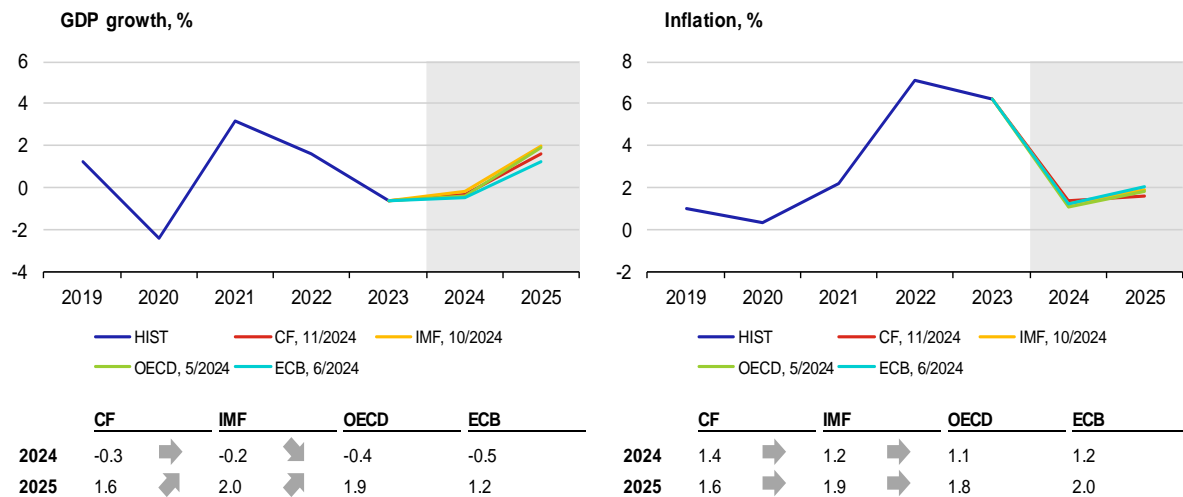
Austria



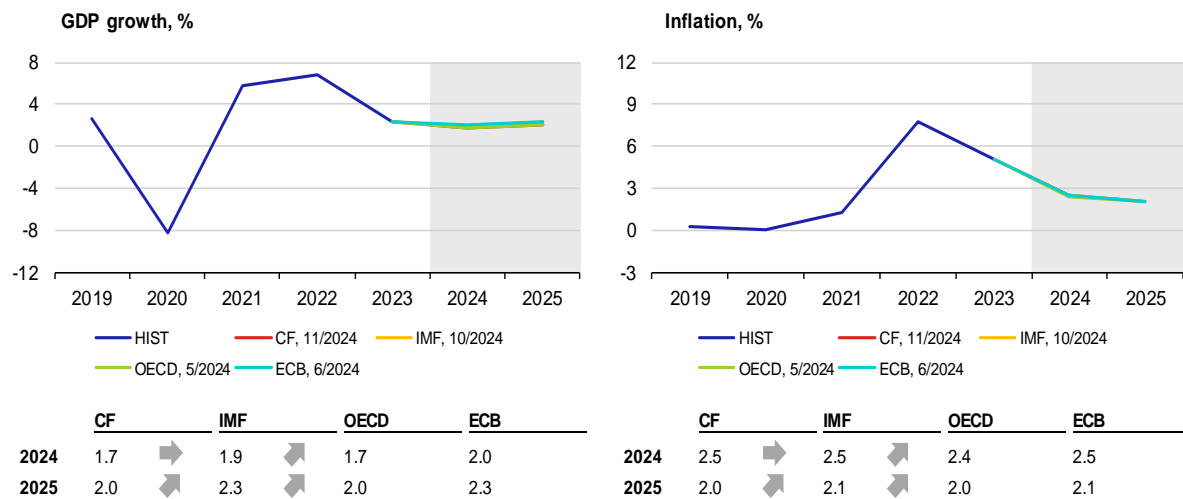
Ireland



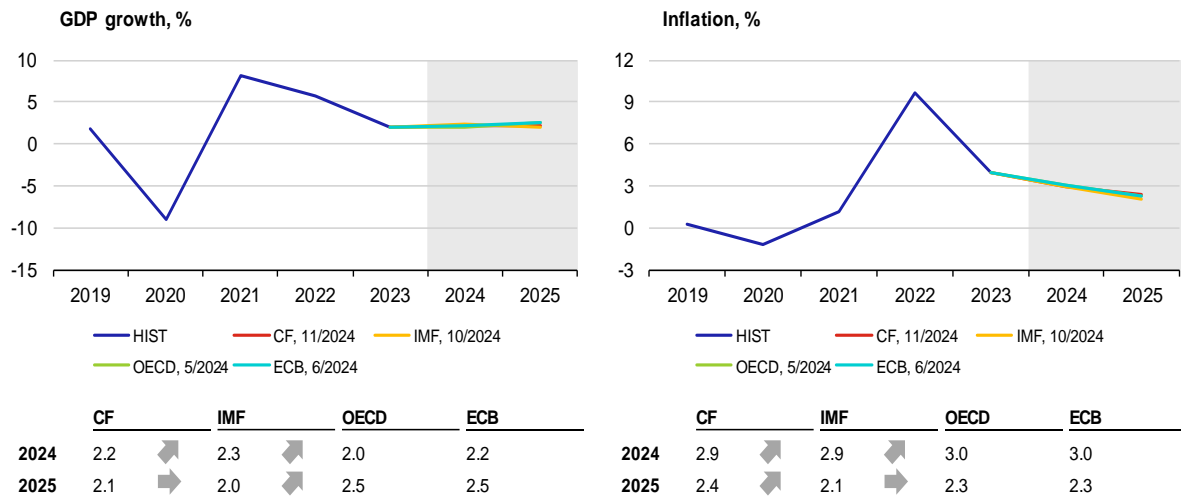
Finland



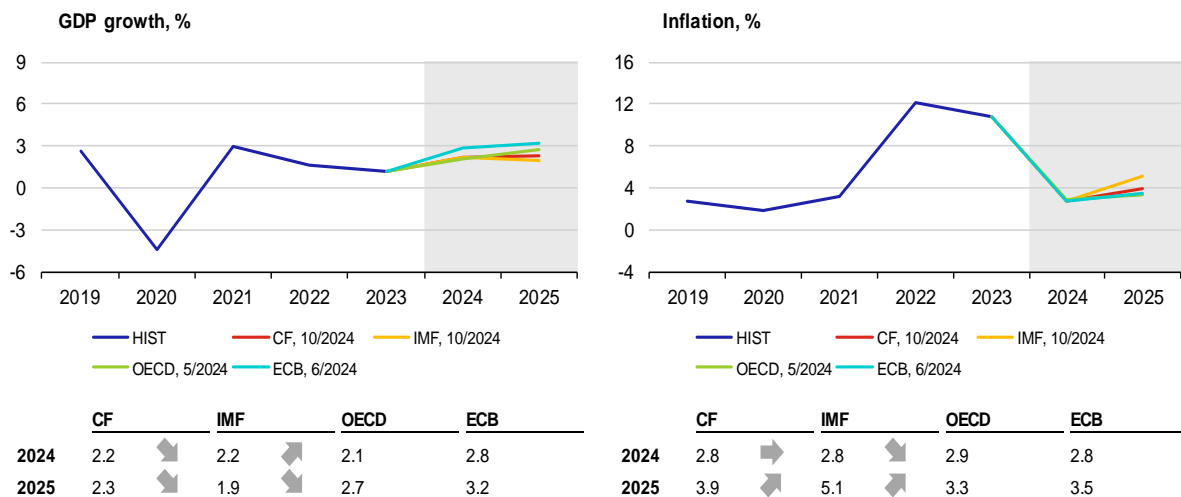
Portugal



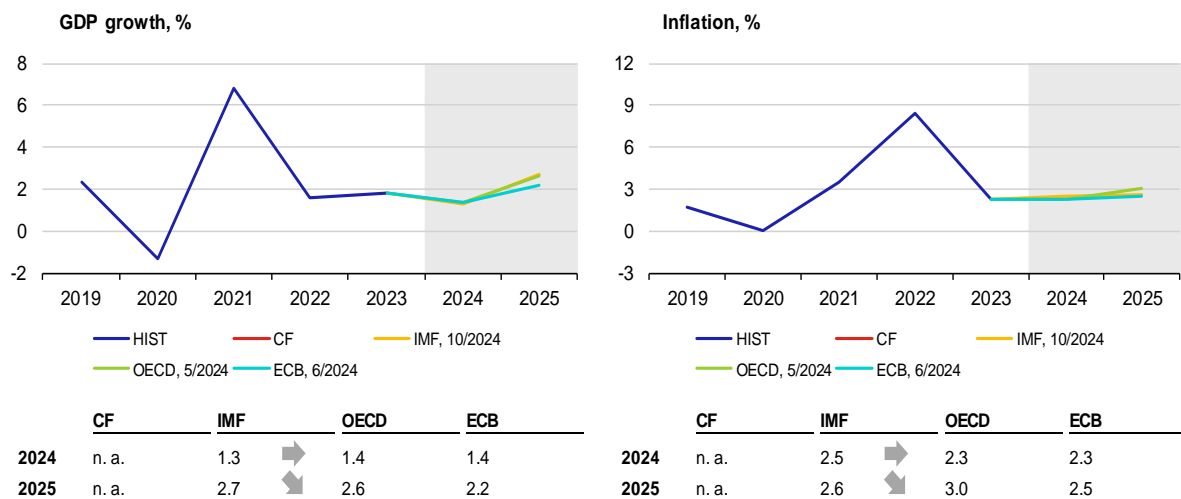
Greece



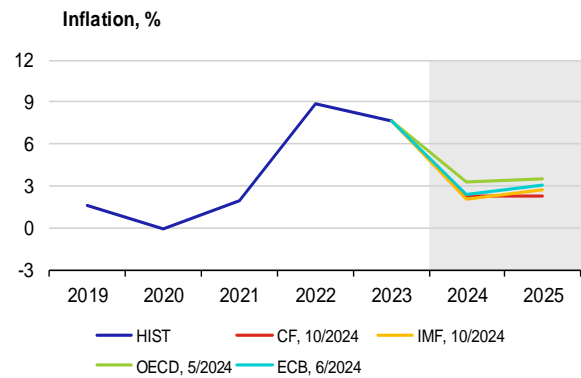
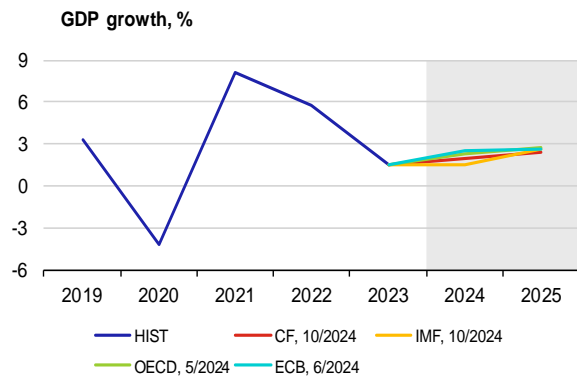
Slovakia



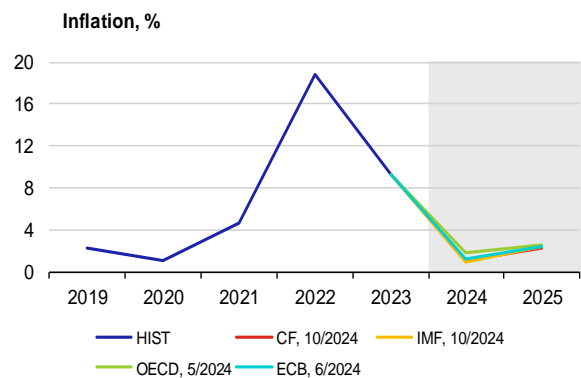
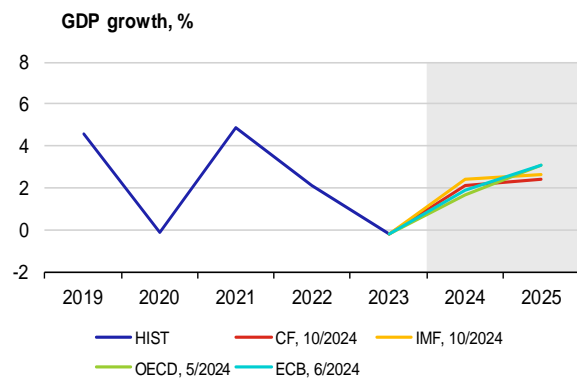
Luxembourg



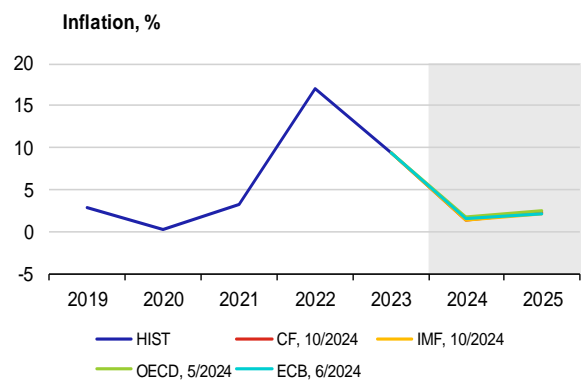
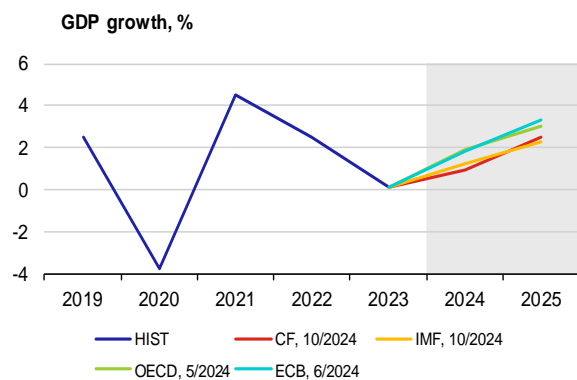
Slovenia



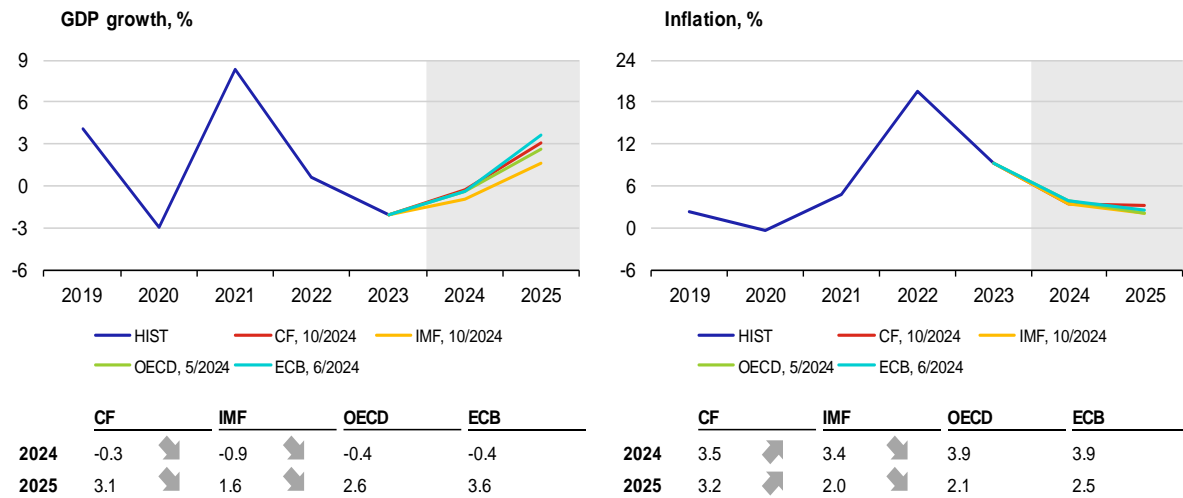
Lithuania



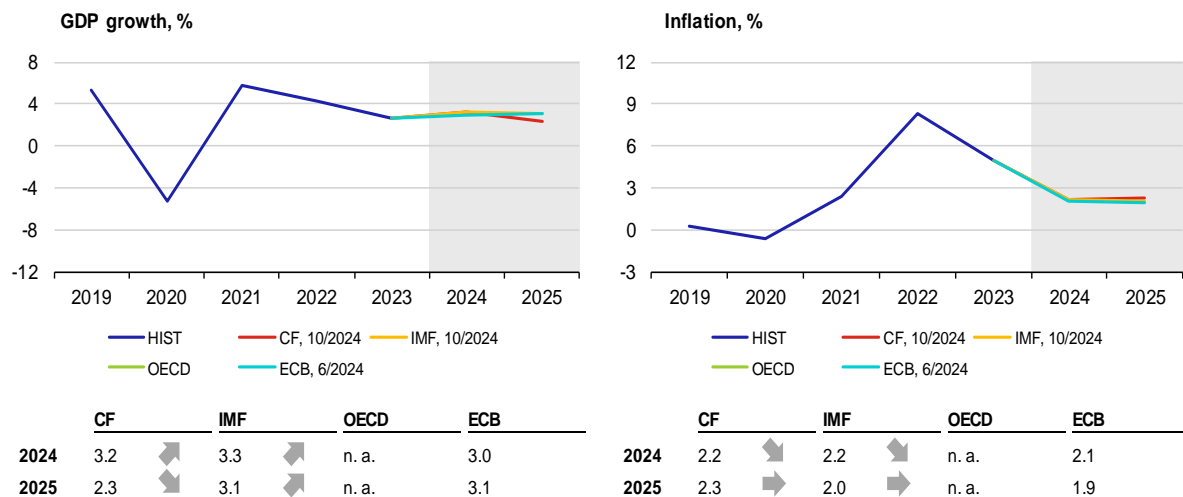
Latvia



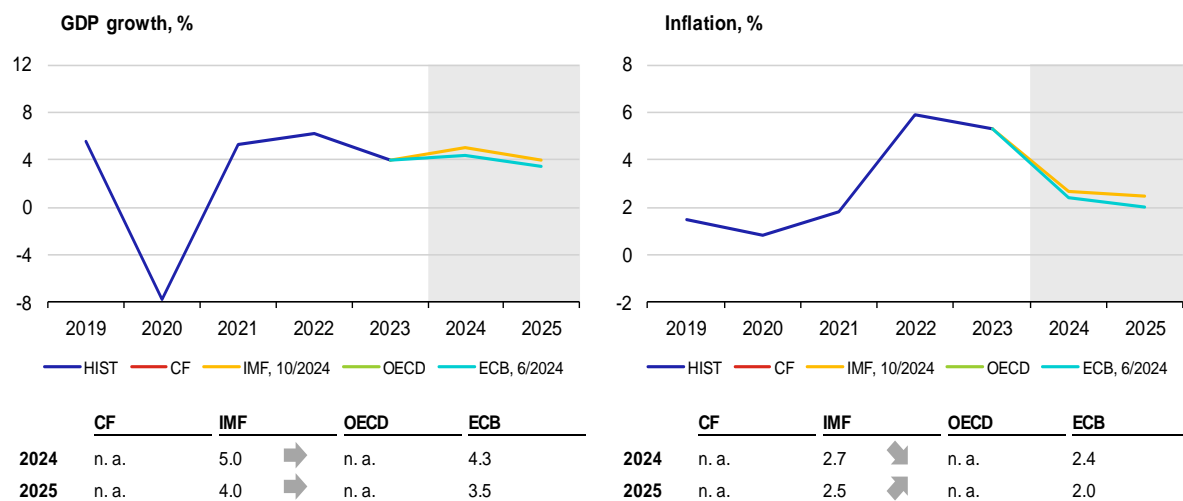
Estonia



Cyprus



Malta

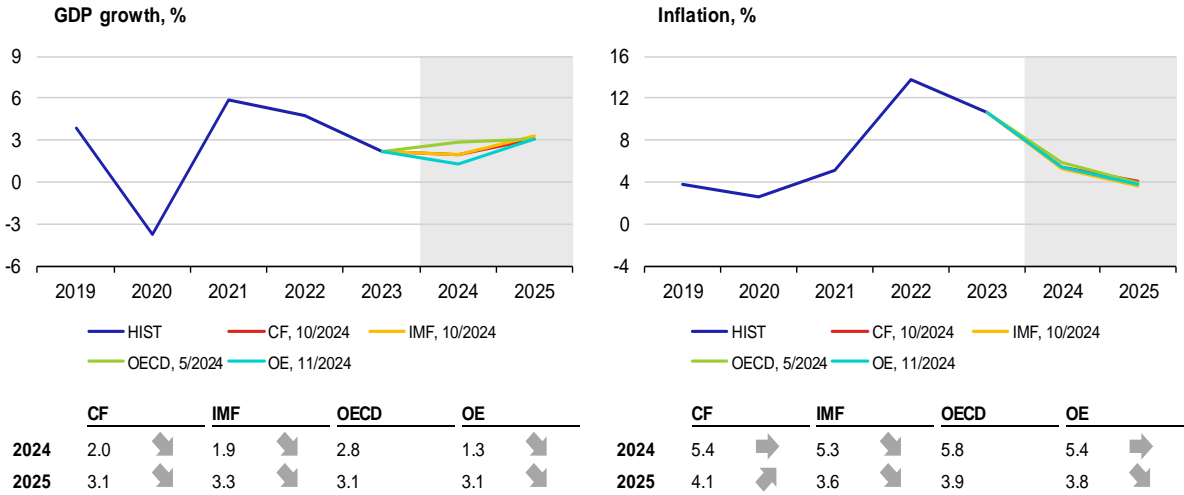


Ddd

Croatia

A5. GDP growth and inflation in other selected countries

Romania



A6. List of abbreviations

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

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

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