

Global Economic Outlook

September 2020



Contents

I. Introduction	2
II. Economic outlook in selected territories	3
II.1 Euro area	3
II.2 United States	5
II.3 United Kingdom	6
II.4 Japan	6
II.5 China	7
II.6 Russia	7
II.7 Developing countries in the spotlight	8
III. Leading indicators and outlook of exchange rates	9
IV. Commodity market developments	10
IV.1 Oil	10
IV.2 Other commodities	11
V. Focus	12
A tale of two crises: An early comparison of foreign trade and economic activity in EU countries	12
A. Annexes	19
A1. Change in predictions for 2020	19
A2. Change in predictions for 2021	19
A3. GDP growth and inflation outlooks in the euro area countries	20
A4. GDP growth and inflation in the individual euro area countries	20
A5. List of abbreviations	27

Cut-off date for data

17 September 2020

CF survey date

13 September 2020

GEO publication date

24 September 2020

Notes to charts

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

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

Leading indicators are taken from Bloomberg and Refinitiv Datastream.

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

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Jan Brůha	V. Focus

I. Introduction

COVID-19: a “cold shower” and an emerging second wave ☹️ With the start of the new school year, the epidemiological situation has worsened visibly in some northern hemisphere countries (such as Israel and the Czech Republic), but South America is now the worst hit continent. The good news for Europe is that Germany – the economic engine of the euro area – is still handling the contagion with aplomb. How are central banks responding? Meetings of the key central banks took place a few days ago with the expected outcome: “no change” in interest rates or the main unconventional monetary policy instruments. A common thread of their deliberations – in an epidemiological situation that is not improving – is a calculation of the effects of government fiscal measures. The Fed remains slightly optimistic overall, while admitting that the US economy will be affected by the fiscal policy support currently under discussion, the parameters of which have yet to be

September GDP growth and inflation outlooks for monitored countries, in %

GDP	EA	DE	US	UK	JP	CN	RU
2020	-7.7 ↘	-5.7 ↘	-4.4 ↘	-10.1 ↘	-5.6 ↘	2.2 ↘	-5.1 ↘
2021	5.5 ↘	4.6 ↘	3.8 ↘	6.5 ↘	2.6 ↘	7.9 ↘	3.4 ↘
Inflation	EA	DE	US	UK	JP	CN	RU
2020	0.4 ↘	0.5 ↘	1.1 ↘	0.8 ↘	-0.1 ↘	2.8 ↘	3.7 ↘
2021	1.0 ↘	1.5 ↘	1.9 ↘	1.5 ↘	0.1 ↘	2.0 ↘	3.6 ↘

Source: Consensus Forecasts (CF)

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

discussed the effective use of negative rates. The failed outcome of the eighth round of negotiations between the UK and the EU, caused by the UK internal market bill, is resonating around the British Isles and beyond. It is surprising that different ideas about mutual relations still persist just three months before the transition period ends.

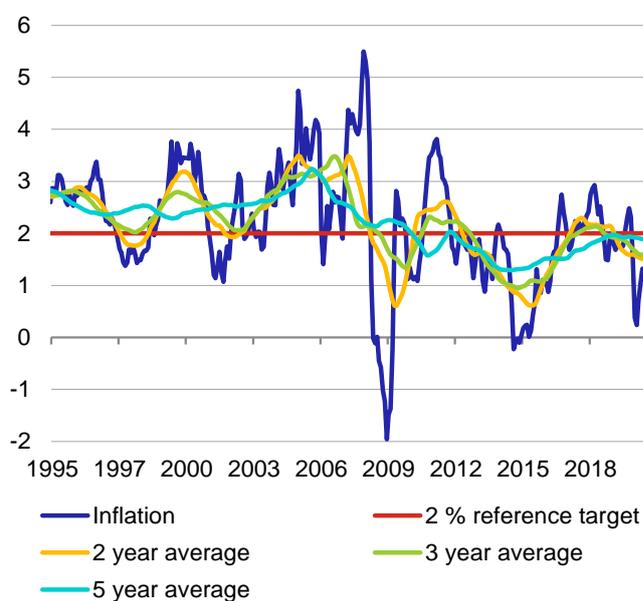
The September GDP growth outlooks for this year predict a slower decline of the three strongest economies, i.e. the USA, the euro area (including Germany) and China, but the results predicted for 2021 are slightly worse than previously expected (except for China). Of course, the coronavirus pandemic, US–China trade relations and the reality of Brexit may substantially affect the current outlooks. **Consumer inflation outlooks** changed only slightly in September compared with August. The important news, though, is still that inflation will remain below 1% in the advanced countries under review and close to zero in the euro area. The outlook for Japan is even slightly deflationary. The forecast for next year gives hope that inflation will approach the 2% ideal in some countries, the USA being closest. The dollar will be de facto stable against the euro and the yen, firm slightly against the renminbi, and weaken against the rouble and slightly against sterling at the one-year horizon. The CF outlook for the Brent crude oil price at the one-year horizon is a touch higher than in August, at USD 48.9/bbl (highest estimate USD 67/bbl, lowest estimate USD 38/bbl). The outlook for 3M USD LIBOR market rates is very slightly falling, while that for 3M EURIBOR rates has remained negative over the entire outlook horizon for several years now.

The chart in the current issue shows inflation in the USA since the mid-1990s when the Fed started to target inflation. It set an explicit 2% target in 2012 and has now, almost ten years on, changed the target and intends to target average inflation (for more details, see [Central Bank Monitoring III/2020](#)). This means that not only the future, but also the past will be important for the Fed’s monetary policy. The chart shows that average inflation stays close to the 2% target, especially in the longer term.

The current issue also contains an analysis: [A tale of two crises: An early comparison of foreign trade and economic activity in EU countries](#). The article shows that although the origins of the two crises are different, as is the pace and size of the economic downturn, many features are similar; the difference between the two episodes under review consists in the dynamics of foreign trade prices.

agreed. The ECB loosened the reins in September by approving a change to the calculation of the leverage ratios of the banks it supervises in order to strengthen the monetary policy transmission mechanism. According to market estimates, this could bring more than EUR 70 billion into the economy. The central banks of the UK and Japan also left monetary policy unchanged. However, the BoE revealed “between the lines” that the MPC members had

Inflation in the USA over the last 25 years, %



Source: U.S. Bureau of Labor Statistics

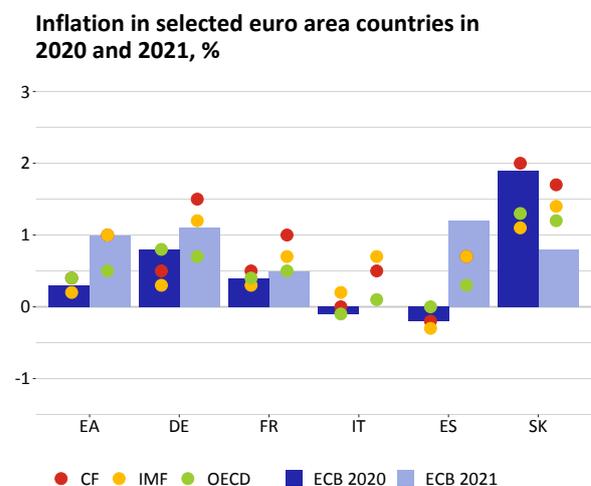
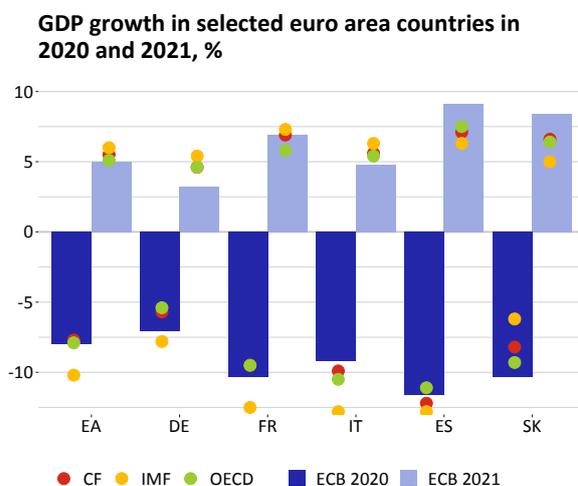
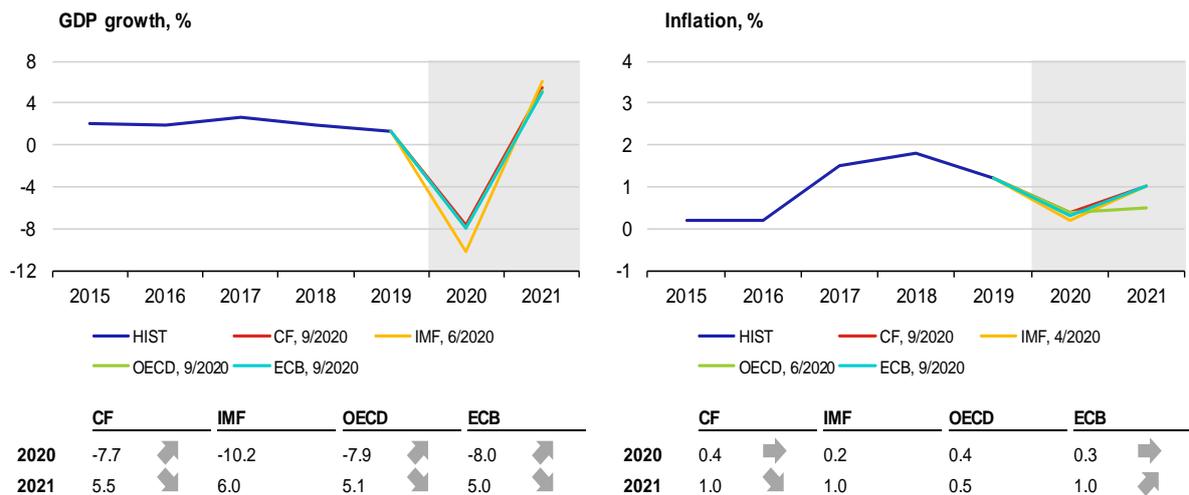
Note: Monthly data on annual inflation. The average is calculated for the data in the middle of the range.

II.1 Euro area

COVID-19-related government restrictions caused the largest-ever decline in the euro area economy. GDP fell by 14.7% in 2020 Q2 compared with the same period of last year. Household consumption decreased by almost 16%, while investment, imports and exports all dropped by more than 20%. Government expenditure went down by 2.5%, but some countries (Germany and Spain) recorded year-on-year growth due to record-high government stimuli. From the sectoral perspective, activity fell not only in services (especially trade, restaurants and professional services), but also in industry.

The euro area will enjoy its fastest-ever recovery in Q3, mainly due to economies re-opening. The first economies were opened at the end of April, but activity was not back up and running fully until June and July according to industrial production data. Industrial production was more than 7% lower in July than in the same period of last year. The leading PMI indicators in industry and services reached the expansion band in July, but the August data were again below the 50-point threshold in many euro area countries, with lower orders often being the reason for the worsening expectations. Consumer sentiment also improved but remains below the long-term average according to the European Commission's survey. Retail sales in the euro area lost momentum in July, but this largely reflected the postponement of summer sales. As regards individual economies, the most optimistic surveys are those among German consumers and businesses. The epidemiological situation has been gradually worsening since August, especially in Spain and France, raising concerns of a second wave of government measures. Spain has already started to tighten its measures, but many countries have not even fully eased all their anti-epidemic measures after the spring wave. Should the situation deteriorate, however, nationwide lockdowns of the economy can no longer be expected.

The September CF again lowered the estimate for the contraction in euro area GDP this year (-7.7%) and the pace of recovery next year (5.5%). According to CF, the largest contractions will be recorded in Spain (-12.2%) and Italy (-9.9%), while that in Germany will amount to a mere 5.7%. As regards the components of GDP, the contraction in the euro

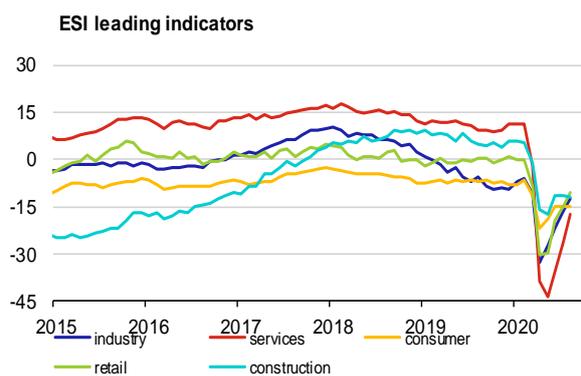


Note: Charts show institutions' latest available outlooks of for the given economy.

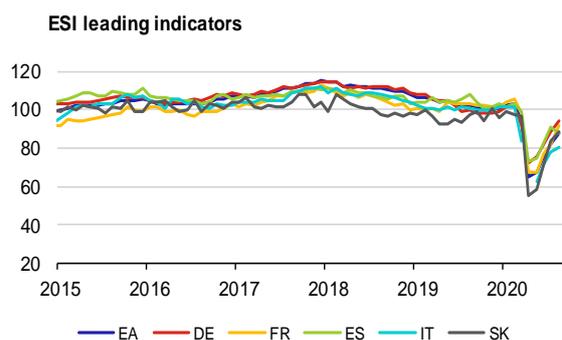
area this year will be due mainly to household consumption and gross fixed capital formation. Government debt and unemployment will also grow significantly. The revision of the outlook towards a more moderate decline was fostered by fiscal support measures announced by individual governments. The German package of EUR 130 billion, announced back in June, is record-high. The French support scheme will be only slightly smaller (EUR 100 billion) but will rely partly on a contribution from the EU recovery fund.

The euro area economy slipped into deflation for the first time in four years in the summer. Consumer prices recorded a year-on-year decline of 0.2% in August after rising by 0.4% the previous month. Deflation was observed in 12 out of the 19 euro area countries. The decline in prices was due mainly to a VAT reduction in Germany, lower oil prices and postponed summer sales in France, Italy and Belgium. Summer sales are usually held in June and July but were postponed to August this year due to the pandemic. The fall in prices was also significant in services, with core inflation dropping to just 0.4%. According to the September CF, inflation will be just above zero this year and rise to 1% next year. Some southern EU countries (Greece, Spain and Portugal) will be in deflation this year. Core inflation in the euro area will remain below 1%.

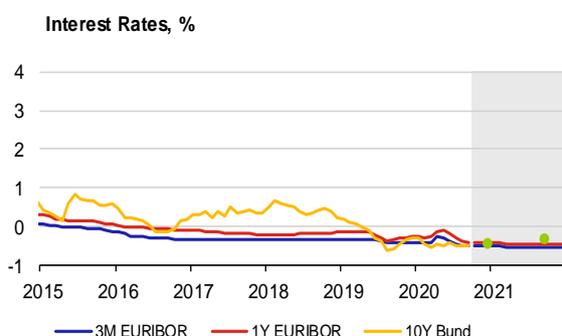
The ECB left its monetary policy stance unchanged at its September meeting. Euro area monetary policy thus remains very accommodative. The ECB said only that it would probably use the entire PEPP envelope by June 2021. The appreciation of the euro against the dollar and other currencies was discussed, including with regard to current inflation. However, President Lagarde said the deflationary risks had receded and did not comment on the exchange rate. As the financial markets had been expecting at least a verbal intervention, the lack thereof caused the euro to appreciate below USD 1.19 to the euro. The central bank also presented its new forecast for the euro area, lowering only the outlook for GDP growth this year. The ECB's macroeconomic projections expect annual real GDP growth of -8.0% in 2020, 5.0% in 2021 and 3.2% in 2022. The central bank's forecast is close to the OECD's outlook.



	industry	services	consum.	retail	constr.
6/20	-21.6	-35.5	-14.7	-19.4	-11.3
7/20	-16.2	-26.2	-15.0	-15.1	-11.4
8/20	-12.7	-17.2	-14.7	-10.5	-11.8



	EA	DE	FR	ES	IT	SK
6/20	75.8	81.9	77.5	83.1	71.2	71.6
7/20	82.4	88.4	82.2	90.6	77.9	83.3
8/20	87.7	94.3	91.5	88.1	80.6	88.2



	8/20	9/20	12/20	9/21
3M EURIBOR	-0.48	-0.48	-0.49	-0.54
1Y EURIBOR	-0.36	-0.40	-0.42	-0.43
10Y Bund	-0.50	-0.47	-0.40	-0.30



Note: Inflation expectations based on 5 year inflation swap and SPF

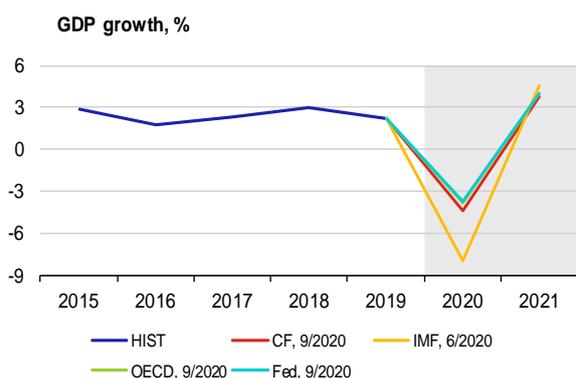
	5y5y	SPF
7/20	1.13	1.65
8/20	1.22	1.65
9/20	1.21	1.65

II.2 United States

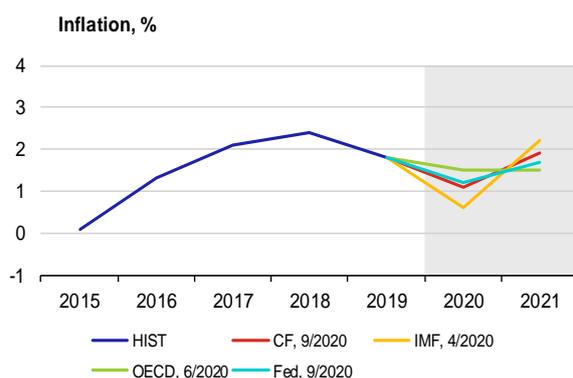
The US economy continues to see a labour market recovery, while the number of new COVID-19 cases is on a downward tendency. Non-farm payrolls rose by more than 1.3 million again in August and the unemployment rate dropped below 10% (to 8.4%). The number of applications for unemployment benefits has been below 900,000 for three weeks in a row. Both the Fed's new forecast and the OECD expect the US economy to contract by less than 4% this year. The CF outlook was also revised upwards, expecting a decline of 4.4% this year. The current data suggest a continued recovery – retail sales recorded month-on-month increases in both July and August, car sales are going up, and the leading PMI indicators in services (55) and manufacturing (53.1) are in the expansion band.

Inflation rose to 1.3% year on year in August, due mainly to growth in prices of food (4.1%) and services (2.2%). By contrast, energy prices decreased by 9% year on year. CF revised its inflation outlook up to 1.1% for 2020 and 1.9% for 2021. The Fed expects inflation of 1.2% this year and 1.7% the next. The dollar weakened significantly against the euro over the last month and will continue to depreciate according to the CF outlook.

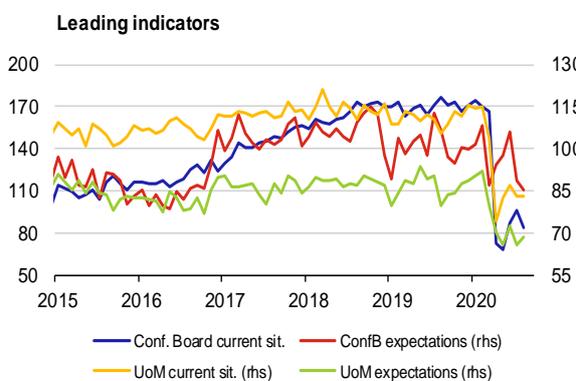
The Fed is changing its monetary policy framework and will keep rates at zero for a few more years. The big news was the announcement of change to the central bank's monetary policy: the Fed will target average inflation while retaining the 2% target. This means in practice that past inflation will play a role in monetary policy. The Fed's other objective – maximum employment – was also modified. From now on, the focus will be on the shortfalls of employment from its maximum level rather than on deviations from the maximum level. The Fed has been working on the revision of its framework for the last two years. Its outlook expects near-zero rates until the end of 2023. Rates may be raised if the labour market reaches full employment and inflation is on track to exceed 2%.



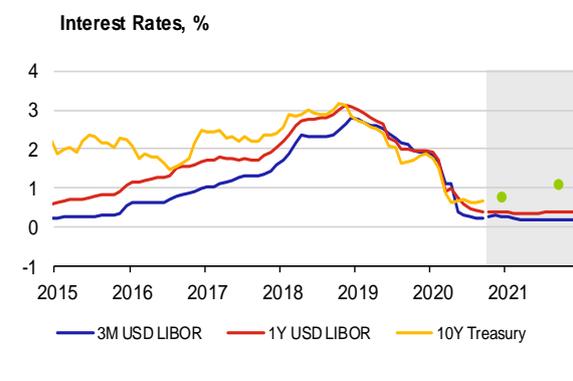
	CF	IMF	OECD	Fed
2020	-4.4	-8.0	-3.8	-3.7
2021	3.8	4.5	4.0	4.0



	CF	IMF	OECD	Fed
2020	1.1	0.6	1.5	1.2
2021	1.9	2.2	1.5	1.7



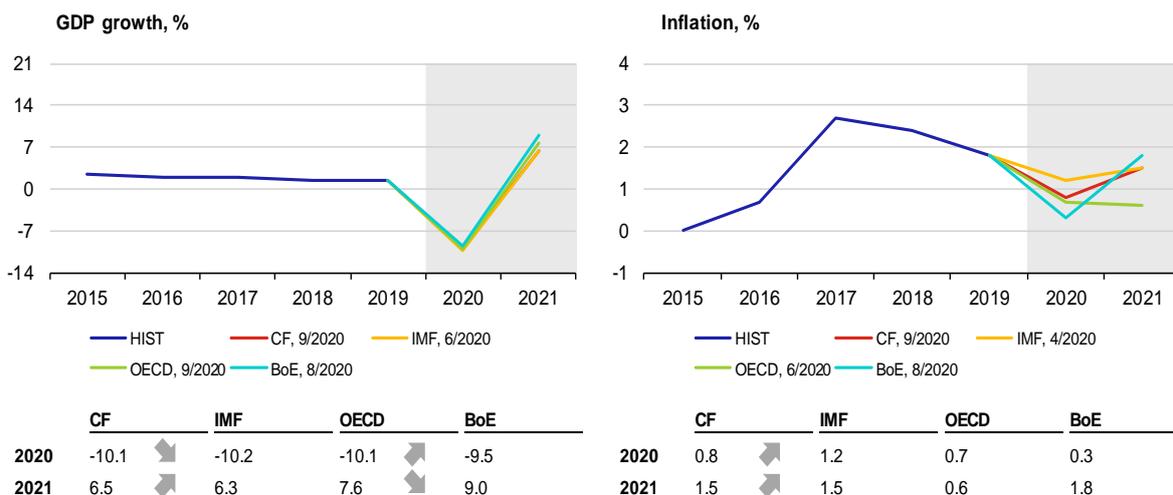
	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
6/20	86.7	106.1	87.1	72.3
7/20	95.9	88.9	82.8	65.9
8/20	84.2	85.2	82.9	68.5



	8/20	9/20	12/20	9/21
USD LIBOR 3M	0.25	0.25	0.29	0.19
USD LIBOR 1R	0.45	0.45	0.39	0.39
Treasury 10R	0.64	0.68	0.80	1.10

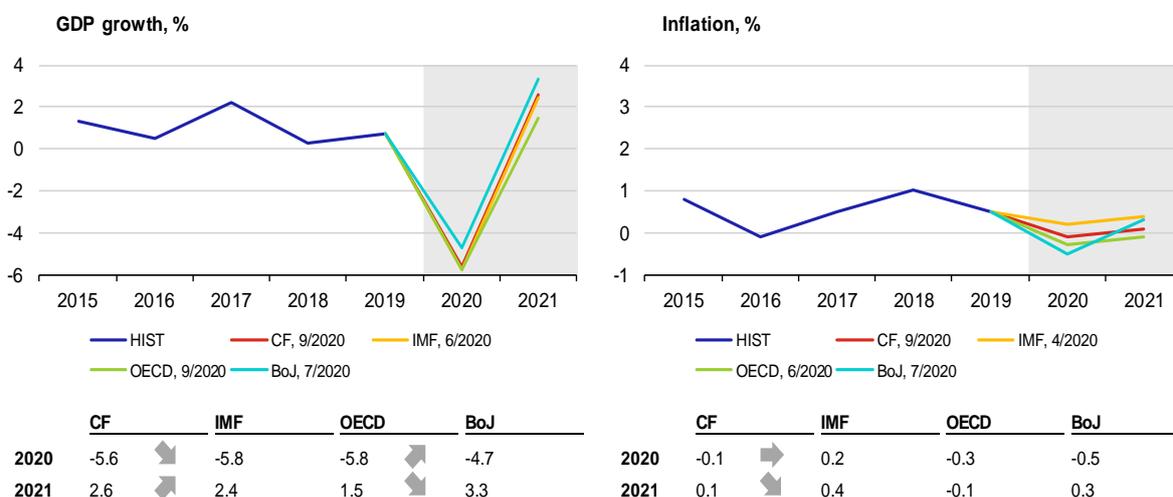
II.3 United Kingdom

Amid growing Brexit tensions and renewed growth in COVID-19 cases, the BoE did not ease monetary policy further. However, the BoE is ready to support the economy with further interventions if necessary. The UK recorded its biggest increase in lay-offs since the financial crisis; moreover, there are concerns about substantial growth in unemployment due to the end of the government's job retention scheme at the end of October. Concerns regarding a lack of a robust testing and monitoring system are also growing, as the testing rate is collapsing. The last round of Brexit talks made again no headway, and a UK bill that might eliminate the legal force of part of the exit agreement ratified last year has damaged mutual trust and fuelled disputes within the UK's Conservative Party. Both CF and the OECD estimate that GDP will fall by 10.1% this year, with the OECD being more positive about growth in 2021 (7.6%). The forward-looking composite PMI rose to 59.1 in August on the back of the strongest expansion in private sector business activity since 2014.



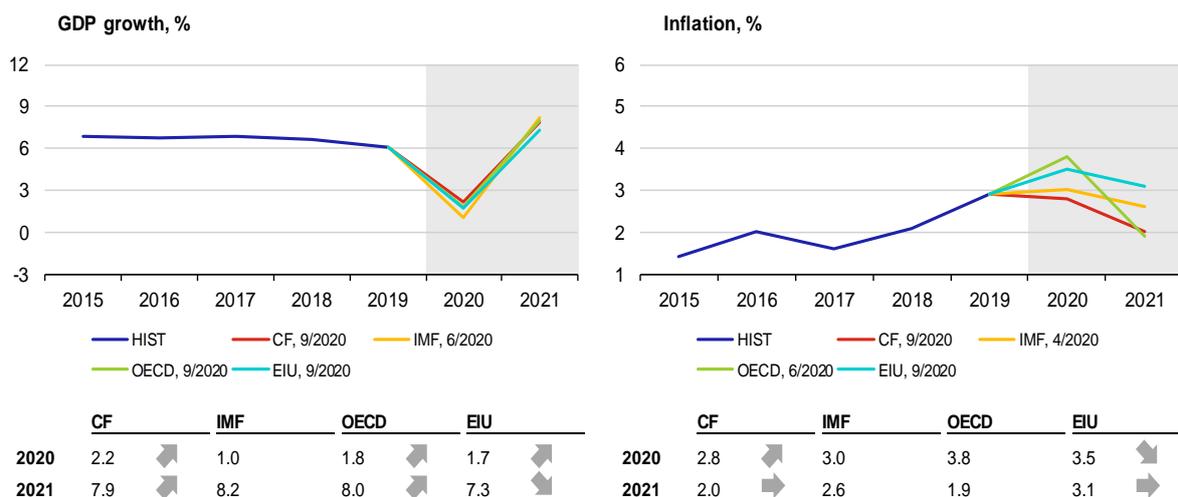
II.4 Japan

Japan recorded a larger year-on-year decrease in GDP in Q2 than in the worst quarter of the global economic crisis. The contraction – the largest in the last 50 years of available data – exceeded 10% and was driven by a fall in private consumption of roughly the same size. Private consumption makes up more than 50% of Japan's GDP. Exports recorded the largest decline in the GDP expenditure structure (23.1%). For comparison, exports dropped by more than one-third in 2009 Q1. The economy shrank by almost 8% relative to the previous quarter, a sharper and considerably larger quarter-on-quarter decline than in the previous crisis. Short-term growth is showing signs of a turnaround: growth in new orders in July and an 8.7% month-on-month rise in industrial production. However, their sustainability is associated with a high degree of pandemic-related uncertainty. The UK signed a free trade agreement with Japan in September. This, the first post-Brexit trade deal, awaits ratification by the parliaments of the two countries.



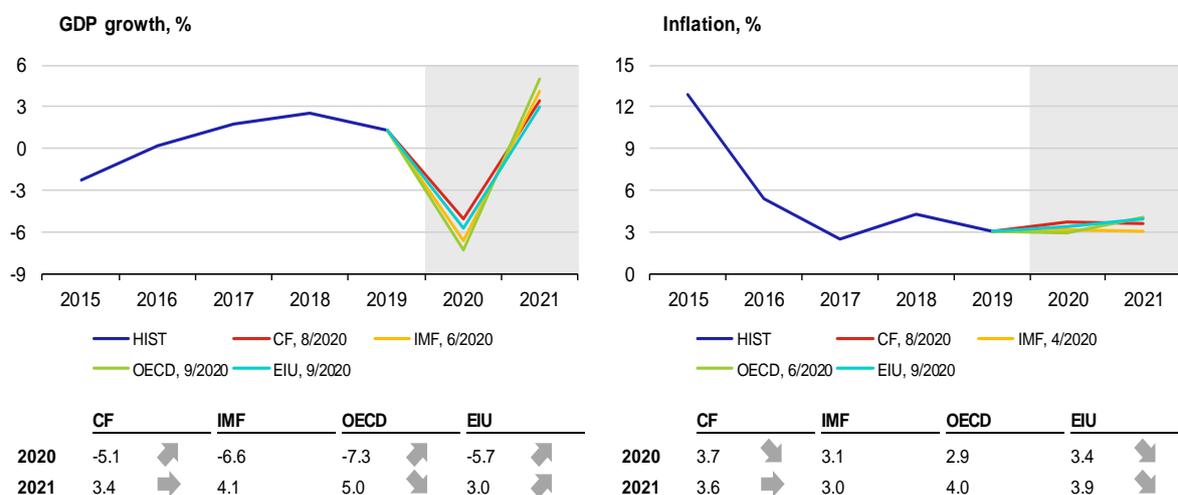
II.5 China

The strong recovery in the growth rate of the Chinese economy to 3.2% in Q2 mainly reflects strong growth in investment and only a slightly positive contribution of net exports, while the contribution of consumption remained negative. The solid growth in industry fostered by massive government fiscal stimuli is picking up further in Q3. Industrial production went up by 5.6% year on year in August, the biggest increase since December 2019. Retail sales likewise rose by 0.5% in August compared with the same month of last year, surpassing analysts' expectations. Following a long-running decline in retail sales, the latest data thus signal improving domestic fundamental demand pressures. Growth in net exports in August reflects the continued gradual opening of the global economy and growing international trade. The CF analysts expect the Chinese economy to grow by 2.2% year on year in 2020 and 7.9% in 2021. According to the September CF outlook, consumer prices in China will rise by 2.8% this year and slow to 2% in 2021.



II.6 Russia

The decline in economic activity was more moderate than the preliminary estimate had expected. According to Rosstat's initial estimate, the decline in GDP amounted to 8% in Q2. The pandemic had the biggest effect on hotels and restaurants, whose value added in GDP was just 43% of last year's level. Activity in the areas of culture, sport, leisure-time activity, entertainment and other types of services fell by almost 30% year on year. The mining industry and manufacturing increased by 13% and 8% respectively, whereas both had recorded modest growth a year earlier. By contrast, financial activities and insurance performed well (with growth of 6.1%), as did public administration, military security and social insurance. The last-mentioned even recorded higher growth (2.6%) than in the same quarter a year earlier (1.4%). CF revised its latest GDP outlook by 0.3 pp towards a more moderate decline.

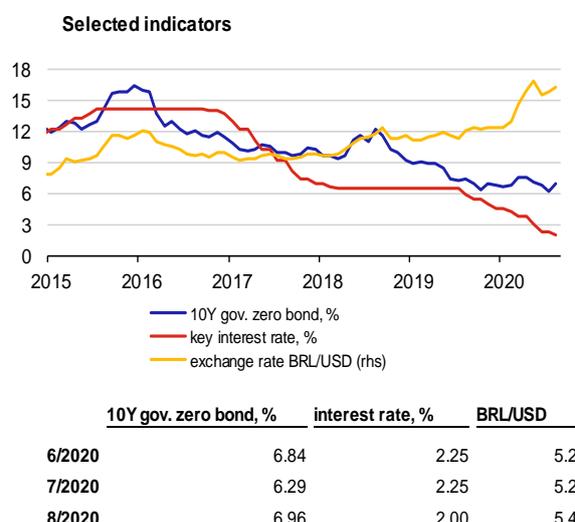
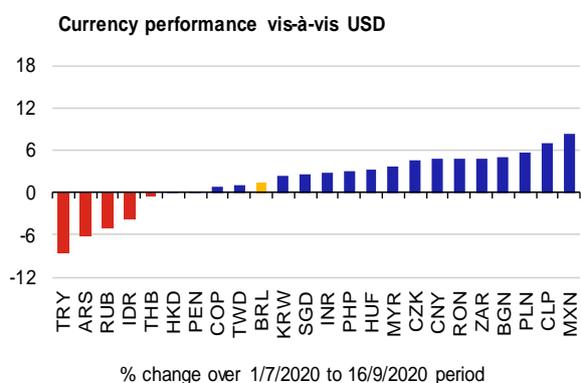
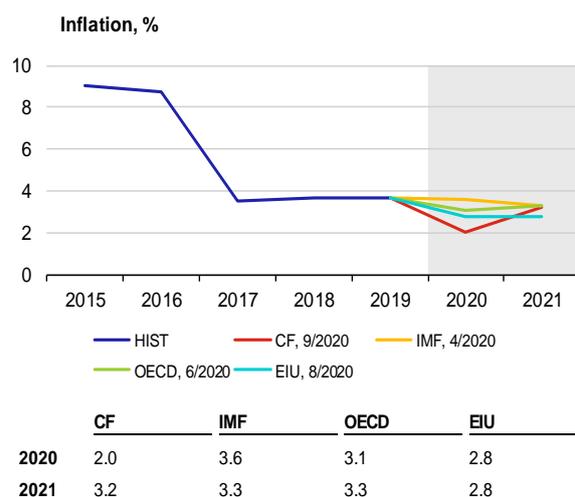
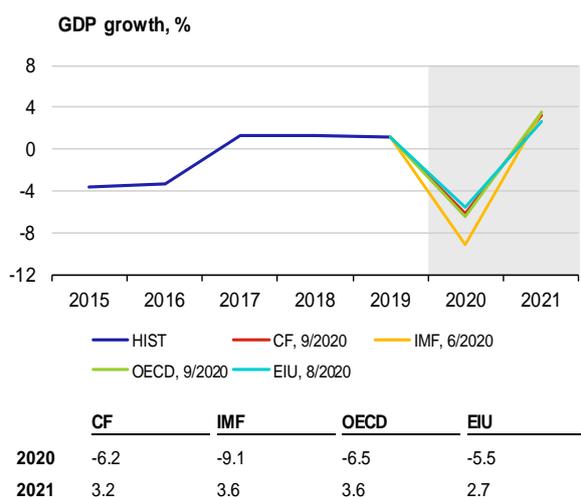


II.7 Developing countries in the spotlight

The Brazilian economy contracted by 9.7% quarter on quarter in Q2. As in most economies, household consumption and investment were affected particularly badly. The Brazilian real recorded increased volatility, weakening from BRL 4.14 to the dollar, where it had stood before the outbreak of the pandemic, to a current BRL 5.3. Consumer inflation was running at 2.4% in August, significantly below the target of the central bank (the BCB; 4% for 2020). In response to the spread of the coronavirus, the BCB has reduced its key interest rate by a total of 225 basis points to 2%. It has also adopted numerous measures to support banking sector liquidity, including an emphasis on lending to SMEs.

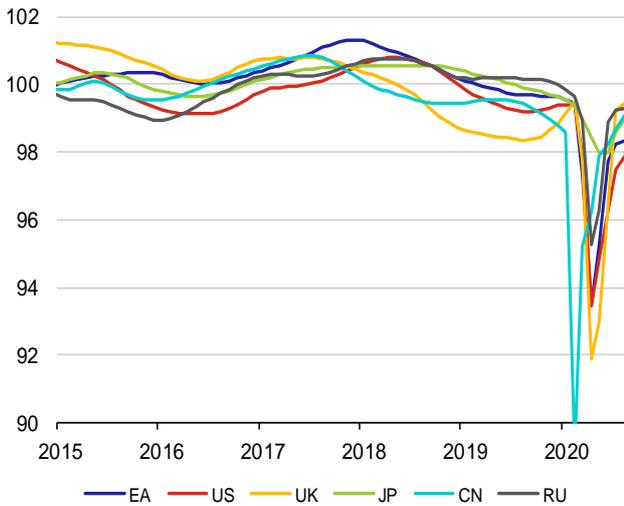
The government expenditure growth cap has been a key topic in Brazil in the past few months. President Bolsonaro took office with the aim of reining in state expenditure, but the coronavirus pandemic has necessitated countercyclical measures. The primary deficit will amount to 13% of GDP this year, and the total debt of the largest Latin American economy will thus probably rise to 98% of GDP. A debate is now going on about raising the cap on government expenditure growth, a step supported by the president and many members of the government and the Congress. It is opposed mainly by Finance Minister Paulo Guedes, whose reform plan has gained favour with the financial markets. The markets are now nervously awaiting the president's next steps. If the spending cap was increased across the board without a sustainable debt plan, investors would exit the Brazilian market en masse and the government would risk a financial crisis.

GDP will decline by around 6% this year according to most institutions. However, many analysts have upgraded their outlooks for Brazil based on the latest data from the real economy. GDP growth is expected to amount to around 3% next year due to the coronavirus crisis and also to Brazil's "old" problems such as an inefficient tax system, high corruption, high unemployment and low productivity. Consumer inflation will stay below the inflation target due to weak wage growth and, according to CF, a slightly appreciating exchange rate. The CF outlook for the key interest rate for next year is almost stable at the current level of 2%.



III. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

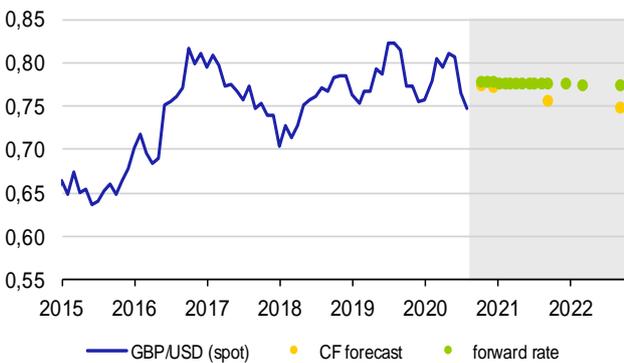


The US dollar (USD/EUR)



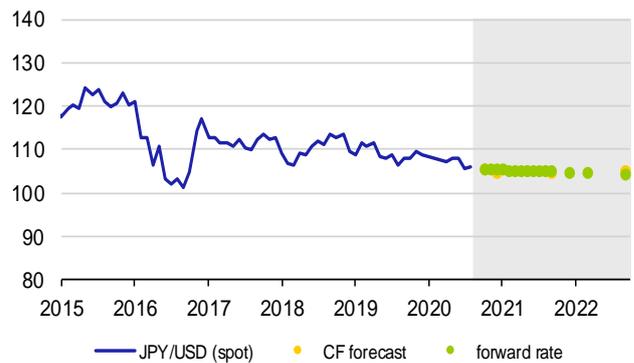
	14/9/20	10/20	12/20	9/21	9/22
spot rate	1.187				
CF forecast		1.175	1.177	1.189	1.197
forward rate		1.187	1.189	1.197	1.207

The British pound (GBP/USD)



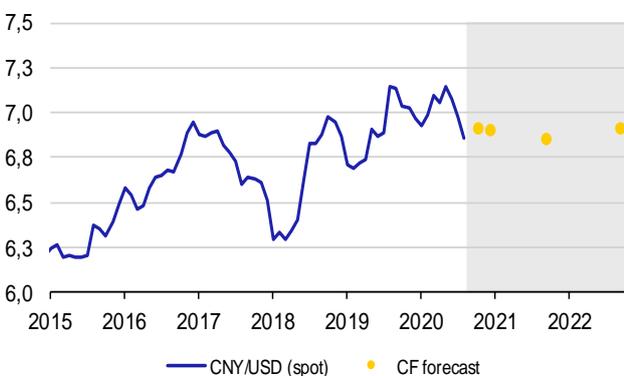
	14/9/20	10/20	12/20	9/21	9/22
spot rate	0.776				
CF forecast		0.776	0.772	0.758	0.750
forward rate		0.778	0.778	0.777	0.775

The Japanese yen (JPY/USD)



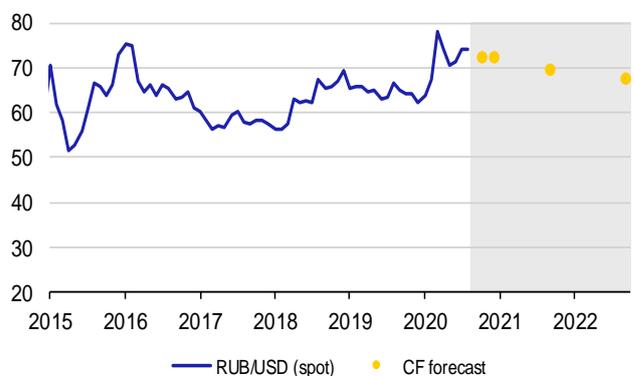
	14/9/20	10/20	12/20	9/21	9/22
spot rate	105.7				
CF forecast		105.5	105.0	105.0	105.3
forward rate		105.7	105.6	105.1	104.4

The Chinese renminbi (CNY/USD)



	14/9/20	10/20	12/20	9/21	9/22
spot rate	6.824				
CF forecast		6.913	6.904	6.857	6.913

The Russian rouble (RUB/USD)

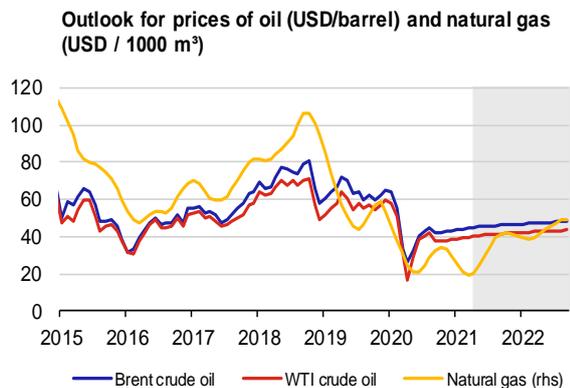


	14/9/20	10/20	12/20	9/21	9/22
spot rate	75.24				
CF forecast		72.41	72.38	69.58	67.93

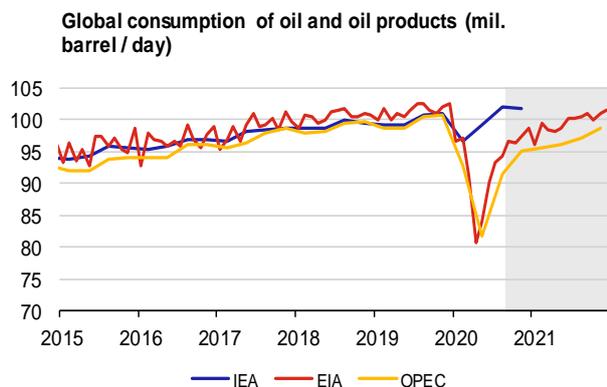
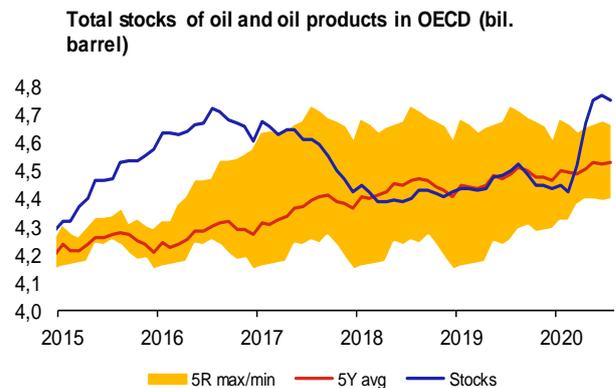
Note: Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

IV.1 Oil

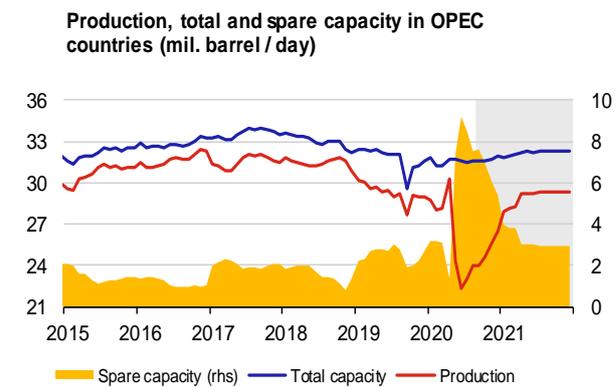
The Brent crude oil price fluctuated within a narrow range along a slightly upward trend in the holiday months, then dropped sharply at the start of September. A weak dollar and overly optimistic expectations regarding a recovery in demand for oil helped keep the price higher (above USD 45/bbl as from mid-August). However, early September saw a sobering-up after the Gulf countries reduced their selling prices for Asian customers more than expected. This suggests slackening demand in this region. Imports of oil to China decreased in July and August (albeit from previously high levels) and no major change can be expected in the rest of the year, as independent refineries in China have largely exhausted the import quotas assigned by the state. The Brent price thus dropped below USD 40 a barrel in early September. However, yet another turnaround occurred in September and the price rose by almost 10% in three days. This was due to favourable economic data for August in the USA and China, an unexpectedly large decline in oil inventories in the USA, the Fed's signals that it would keep interest rates close to zero for several years, and renewed increased pressure from Saudi Arabia on other OPEC cartel members to comply with their production quotas. However, the risks to prices going forward are mostly downward and include the end of the (already weak) driving season in the USA and the forthcoming seasonal maintenance of refineries, which may last longer due to low margins. They also include the worsening epidemiological situation and the escalating political tensions between the USA and China. On the supply side, they include increased production by OPEC+ and a possible increase in production in the USA. The EIA expects the Brent crude oil price to stay close to its current level for the rest of the year and rise in the first half of 2021. At the end of 2021, the Brent crude oil price is expected to be at USD 51/bbl. The current futures curve is also rising but is signalling a lower price for the end of next year, at around USD 47/bbl. The September CF expects a Brent crude oil price of around USD 49/bbl one year ahead.



	Brent	WTI	Natural gas
2020	42.67 ↘	38.11 ↘	90.93 ↗
2021	45.46 ↘	40.79 ↘	94.71 ↗



	IEA	EIA	OPEC
2020	99.89 ↗	93.07 ↘	90.21 ↘
2021		99.60 ↘	96.84 ↘



	Production	Total capacity	Spare capacity
2020	25.79 ↗	31.58 ↘	5.78 ↘
2021	28.99 ↘	32.18 ↗	3.19 ↗

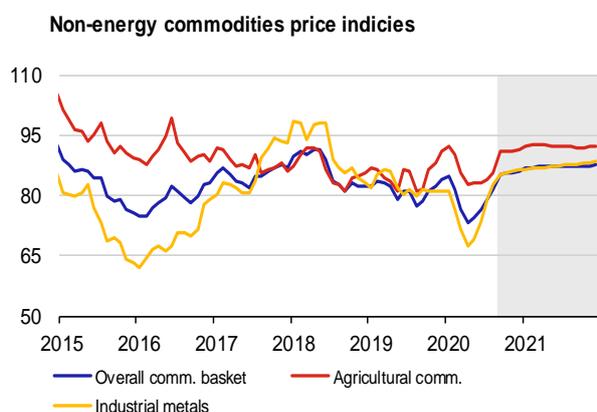
Source: Bloomberg, IEA, EIA, OPEC, CNB calculation
 Note: Oil price at ICE, average gas price in Europe – World Bank data, smoothed by the HP filter. Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Total oil stocks (commercial and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

IV.2 Other commodities

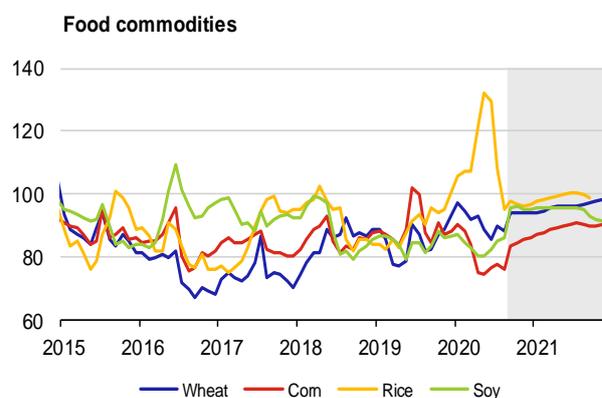
The average price of natural gas in Europe rose by 60% month on month in August but remains very low from a historical standpoint. The increase was due to unusually warm weather, lower LNG imports from the USA and disruptions to pipeline supplies due to maintenance work on some pipelines. Gas inventories thus rose at a slower pace, with underground reservoirs filled to 92% of total capacity at the end of August, which is comparable with last year. The price of coal fell further due to lower Chinese imports.

The industrial metals price sub-index continued to grow strongly in August and the first half of September. Its growth continued to be fostered by news of a recovery in global manufacturing. The JPMorgan Global PMI rose from 51.0 to 52.4 in September, the highest level since March 2019. This was the fourth increase in a row. Industrial commodity prices were also supported by positive sentiment on financial markets and a weaker dollar. The price of copper also increased further due to a continued decline in stocks at the LME. Prices of rubber and cotton also increased. Nevertheless, prices of some of these commodities decreased slightly together with oil prices in early September. Steel production in China rose by 9.1% year on year (but fell in most other countries). This led to strong imports of iron ore into China and a further increase in its price to a six and a half year high.

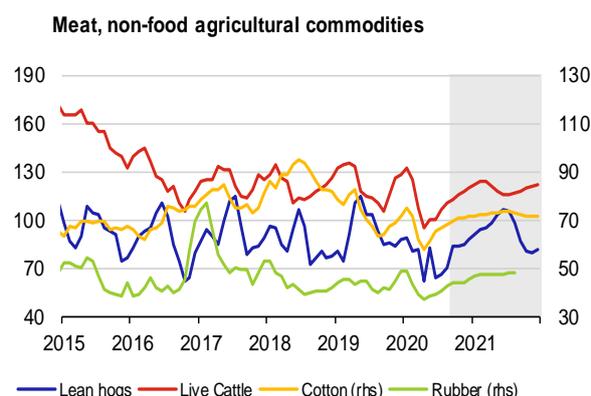
The food commodity price sub-index, which had shown only weak month-on-month growth in previous months, also surged in the first half of September. This was largely due to prices of grains (except for rice), coffee, cocoa and meat. However, prices of coffee and cocoa started falling again in early September, joining prices of sugar, which have been declining since mid-August.



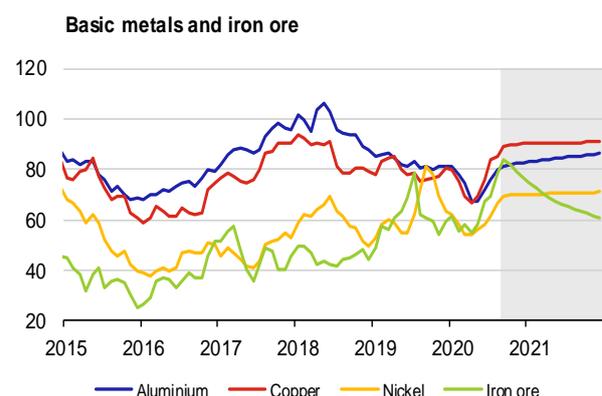
	Overall	Agricultural	Industrial
2020	80.8 ↗	87.6 ↗	78.7 ↗
2021	87.2 ↗	92.3 ↗	87.5 ↗



	Wheat	Corn	Rice	Soy
2020	92.2 ↗	81.9 ↗	108.0 ↗	87.8 ↗
2021	96.6 ↗	89.8 ↗	99.4 ↗	94.4 ↗



	Lean hogs	Live Cattle	Cotton	Rubber
2020	77.7 ↗	111.9 ↗	67.3 ↗	42.0 ↗
2021	93.2 ↗	119.7 ↗	72.2 ↗	47.5 ↗



	Aluminium	Copper	Nickel	Iron ore
2020	77.0 ↗	80.3 ↗	62.5 ↗	68.7 ↗
2021	84.6 ↗	90.5 ↗	70.5 ↗	66.5 ↗

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.

A tale of two crises: An early comparison of foreign trade and economic activity in EU countries.¹

In this article, we compare two episodes of decline in domestic economic activity and foreign trade in EU countries: the 2008/2009 global financial crisis and the current downturn in economic activity related to the coronavirus pandemic. The current crisis is characterised by a higher degree of synchronisation of the impact across countries. This is natural, as the administrative measures were introduced almost simultaneously in European countries. Although the driving forces of the two crises are different, there are many similarities in the dynamics of foreign trade. On the other hand, the current crisis differs substantially from the global financial crisis in that trade prices have fallen much less sharply. This means that the current crisis is partly also a negative supply shock.

Foreign trade and economic activity

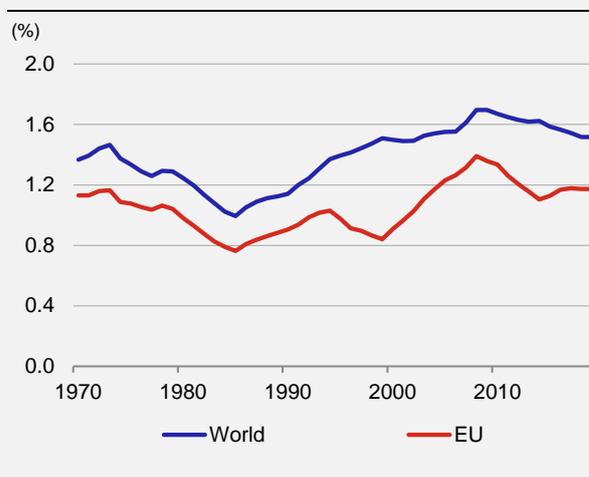
Foreign trade grows faster than economic activity in the long run. In recent decades, foreign trade has grown much faster than economic activity on both the global and European scale (see Chart 1). This can be explained by foreign trade liberalisation accompanied by a drop in trade costs and the related production specialisation and creation of global production chains (Yi, 2003). The gap between the long-run growth rates of trade and economic activity was largest between the start of the millennium and the global financial crisis (GFC). Although growth in foreign trade has slowed slightly over the last ten years compared with the period before the GFC, exports and imports were still increasing faster than the other GDP components on both the global and European scale until the onset of the coronavirus pandemic (Babecká Kucharčuková and Brůha, 2018)

High sensitivity of trade to economic activity is particularly visible in recessions. Andrieu et al. (2017) show that the cyclical component of exports is around four times more volatile than that of GDP and this fact is remarkably stable over time and across advanced countries. During an economic downturn, exports and imports are thus among the hardest hit components of GDP. It is therefore particularly useful to monitor foreign trade during economic contractions. The depth and timing of the drop in trade can serve as a useful indicator of the causes and duration of economic crises.

This article compares the dynamics of foreign trade in EU countries during two episodes of dramatic decline in economic activity: the global financial crisis (GFC) and the current coronavirus episode. We focus on comparing the initial months of the two crises in 2009 and 2020. This choice is motivated by the fact that the GFC downturn reached its trough in most countries during the spring months of 2009; similarly, the administrative lockdown of the economy during the coronavirus crisis occurred during spring 2020. For the current episode the national accounts are available in a detailed breakdown for the first quarter of 2020 Q1 only, so for our comparison we use the available monthly indicators.² However, even this early comparison may yield much useful information.

The two crises had different driving forces, with the GFC displaying a gradual decline in economic sentiment and industrial production. The usual narrative explaining the GFC involves a shock to the US financial system spilling over to the real economy and hitting other advanced economies via trade and financial links.³ Economic sentiment⁴ started to worsen significantly as early as 2008 and fell markedly in most countries in spring 2009. Industrial production also began to drop in 2008, but its decline was more moderate than that in economic sentiment and goods exports remained stable

Chart 1 – Share of trade and GDP growth



Source: WDI

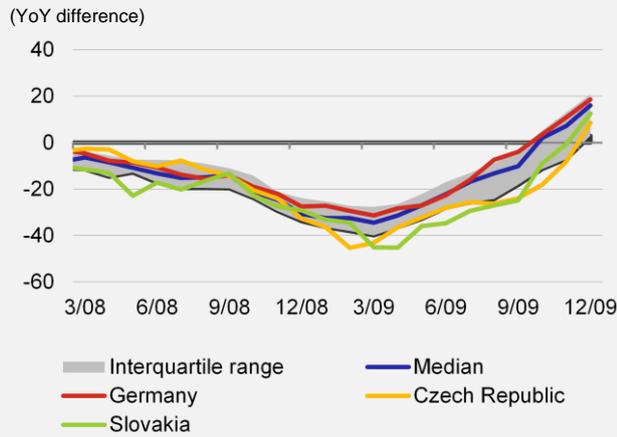
¹ Authors: Oxana Babecká Kucharčuková and Jan Brůha. The views expressed in this article are those of the authors and do not necessarily reflect the official position of the Czech National Bank.

² The source of all the data is Eurostat; we use seasonally adjusted data where possible.

³ For the Czech economy, the GFC was a shock to external demand, while financial shocks as such accounted for only a small part of the contraction of the Czech economy (see Ryšánek et al., 2012).

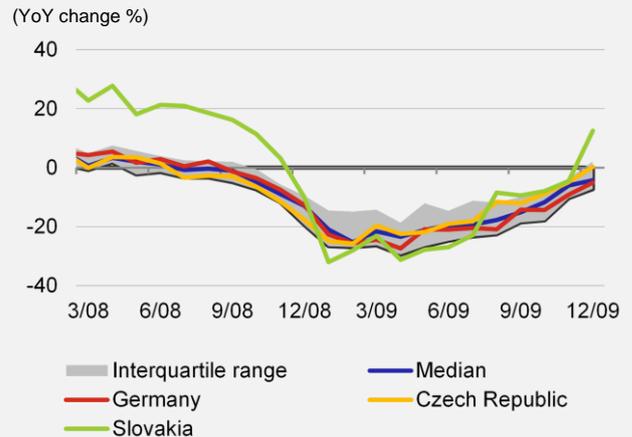
⁴ For the analysis in this article, we use seasonally adjusted economic sentiment as constructed by the European Commission's DG Economic and Financial Affairs, which is published monthly by Eurostat. This is because this indicator is broadly available over time and across countries and is constructed as a coincident indicator of economic activity. The use of alternative economic sentiment indicators, such as the German IFO indices, would lead to qualitatively similar conclusions regarding the profile of the fall in economic sentiment in both episodes under review.

Chart 2a – GFC in EU countries: economic sentiment



Source: Eurostat, authors' calculations

Chart 2b – GFC in EU countries: industrial production

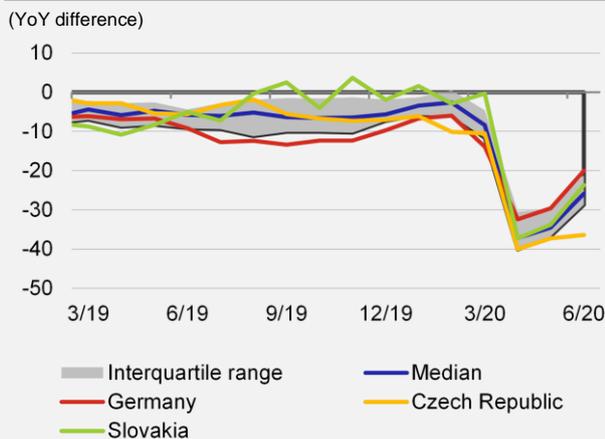


Source: Eurostat, authors' calculations

throughout 2008. The two variables decreased more sharply in spring 2009, troughing between March and May in individual countries. Chart 2 shows the dynamics of economic sentiment and industrial production in EU countries during the GFC: it depicts the median and interquartile range for all EU countries and highlights the data for the Czech Republic and for Germany, which is the largest EU economy as well as the Czech Republic's biggest trading partner.

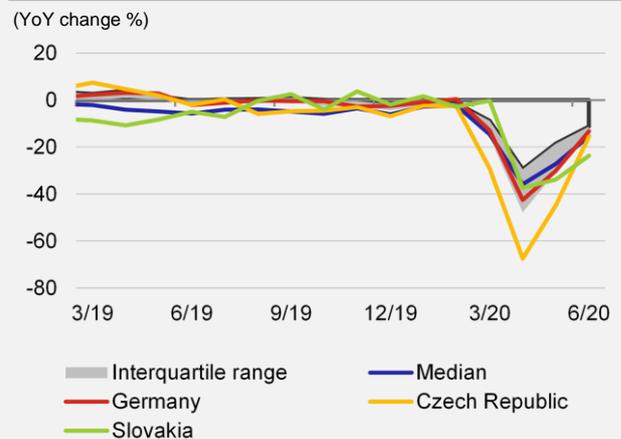
The current crisis is due to a sudden freeze on the economy resulting from government measures introduced to prevent the pandemic from spreading further. The drop in industrial production and economic sentiment was therefore sudden and highly synchronised across EU countries by comparison with the GFC: with a few exceptions, the worst month was April 2020, with most countries showing a positive turnaround for both indicators already in May. This is clear from Chart 3, which is analogous to Chart 2.

Chart 3a – Pandemic in EU countries: economic sentiment



Source: Eurostat, authors' calculations

Chart 3b – Pandemic in EU countries: industrial production

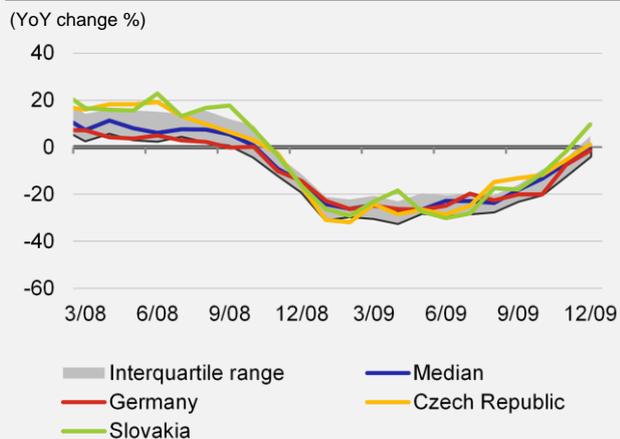


Source: Eurostat, authors' calculations

Goods trade

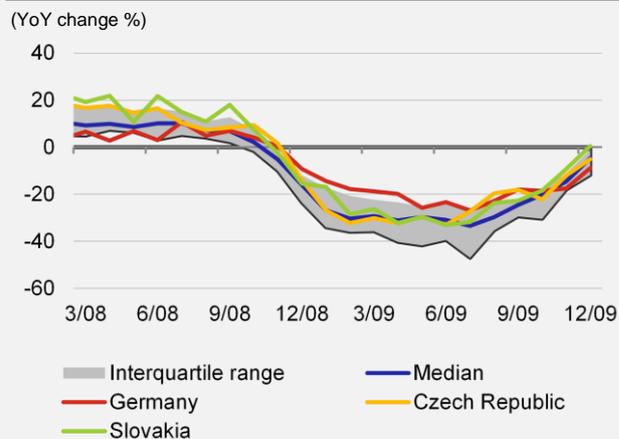
The dynamics of goods trade are very similar to those of industrial production in both episodes. Exports and imports of goods saw declines in both episodes, the profile of which was broadly similar to that of industrial production, as illustrated by Chart 4.⁵

Chart 4a – GFC in EU countries: goods exports



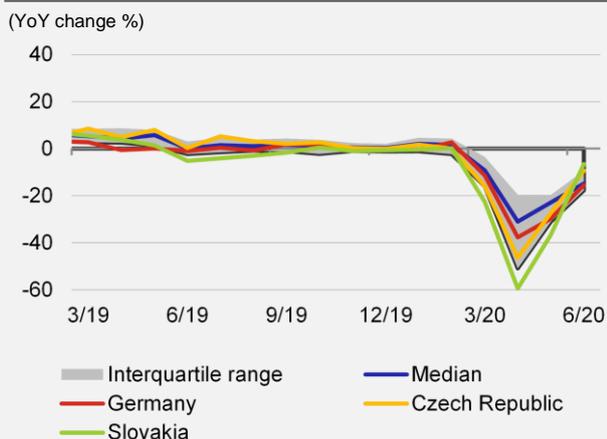
Source: Eurostat, authors' calculations

Chart 4b – GFC in EU countries: goods imports



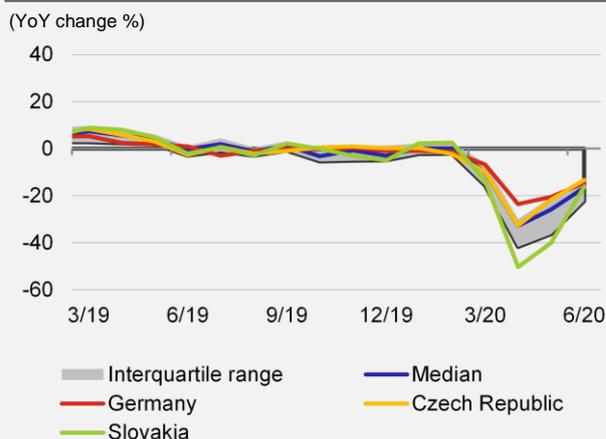
Source: Eurostat, authors' calculations

Chart 4c – Pandemic in EU countries: goods exports



Source: Eurostat, authors' calculations

Chart 4d – Pandemic in EU countries: goods imports

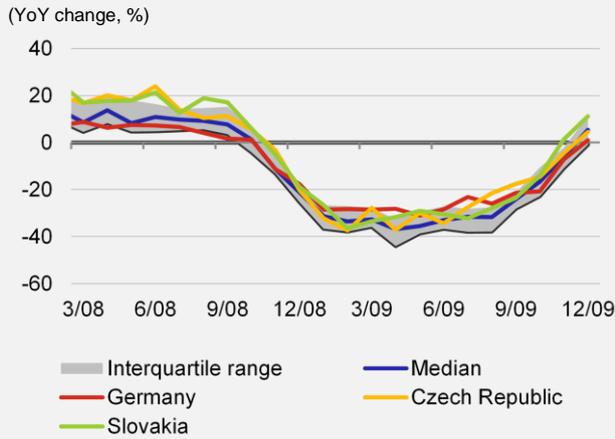


Source: Eurostat, authors' calculations

Net exports also show similar dynamics in the two crises. Countries which had recorded positive net exports before the GFC, continued to record them in the first half of 2009, though typically about one-third lower. By contrast, countries which had recorded negative net exports before the crisis, continued to record them during the crisis, although their absolute value was again about one-third lower. The same goes for the coronavirus pandemic in both qualitative and quantitative terms. After the GFC subsided, net exports returned to their pre-crisis levels relatively quickly (as early as 2010). Therefore, a relatively swift return of net exports to their pre-pandemic level can be expected now as well.

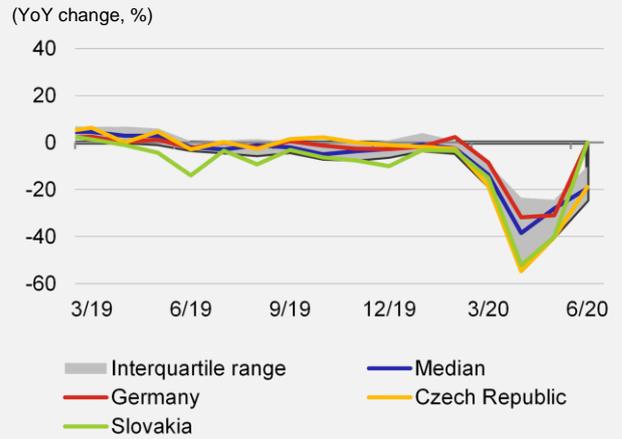
⁵ An econometric estimate of the time-varying elasticity of goods exports to industrial production using the Kalman filter indicates roughly unit elasticity in both episodes. Due to the unavailability of national accounts data for the second quarter of 2020, this result cannot be verified for now using consistent national accounts data, which are normally used to measure the elasticity of trade to economic activity. The elasticity derived from the national accounts may differ from that based on monthly data for a number of reasons (price effects, GDP composition). Given the rising volume of services in GDP in many countries, the total elasticity may have a slight downward tendency. A more detailed analysis will only be possible in the future.

Chart 5a – GFC: Capital goods exports



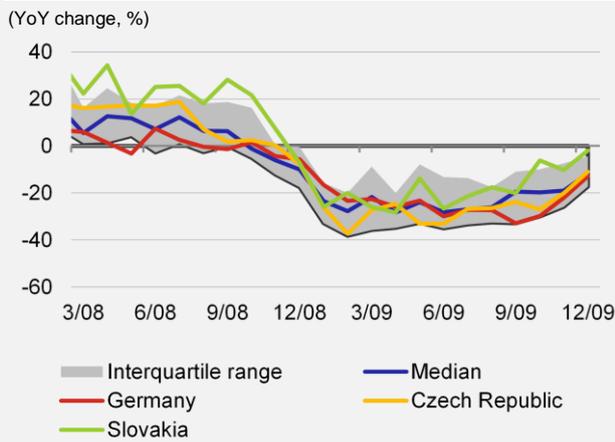
Source: Authors' calculations

Chart 5b – Pandemic: Capital goods exports



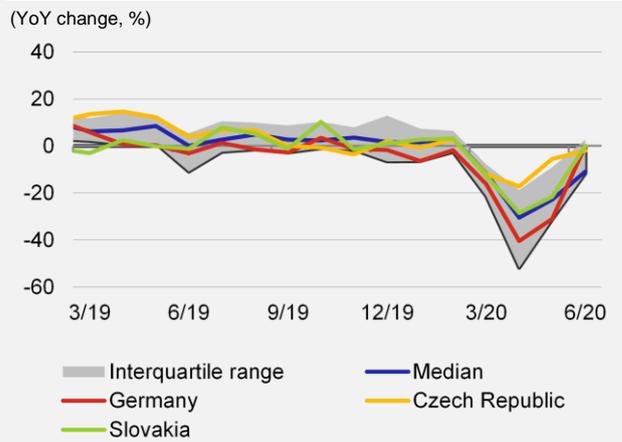
Source: Authors' calculations

Chart 5c – GFC: intermediate goods exports



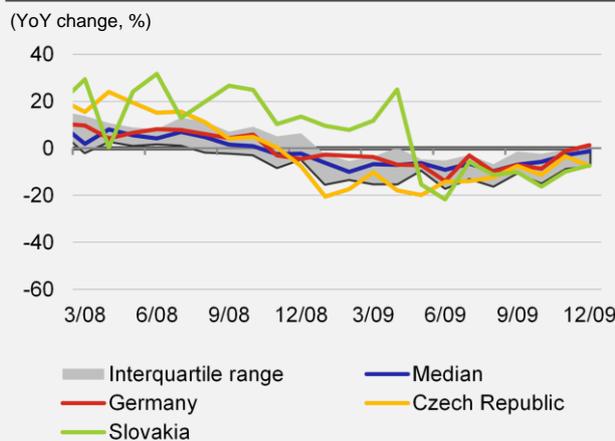
Source: Authors' calculations

Chart 5d – Pandemic: intermediate goods exports



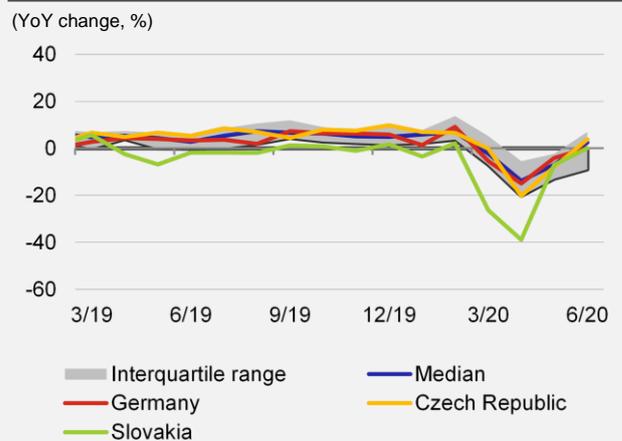
Source: Authors' calculations

Chart 5e – GFC: Consumption goods exports



Source: Authors' calculations

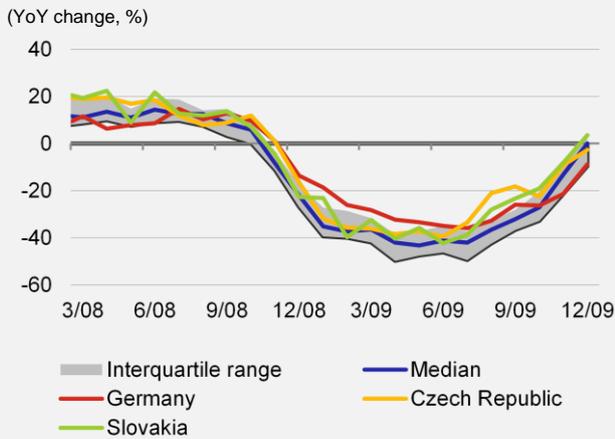
Chart 5f – Pandemic: Consumption goods exports



Source: Authors' calculations

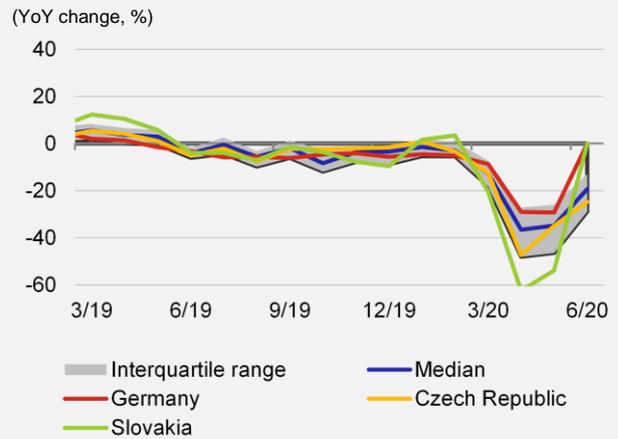
Trade in various types of goods differs in terms of sensitivity to a downturn. Trade in capital goods displays the most sensitive reaction to a crisis, while trade in consumer goods is the least sensitive. In the first half of 2009, the year-on-year fall in capital goods exports and imports in EU countries was between 30% and 40%, whereas the decline in consumption goods exports and imports was no deeper than 20% in a typical country. Although the profile of the downturn is different, trade in capital goods recorded the largest decrease in 2020 as well. This similarity is illustrated by Charts 5 and 6.

Chart 6a – GFC: Capital goods imports



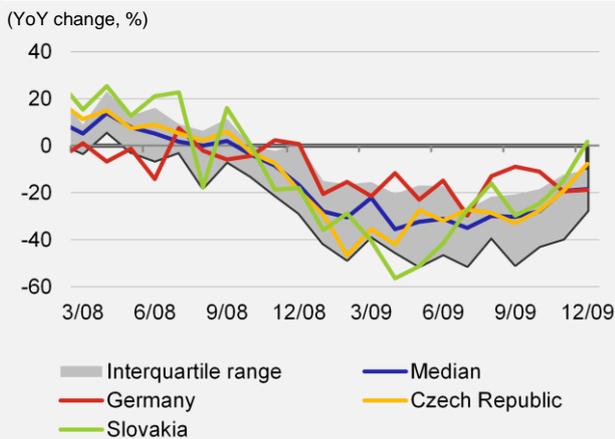
Source: Authors' calculations

Chart 6b – Pandemic: Capital goods imports



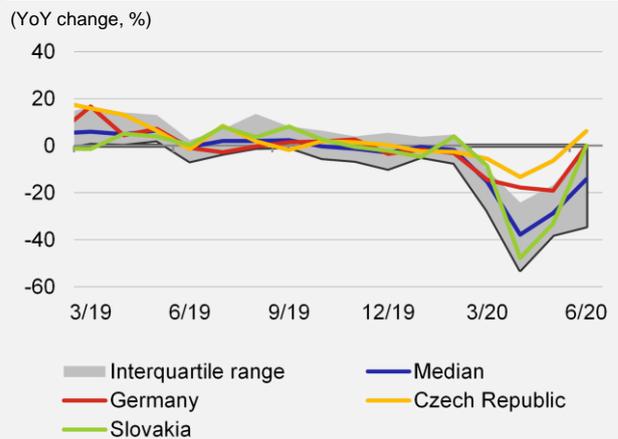
Source: Authors' calculations

Chart 6c – GFC: intermediate goods imports



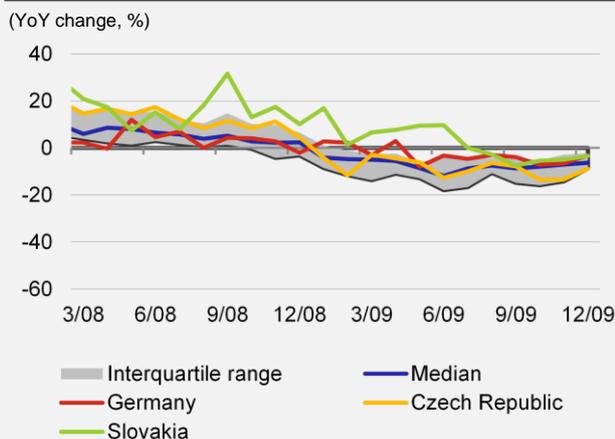
Source: Authors' calculations

Chart 6d – Pandemic: intermediate goods imports



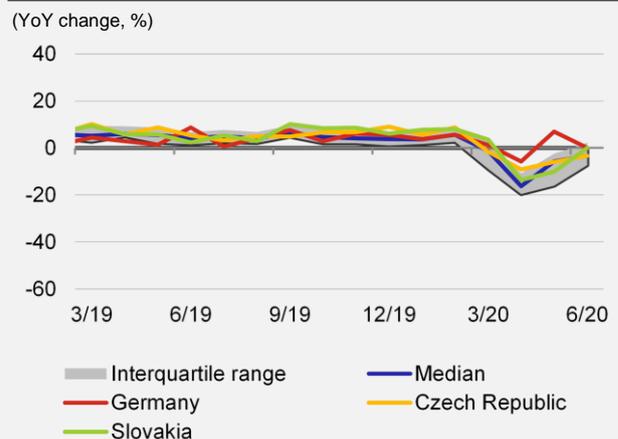
Source: Authors' calculations

Chart 6e – GFC: Consumption goods imports



Source: Authors' calculations

Chart 6f – Pandemic: Consumption goods imports



Source: Authors' calculations

During the GFC, the recovery in capital goods trade lagged slightly behind the overall recovery in European economies. Deeply negative year-on-year growth in capital goods trade persisted until the third quarter of 2009, when the declines in industrial production and consumer and intermediate goods trade were already moderating. The fact that capital goods trade had already recovered slightly in some EU countries (including the Czech Republic) by May and June can be cautiously assessed as an indicator of a recovery in economic activity following the initial shock.⁶

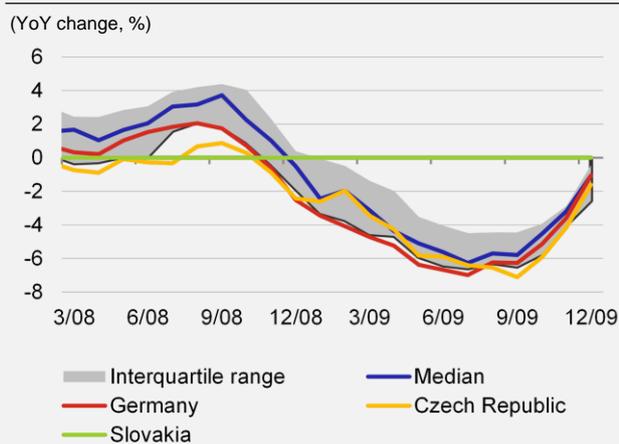
Prices in foreign trade

The dynamics of foreign trade prices constitute a significant difference between the two episodes. As shown in Chart 7, import prices in the manufacturing sector fell by around 5% year on year in most EU countries during the GFC. This probably reflected a decrease in global demand, meaning that the GFC was mostly a negative demand shock for European countries. Amid a comparable decline in industrial production and goods trade, a much smaller decrease in import prices was recorded in the current episode, reaching only 3% on average.

The small decline in foreign trade price inflation relative to the GFC indicates that the current crisis caused by administrative measures is partly also a negative supply shock. Although a definitive conclusion will only be possible in the future, a comparison between the periods preceding the two crises corroborates the importance of negative supply shocks in the current episode. Before the GFC, most countries had higher interest rates and inflation rates. Nevertheless, import and export prices dropped relatively quickly, as did prices in other categories. Before the coronavirus pandemic, few economies had markedly positive interest rates and euro area inflation was nowhere near the implicit 2% target. Despite this current mostly anti-inflationary environment, the additional downturn in foreign trade prices was relatively small. This is in line with the general intuition that administrative lockdowns restrict the supply side by their very nature.⁷

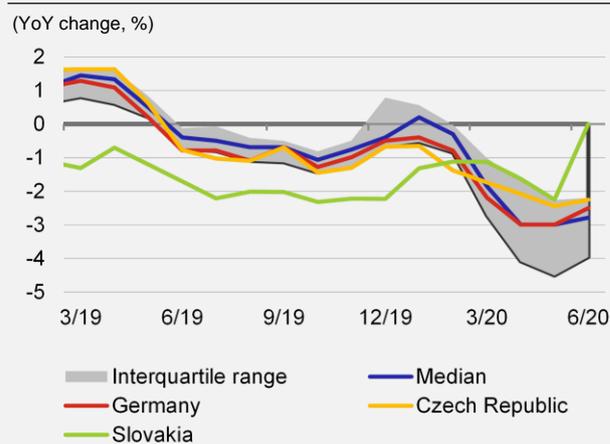
A rise in anti-globalisation tendencies connected with the coronavirus crisis would be an additional cost factor. The apparent growth in anti-globalisation tendencies has been much debated lately. Such tendencies were present before the crisis and were reflected, among other things, in trade disputes between China and the USA. Public health concerns connected with the coronavirus pandemic may strengthen them further. If they were to go beyond an acceptable level, they would represent a severe negative supply shock undermining long-run economic growth.⁸ For monetary authorities, such developments would, over the longer term, probably mean materialisation of the stagflation scenario – a period of economic contraction accompanied by elevated inflation. The currently observed dynamics of foreign trade prices do not indicate that the stagflation scenario is materialising. However, they do point to a mix of supply and demand shocks making the world economy more vulnerable to autarchic tendencies than during normal times.

Chart 7a – GFC: Import prices in the manufacturing sector



Source: Eurostat, authors' calculations

Chart 7b – Pandemic: Import prices in the manufacturing sector



Source: Eurostat, authors' calculations

Conclusion

⁶ Of course, this conclusion is conditional on the non-materialisation of the highly adverse scenarios of a resurgence of the pandemic and related administrative measures.

⁷ Our conclusions thus support the assumptions of the simulations of the pandemic's global impacts prepared at the CNB using the NiGEM model. Besides the expected negative demand effects, these assumptions included significant negative supply shocks (see Motl, 2020).

⁸ Audzei et al. (2020) provide a highly readable non-technical review of the empirical literature examining the relationship between foreign trade liberalisation and long-run economic growth.

This article compares the dynamics of goods trade in EU economies during two major crises: the global financial crisis and the current crisis connected with measures to prevent the coronavirus pandemic from spreading. Although the origins of the two crises are different, as is the pace and size of the economic downturn, many features are similar. The profile of the downturn in foreign goods trade is consistent with that of the downturn in industrial production, and the dynamics of net exports are also qualitatively similar.

As regards trade structure, trade in capital goods was hit harder in both episodes. Assuming a qualitatively similar pattern of trade in both episodes, the recovery in capital goods trade observed in some EU countries in May could be a signal of a possible speedy recovery of the economy this year.

The difference between the two episodes consists in the dynamics of foreign trade prices. Import prices in the manufacturing sector have recorded a much smaller decrease during the current economic crisis. This indicates that at least a part of the current shocks are of a negative cost nature and the deflationary tendencies may not be as strong as during the global financial crisis. If the current crisis were to be accompanied by anti-globalisation tendencies, which would represent an additional cost factor, the crisis may become stagflationary in the longer run.

References

- Andrle, M., Brůha, J., Solmaz, S. (2017). *On the sources of business cycles: Implications for DSGE models*, Working Paper Series 2058, European Central Bank.
- Audzej, V., Brůha, J., Sutoris, I. (2020). *International trade and long-term economic growth*, Thematic analysis in Balance of Payments Report, CNB.
- Babecká Kucharčuková, O., Brůha, J. (2018). *International trade developments with a focus on the EU*, Focus in GEO 10/2018.
- Levchenko, A., Lewis, L. T., Tesar, L. L. (2010). *The collapse of international trade during the 2008–09 crisis: In search of the smoking gun*, IMF Economic Review, 58(2), pp. 214–253.
- Motl, M. (2020). *Impacts of the COVID-19 pandemic on the world economy*, Focus in GEO 4/2020.
- Ryšánek, J., Tonner, J., Tvrz, S., Vašíček, O. (2012). *Monetary policy implications of financial frictions in the Czech Republic*, Czech Journal of Economics and Finance, 62(5), pp. 413–429.
- Yi, K.-M. (2003). *Can vertical specialization explain the growth of world trade?* Journal of Political Economy, 111(1), pp. 52–102.

Keywords

Foreign trade, global crises

JEL classification

F14, F41

A1. Change in predictions for 2020

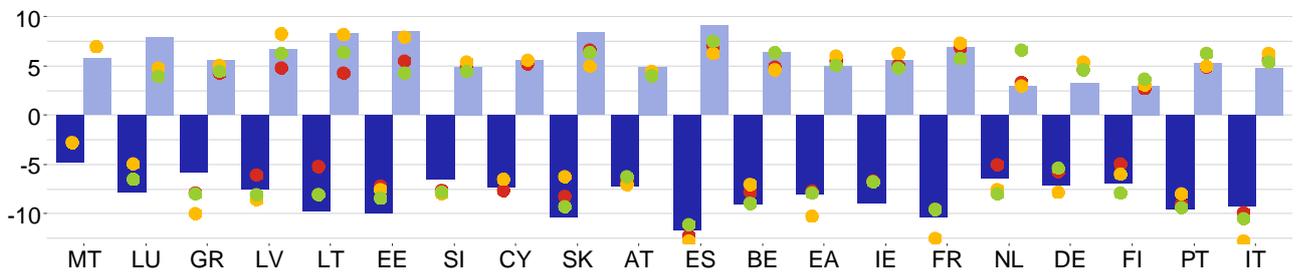
	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / EIU	CF	IMF	OECD	CB / EIU
EA	+0.2	-2.7	+1.2	+0.7	0	-1.2	-0.7	0
US	+0.8	-2.1	+3.5	+2.8	+0.2	-1.7	-0.6	+0.4
UK	-0.2	-3.7	+1.4	+4.5	+0.1	-0.7	-1.5	-0.3
JP	-0.3	-0.6	+0.2	-0.7	0	-1.1	-1.4	0
CN	+0.1	-0.2	+4.4	+0.3	+0.1	+0.6	+1.6	-0.2
RU	+0.3	-1.1	+0.7	+0.4	-0.1	-0.4	-1.1	-0.1

A2. Change in predictions for 2021

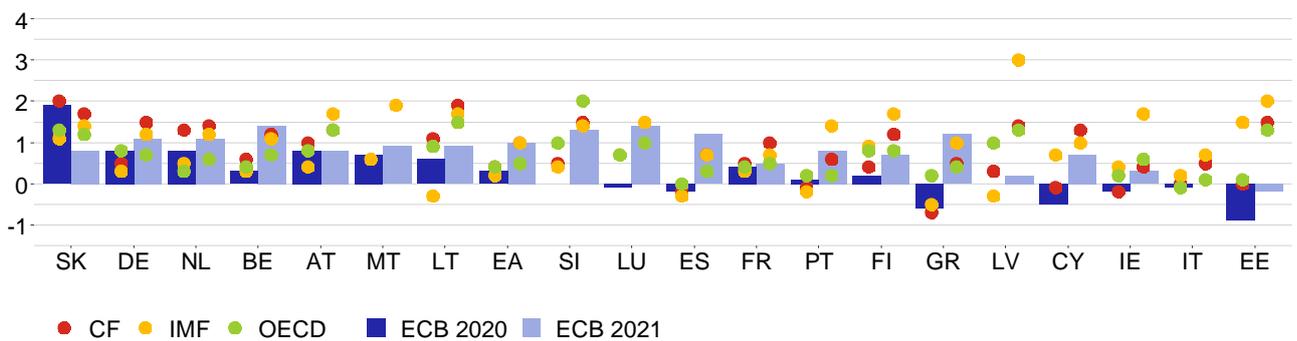
	GDP growth, %				Inflation, %			
	CF	IMF	OECD	CB / EIU	CF	IMF	OECD	CB / EIU
EA	+0.2	-2.7	+1.2	+0.7	0	-1.2	-0.7	0
US	+0.8	-2.1	+3.5	+2.8	+0.2	-1.7	-0.6	+0.4
UK	-0.2	-3.7	+1.4	+4.5	+0.1	-0.7	-1.5	-0.3
JP	-0.3	-0.6	+0.2	-0.7	0	-1.1	-1.4	0
CN	+0.1	-0.2	+4.4	+0.3	+0.1	+0.6	+1.6	-0.2
RU	+0.3	-1.1	+0.7	+0.4	-0.1	-0.4	-1.1	-0.1

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

GDP growth in the euro area countries in 2020 and 2021, %



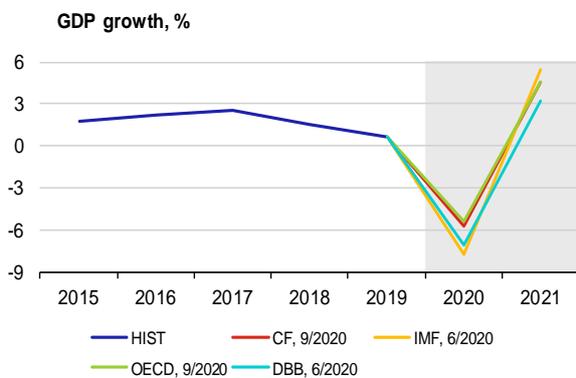
Inflation in the euro area countries in 2020 and 2021, %



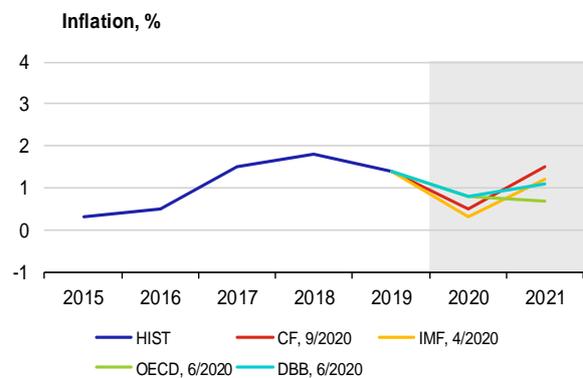
Note: Charts show institutions' latest available outlooks of for the given country.

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

Germany

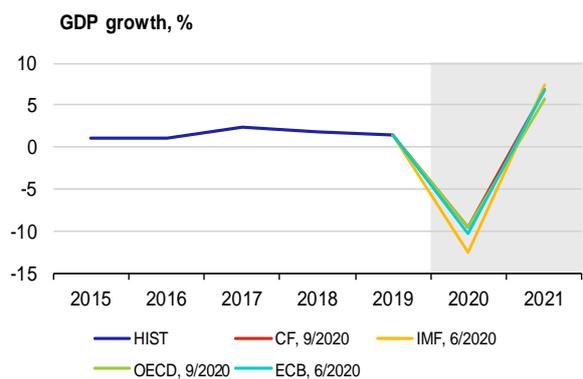


	CF	IMF	OECD	DBB
2020	-5.7	-7.8	-5.4	-7.1
2021	4.6	5.4	4.6	3.2

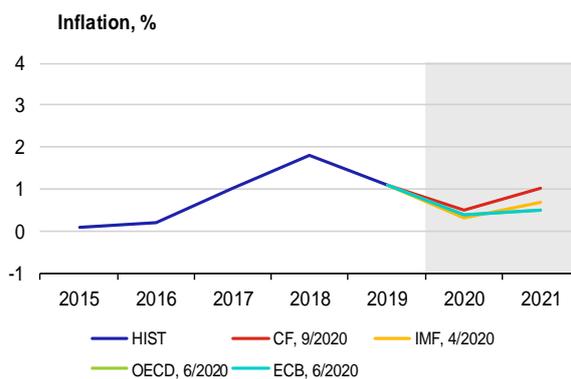


	CF	IMF	OECD	DBB
2020	0.5	0.3	0.8	0.8
2021	1.5	1.2	0.7	1.1

France

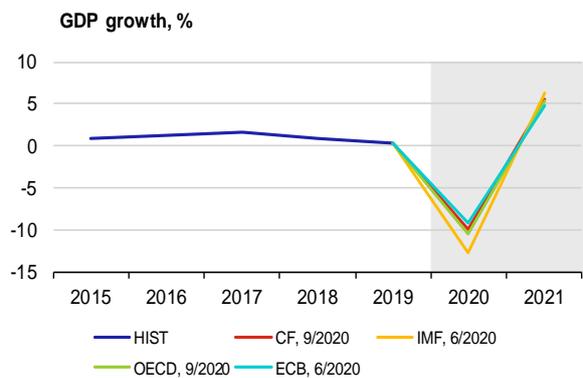


	CF	IMF	OECD	ECB
2020	-9.5	-12.5	-9.5	-10.3
2021	6.9	7.3	5.8	6.9

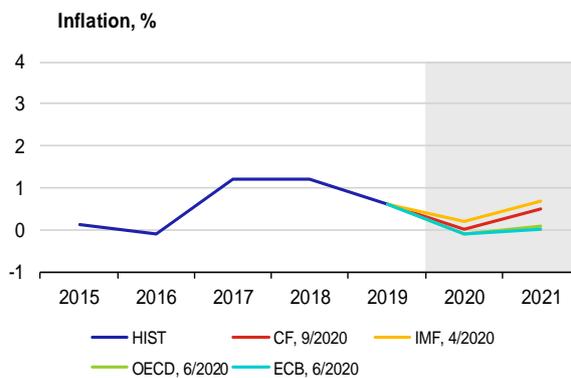


	CF	IMF	OECD	ECB
2020	0.5	0.3	0.4	0.4
2021	1.0	0.7	0.5	0.5

Italy

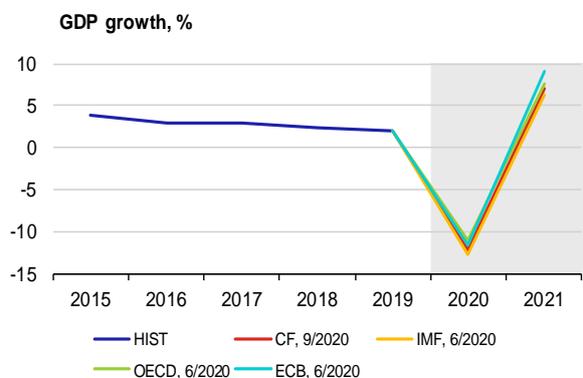


	CF	IMF	OECD	ECB
2020	-9.9	-12.8	-10.5	-9.2
2021	5.6	6.3	5.4	4.8

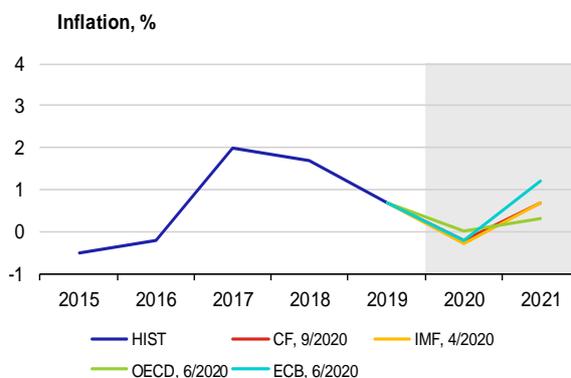


	CF	IMF	OECD	ECB
2020	0.0	0.2	-0.1	-0.1
2021	0.5	0.7	0.1	0.0

Spain

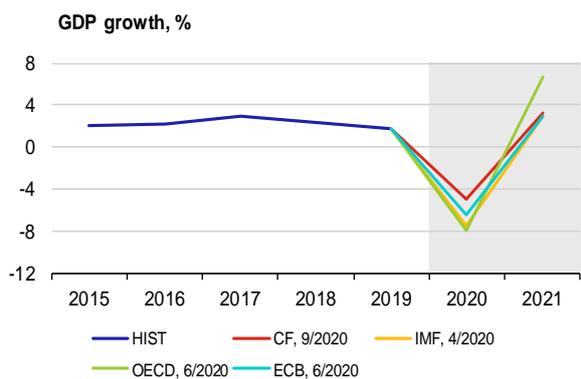


	CF	IMF	OECD	ECB
2020	-12.2	-12.8	-11.1	-11.6
2021	7.1	6.3	7.5	9.1

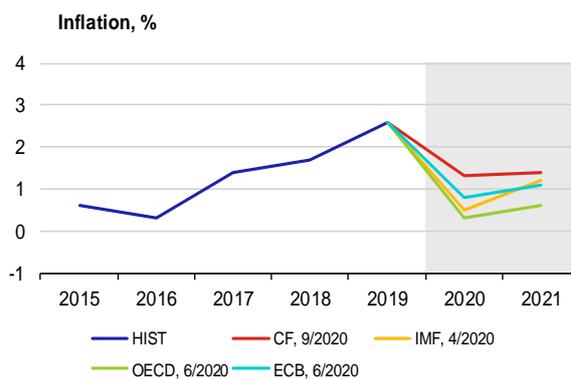


	CF	IMF	OECD	ECB
2020	-0.2	-0.3	0.0	-0.2
2021	0.7	0.7	0.3	1.2

Netherlands

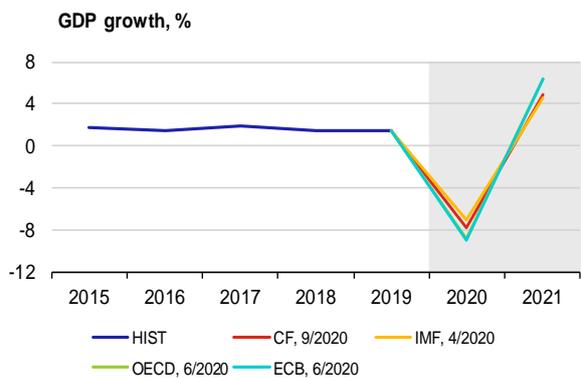


	CF	IMF	OECD	ECB
2020	-5.0	-7.5	-8.0	-6.4
2021	3.3	3.0	6.6	2.9

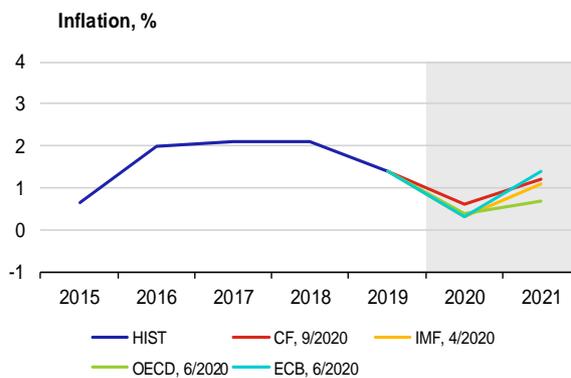


	CF	IMF	OECD	ECB
2020	1.3	0.5	0.3	0.8
2021	1.4	1.2	0.6	1.1

Belgium

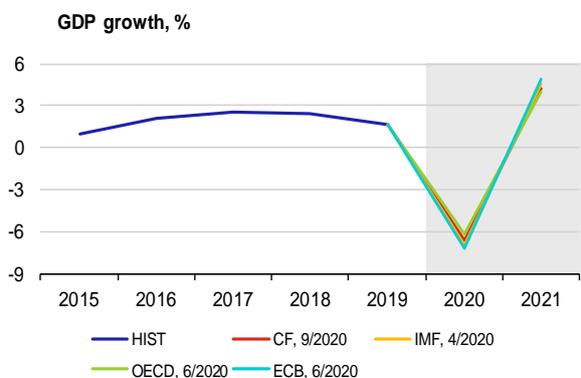


	CF	IMF	OECD	ECB
2020	-7.8	-7.0	-8.9	-9.0
2021	4.9	4.6	6.4	6.4

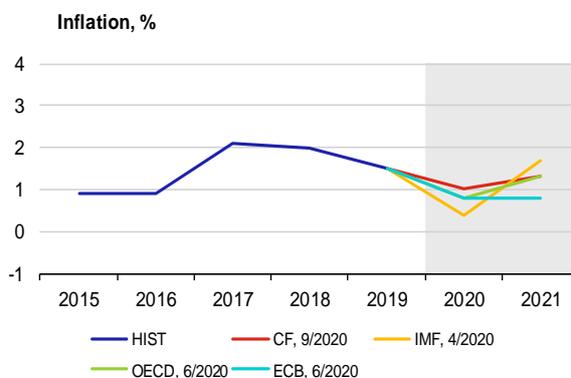


	CF	IMF	OECD	ECB
2020	0.6	0.3	0.4	0.3
2021	1.2	1.1	0.7	1.4

Austria

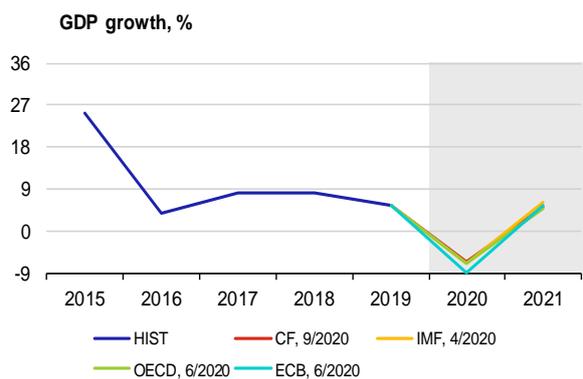


	CF	IMF	OECD	ECB
2020	-6.6	-7.0	-6.2	-7.2
2021	4.2	4.5	4.0	4.9

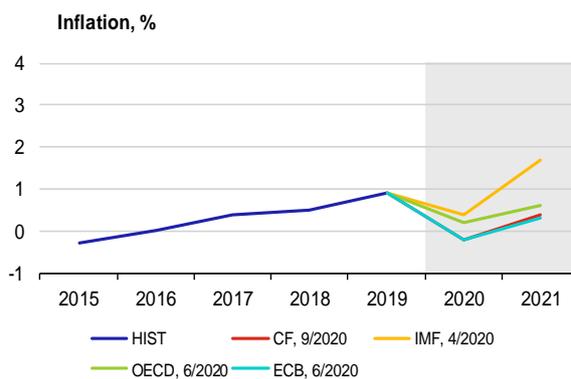


	CF	IMF	OECD	ECB
2020	1.0	0.4	0.8	0.8
2021	1.3	1.7	1.3	0.8

Ireland

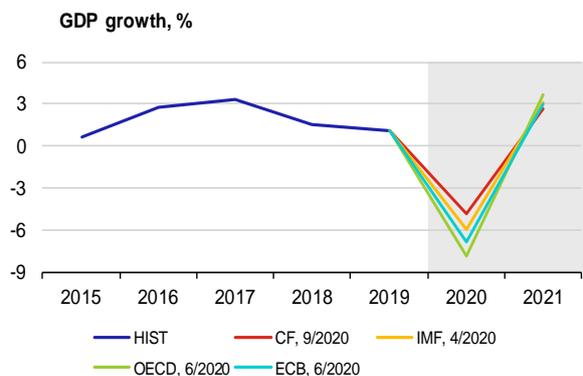


	CF	IMF	OECD	ECB
2020	-6.7	-6.8	-6.8	-8.9
2021	5.1	6.3	4.8	5.6

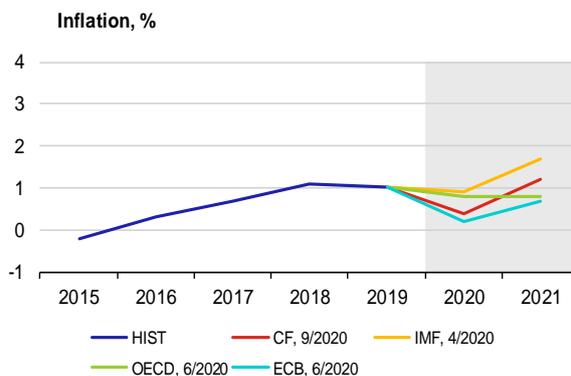


	CF	IMF	OECD	ECB
2020	-0.2	0.4	0.2	-0.2
2021	0.4	1.7	0.6	0.3

Finland

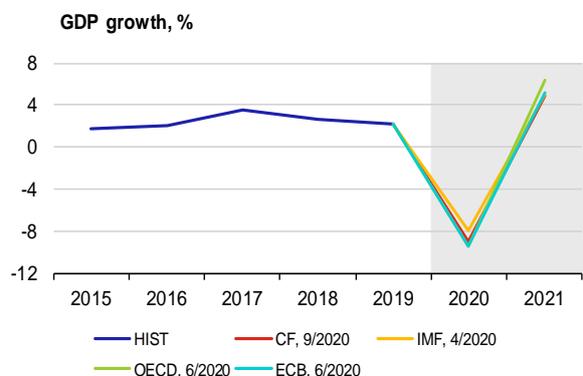


	CF	IMF	OECD	ECB
2020	-4.9	-6.0	-7.9	-6.9
2021	2.7	3.1	3.7	3.0

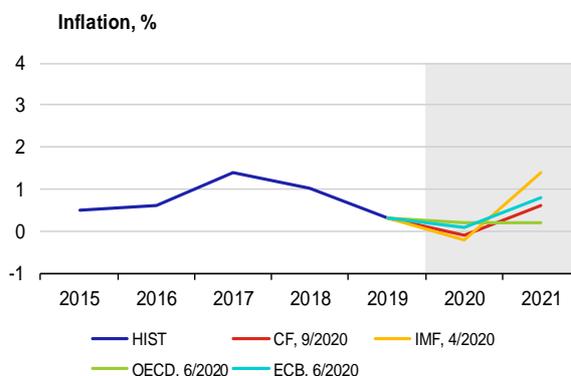


	CF	IMF	OECD	ECB
2020	0.4	0.9	0.8	0.2
2021	1.2	1.7	0.8	0.7

Portugal

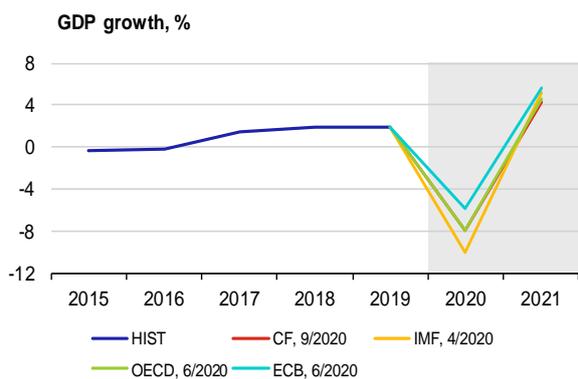


	CF	IMF	OECD	ECB
2020	-9.0	-8.0	-9.4	-9.5
2021	4.9	5.0	6.3	5.2

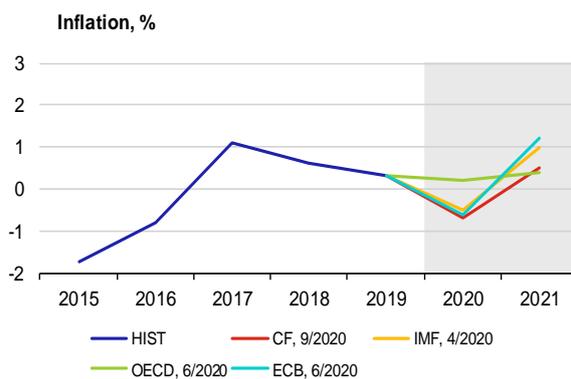


	CF	IMF	OECD	ECB
2020	-0.1	-0.2	0.2	0.1
2021	0.6	1.4	0.2	0.8

Greece

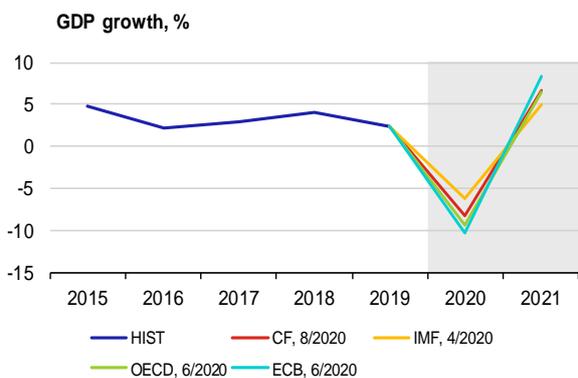


	CF	IMF	OECD	ECB
2020	-7.9	-10.0	-8.0	-5.8
2021	4.3	5.1	4.5	5.6

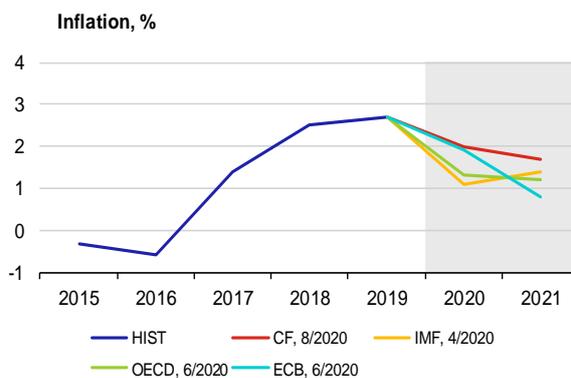


	CF	IMF	OECD	ECB
2020	-0.7	-0.5	0.2	-0.6
2021	0.5	1.0	0.4	1.2

Slovakia

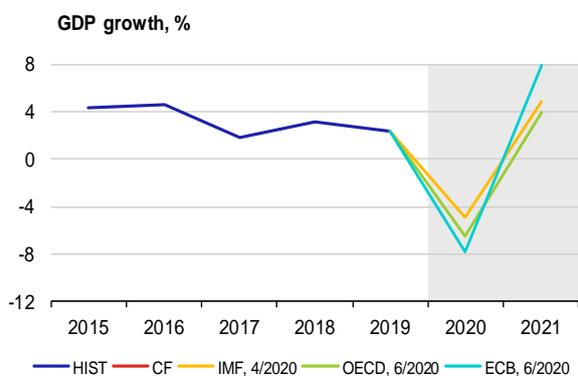


	CF	IMF	OECD	ECB
2020	-8.2	-6.2	-9.3	-10.3
2021	6.6	5.0	6.4	8.4

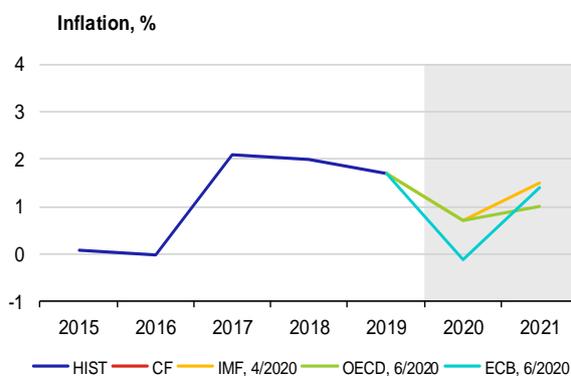


	CF	IMF	OECD	ECB
2020	2.0	1.1	1.3	1.9
2021	1.7	1.4	1.2	0.8

Luxembourg

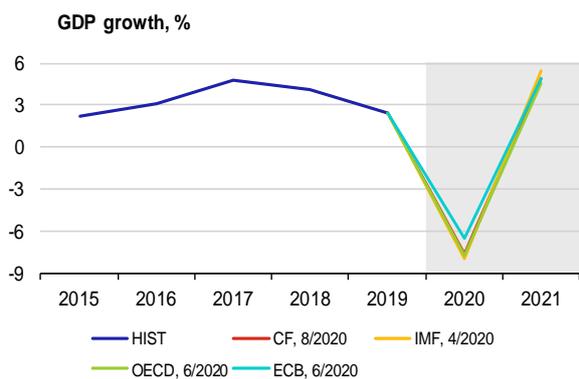


	CF	IMF	OECD	ECB
2020	n. a.	-4.9	-6.5	-7.8
2021	n. a.	4.8	3.9	7.9

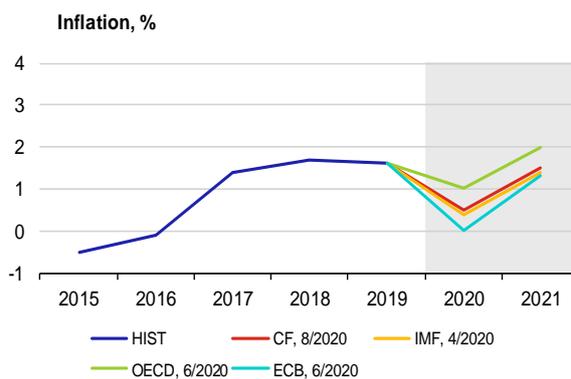


	CF	IMF	OECD	ECB
2020	n. a.	0.7	0.7	-0.1
2021	n. a.	1.5	1.0	1.4

Slovenia

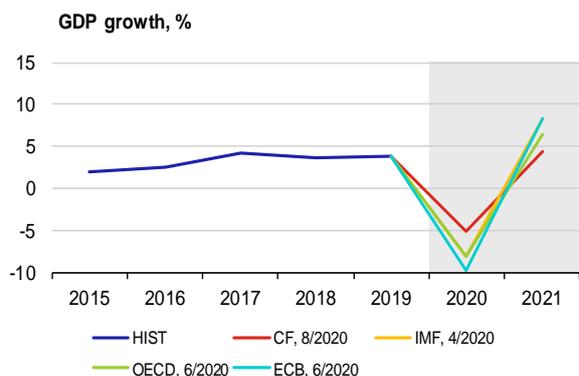


	CF	IMF	OECD	ECB
2020	-7.6	-8.0	-7.8	-6.5
2021	4.9	5.4	4.5	4.9

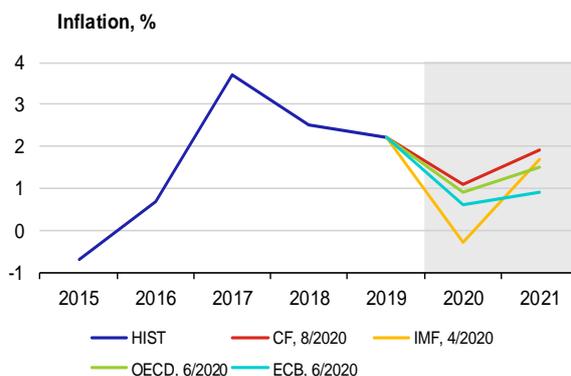


	CF	IMF	OECD	ECB
2020	0.5	0.4	1.0	0.0
2021	1.5	1.4	2.0	1.3

Lithuania

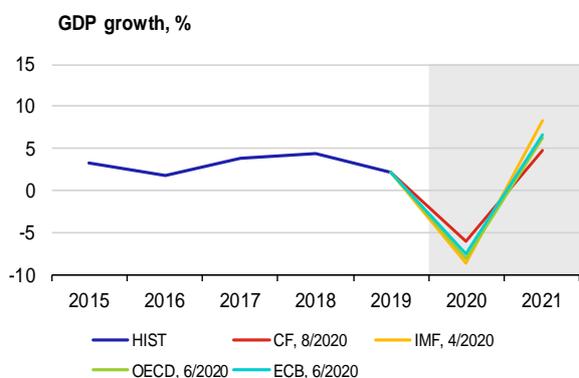


	CF	IMF	OECD	ECB
2020	-5.2	-8.1	-8.1	-9.7
2021	4.3	8.2	6.4	8.3

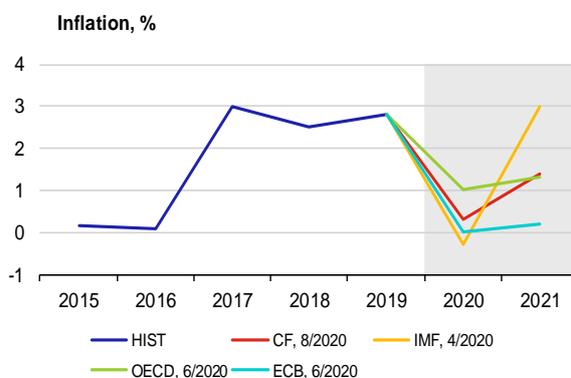


	CF	IMF	OECD	ECB
2020	1.1	-0.3	0.9	0.6
2021	1.9	1.7	1.5	0.9

Latvia

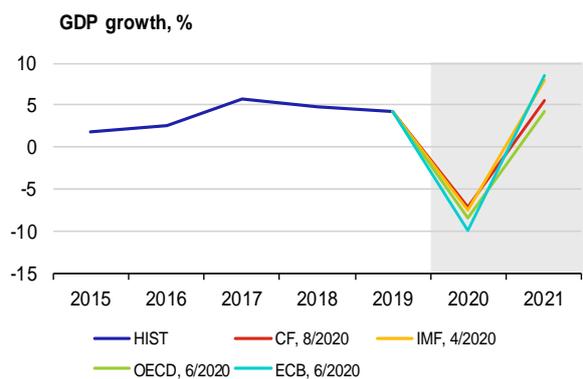


	CF	IMF	OECD	ECB
2020	-6.1	-8.6	-8.1	-7.5
2021	4.8	8.3	6.3	6.7

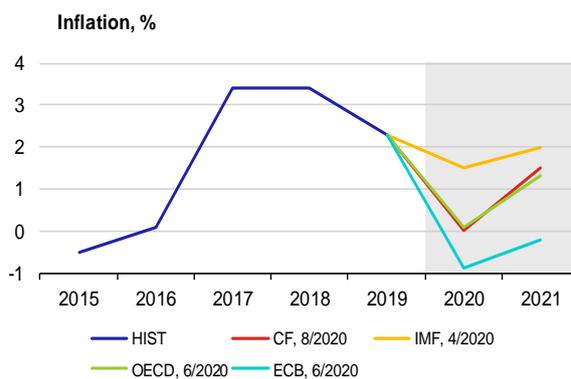


	CF	IMF	OECD	ECB
2020	0.3	-0.3	1.0	0.0
2021	1.4	3.0	1.3	0.2

Estonia

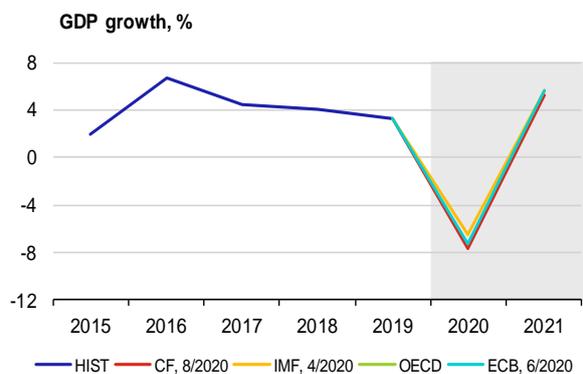


	CF	IMF	OECD	ECB
2020	-7.2	-7.5	-8.4	-10.0
2021	5.5	7.9	4.3	8.5

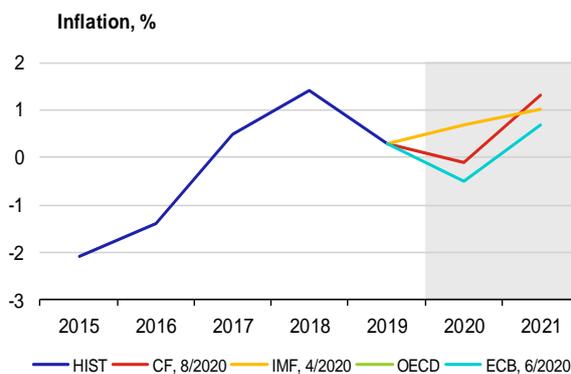


	CF	IMF	OECD	ECB
2020	0.0	1.5	0.1	-0.9
2021	1.5	2.0	1.3	-0.2

Cyprus

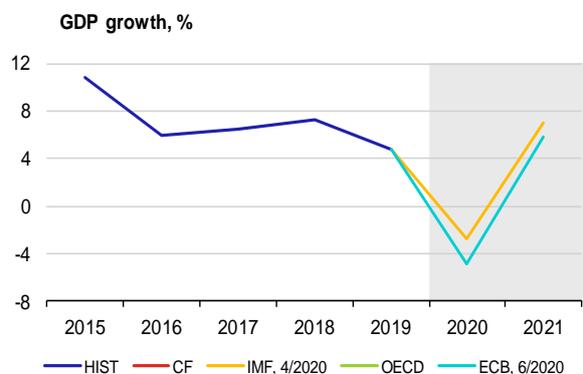


	CF	IMF	OECD	ECB
2020	-7.6	-6.5	n. a.	-7.3
2021	5.2	5.6	n. a.	5.6

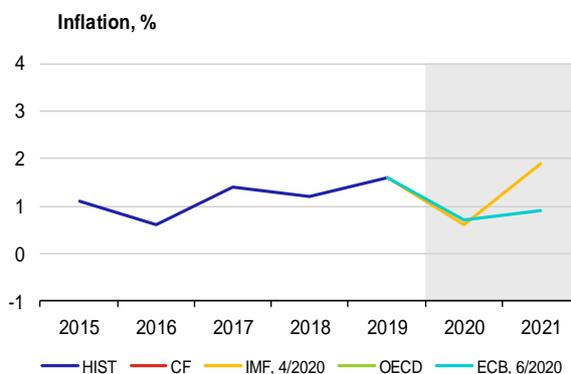


	CF	IMF	OECD	ECB
2020	-0.1	0.7	n. a.	-0.5
2021	1.3	1.0	n. a.	0.7

Malta



	CF	IMF	OECD	ECB
2020	n. a.	-2.8	n. a.	-4.8
2021	n. a.	7.0	n. a.	5.8



	CF	IMF	OECD	ECB
2020	n. a.	0.6	n. a.	0.7
2021	n. a.	1.9	n. a.	0.9

A5. List of abbreviations

AT	Austria	IFO	Leibniz Institute for Economic Research at the University of Munich
bbl	barrel	IMF	International Monetary Fund
BE	Belgium	IRS	Interest Rate swap
BoE	Bank of England (the UK central bank)	ISM	Institute for Supply Management
BoJ	Bank of Japan (the central bank of Japan)	IT	Italy
bp	basis point (one hundredth of a percentage point)	JP	Japan
CB	central bank	JPY	Japanese yen
CBR	Central Bank of Russia	LIBOR	London Interbank Offered Rate
CF	Consensus Forecasts	LME	London Metal Exchange
CN	China	LT	Lithuania
CNB	Czech National Bank	LU	Luxembourg
CNY	Chinese renminbi	LV	Latvia
ConfB	Conference Board Consumer Confidence Index	MKT	Markit
CXN	Caixin	MT	Malta
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	OECD	Organisation for Economic Co-operation and Development
ECB	European Central Bank	OECD-CLI	OECD Composite Leading Indicator
EE	Estonia	OPEC+	member countries of OPEC oil cartel and 10 other oil-exporting countries (the most important of which are Russia, Mexico and Kazakhstan)
EIA	Energy Information Administration	PMI	Purchasing Managers' Index
EIU	Economist Intelligence Unit	pp	percentage point
ES	Spain	PT	Portugal
ESI	Economic Sentiment Indicator of the European Commission	QE	quantitative easing
EU	European Union	RU	Russia
EUR	euro	RUB	Russian rouble
EURIBOR	Euro Interbank Offered Rate	SI	Slovenia
Fed	Federal Reserve System (the US central bank)	SK	Slovakia
FI	Finland	UK	United Kingdom
FOMC	Federal Open Market Committee	UoM	University of Michigan Consumer Sentiment Index - present situation
FR	France	US	United States
FRA	forward rate agreement	USD	US dollar
FY	fiscal year	USDA	United States Department of Agriculture
GBP	pound sterling	WEO	World Economic Outlook
GDP	gross domestic product	WTI	West Texas Intermediate (crude oil used as a benchmark in oil pricing)
GR	Greece	ZEW	Centre for European Economic Research
ICE	Intercontinental Exchange		
IE	Ireland		
IEA	International Energy Agency		

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