GLOBAL ECONOMIC OUTLOOK - NOVEMBER

2019

Monetary Department
External Economic Relations Division

CZECH NATIONAL BANK

Cut-off date for data
15 November 2019

CF survey date
11 November 2019

GEO publication date
22 November 2019

Notes to charts

ECB, Fed, BoE and BoJ: midpoint of the range of forecasts.
The arrows in the GDP and inflation outlooks indicate the direction of revisions compared to the last GEO. If no arrow is shown, no new forecast is available. Asterisks indicate first published forecasts for given year. Historical data are taken from CF, with exception of MT and LU, for which they come from EIU.
Leading indicators are taken from Bloomberg and Refinitiv Datastream.
Forecasts for EURIBOR and LIBOR rates are based on implied rates from interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizons). Forecasts for German and US government bond yields (10Y Bund and 10Y Treasury) are taken from CF.

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I. Introduction

Geopolitical risks decreased slightly in November due to the postponement of the threat of a disorderly Brexit and to progress in the negotiation of a trade deal between the US and China. In the case of Brexit, the European Council voted unanimously in favour of the proposal to extend the deadline for the UK's withdrawal from the EU to 31 January 2020. The exit can take place earlier – on the first day of the month following ratification – if the withdrawal agreement is ratified sooner in the UK and the European Parliament. The question remains whether an earlier withdrawal is at all possible, or whether the withdrawal treaty will even be ratified by the UK, since early elections have been announced in the UK for 12 December 2019. The announcement of an agreement between the US and Chinese negotiating teams on a "phase 1" trade deal is also helping to reduce geopolitical risks. Nevertheless, market sentiment has been visibly shaken by the escalating situation in Hong Kong, which has raised fears of a Chinese military intervention.

The GDP growth outlooks for the euro area and the UK were raised slightly in November. The modest upward revision of euro area growth next year reflects a more optimistic outlook for the Irish economy and is thus probably linked – as with the increase in the outlooks for the UK – to the fall in the perceived risk of a disorderly Brexit. The outlooks for the euro area will be further bolstered by the fact that the German economy has avoided a technical recession. Even so, the euro area will grow at a visibly slower pace than that expected for the US economy over the monitored horizon. Much lower growth is expected for the Japanese economy next year, while China's economy continues to slow gradually.

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

GDP	EA	DE	US	UK	JP	CN	RU
2019	1.1 ➡	0.5 ➡	2.3 ➡	1.3 ↗	1.0 ➡	6.1 ↘	1.0 ➡
2020	1.0 ↗	0.8 ➡	1.8 ➡	1.1 ↗	0.2 ➡	5.8 ↘	1.8 ➡

Inflation	EA	DE	US	UK	JP	CN	RU
2019	1.2 ➡	1.4 ➡	1.8 ➡	1.9 ➡	0.6 ➡	2.6 ↗	3.9 ↘
2020	1.2 ➡	1.5 ➡	2.0 ↘	1.9 ↘	0.7 ➡	2.7 ↗	3.9 ➡

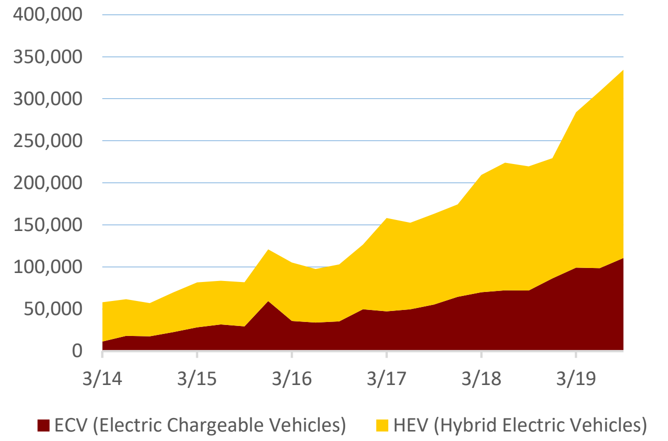
Source: Consensus Forecasts (CF)

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

The inflation outlooks for the US and the UK have been revised down. Inflation in the economies we monitor should not be lower next year than this year. For the euro area, this means a continued dismal situation of inflation 0.8 pp lower than the 2% "ideal" this year despite the reintroduction of unconventional monetary policy. In contrast, expected inflation in China rose again, moving further away from the 2.5% target.

The dollar will weaken slightly against the euro, sterling and the yen at the one-year horizon, but will strengthen slightly against the renminbi and the rouble. The CF outlook for the Brent crude oil price at the end of this year moved slightly lower than last month to USD 60.9/bbl (the highest and lowest estimates remained equal to the October expectations at USD 70/bbl and USD 50/bbl respectively). The outlook for 3M USD LIBOR market rates is still slightly falling, while 3M EURIBOR rates remain negative over the entire outlook horizon.

Number of new electric passenger vehicle registrations in the EU



Source: European Automobile Manufacturers Association

The chart in the November issue points to a rising trend in the popularity of alternatively powered passenger vehicles. The number of registrations in the EU has grown noticeably over the past five years both for electrically chargeable vehicles (ECVs) and for hybrid electric vehicles (HEVs), which together made up almost 10% of all registrations in 2019 Q3. This is due both to growing consumer demand for alternatively powered vehicles and to the efforts of car manufacturers to respond by offering new models that take into account regulatory developments and carbon footprint cost.

The current issue also contains an analysis: The economic slowdown in China and its impact on commodity markets. The article describes how China has become an important player in commodity markets. Its economy will be affected not by the gradually slowing GDP growth but rather by a major change in its structure.

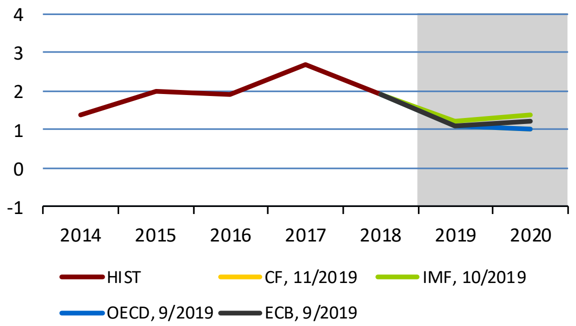
II.1 Euro area

Economic growth in the euro area did not slow in Q3 but sustained the same rate as in Q2. According to Eurostat's flash estimate, GDP increased by 0.2% quarter on quarter, slightly above analyst expectations. This was mainly due to surprisingly positive developments in Germany, whose economy not only avoided a technical recession, but recorded positive growth (of 0.1%) after a Q2 decline in activity (whose size was increased by revisions to -0.2%). The other large economies maintained their previous quarter-on-quarter growth rates (France 0.3%, Italy 0.1%, Spain 0.4%). Year-on-year euro area growth remained at 1.2%.

The dual nature of the economy is increasing further – barriers to international trade hampered industrial production, but the tight labour market had a positive effect on service sector growth. Euro area industrial output rose by 0.1% (seasonally adjusted) in September. It thus roughly offset the July decline during August and September. However, this was not the case for Germany, where industrial production fell by 1% in September, or for other large economies. Their failures, however, are being offset by rising output in smaller countries of the euro area (with Ireland doing best). The overall unemployment rate remained very low, while in countries with the highest levels (Spain and France) it continued to gradually decrease. Growth in employment slowed in Q3 (to 0.1% quarter on quarter), but remained positive. Retail sales continued rising rapidly (3.1% year on year in September).

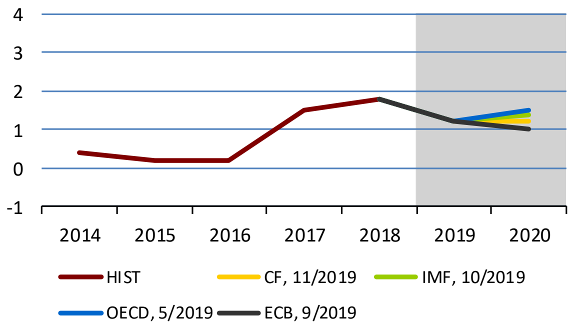
Continued subdued growth can clearly be expected at the end of this year. Sentiment indicators do not indicate a more marked slowdown, let alone the feared recession. The October survey of purchasing managers showed an improvement in outlooks for the most part. The composite indicator for the euro area rose and is above 50 points (this does not, however, apply to Germany). Growth was also recorded in the PMI for services and in the manufacturing PMI, which, however, remains in the contraction band. In contrast, the European Commission's Economic Sentiment Indicator (ESI) continued to worsen in October,

GDP growth, %



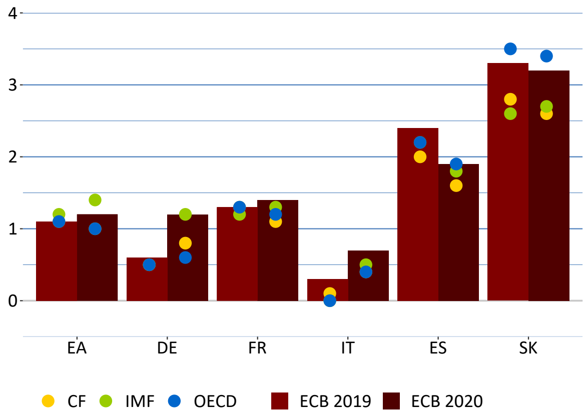
	CF	IMF	OECD	ECB
2019	1.1	1.2	1.1	1.1
2020	1.0	1.4	1.0	1.2

Inflation, %

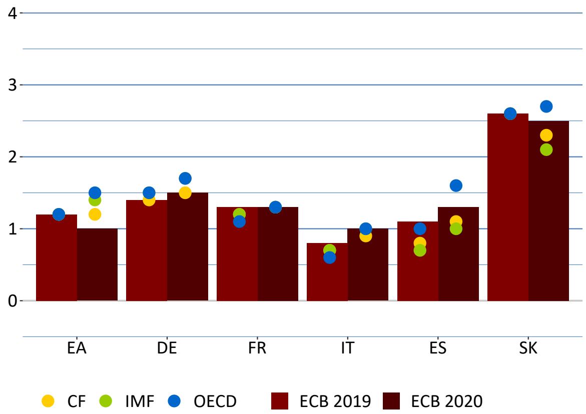


	CF	IMF	OECD	ECB
2019	1.2	1.2	1.2	1.2
2020	1.2	1.4	1.5	1.0

GDP growth in selected euro area countries in 2019 and 2020, %



Inflation in selected euro area countries in 2019 and 2020, %

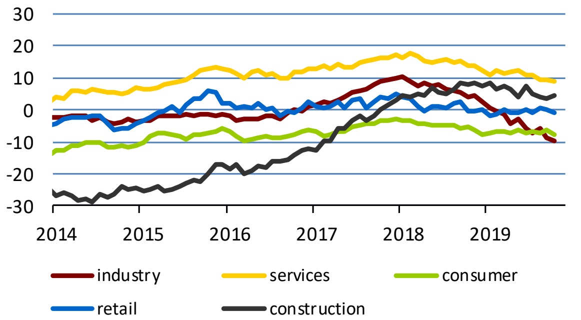


Note: Charts show institutions' latest available outlooks of for the given economy.

with confidence declining in all categories except construction. Nonetheless, the calming of global uncertainties (Brexit, the US-China trade war and the threat of duties on European car exports to the US) subsequently fostered a marked improvement in the ZEW economic sentiment indicator for November. The share of analysts who are pessimistic about developments in the euro area over the next six months now exceeds the share of optimistic ones by only 1 pp, whereas in October the difference was 23.5 pp. The November CF left its GDP growth outlook unchanged this year but reduced expectations of an economic slowdown next year due to a marked upward revision of the growth outlook for Ireland, which, however, is partly offset by a slight decrease in the outlooks for France, Spain, the Netherlands, Austria and Portugal.

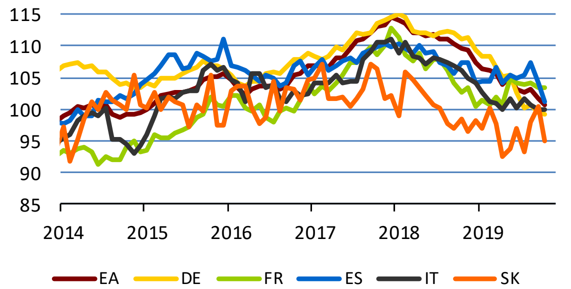
Inflation also remains subdued. The ECB left its monetary policy unchanged at its October meeting. At the press conference, outgoing ECB president Mario Draghi called for the introduction of pro-growth reforms to be stepped up to increase the resilience of the European economy to unfavourable external forces. From this month, the ECB will be headed by the former IMF head, French economist Christine Lagarde. In October, the year-on-year growth of the harmonised consumer price index slowed to 0.7% as a result of a sharp drop in energy prices (of 3.1%). By contrast, core inflation increased slightly to 1.1%. Heterogeneity in inflation nonetheless persists across the economies of the euro area. HICP inflation is highest in Slovakia and the Netherlands (at 2.9% and 2.8% respectively); otherwise only Latvia was above the ECB target. Cyprus, Greece and Portugal recorded deflation in October. The November CF, published before the October inflation figures were issued, left its inflation outlooks unchanged for this year and the next. A downward revision can be therefore expected next month. Long-term inflation expectations in the euro area have more or less stabilised at very low levels. The October SPF survey brought a slight lowering of estimated inflation at the five-year horizon; expectations based on the five-year inflation swap rose slightly in November. The interest rate outlook shifted slightly higher compared with the previous month. Three-month rates should thus remain roughly stable at the one-year horizon, at -0.4%. The one-year outlook for the German 10Y government bond yield is -0.3%.

ESI leading indicators



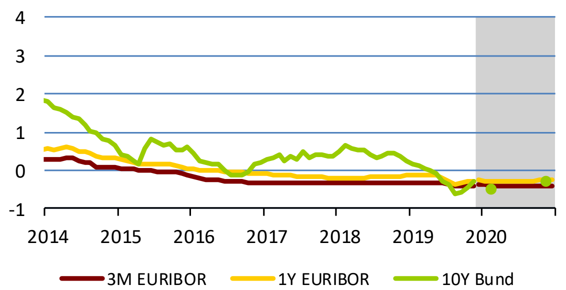
	industry	services	consum.	retail	constr.
8/19	-5.8	9.2	-7.1	0.6	3.9
9/19	-8.9	9.5	-6.5	0.2	3.4
10/19	-9.5	9.0	-7.6	-0.7	4.7

ESI leading indicators



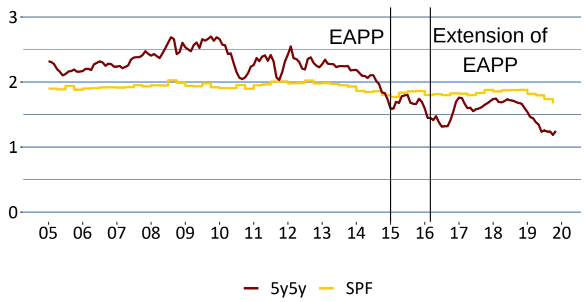
	EA	DE	FR	ES	IT	SK
8/19	103.1	100.6	104.1	107.3	100.7	97.9
9/19	101.7	99.4	103.5	104.2	99.9	100.4
10/19	100.8	99.2	103.4	101.2	100.0	95.1

Interest Rates, %



	10/19	11/19	2/20	11/20
3M EURIBOR	-0.41	-0.40	-0.39	-0.42
1Y EURIBOR	-0.30	-0.27	-0.27	-0.25
10Y Bund	-0.45	-0.28	-0.50	-0.30

Inflation expectations in the euro area, %



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

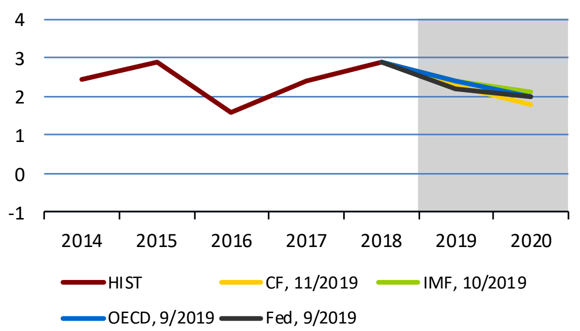
II.2 United States

If the US and China reach a "phase 1" agreement, both sides will lower duties on selected imports. The trade war may therefore finally be moving from the conflict escalation phase to the search for comprises phase. Both sides have agreed to gradually proceed with further steps leading to an agreement to lower tariffs. China yielded in its demand for the cancellation of all tariffs prior to signing any kind of agreement. The US is considering lifting the tariffs implemented in September, but this may not be enough for China. Both sides are under pressure to reach at least a partial agreement. This is resulting in greater financial market optimism.

The US economy is slowing only gradually and is still being buoyed by consumer demand. According to a second estimate, the US recorded annual GDP growth of 1.9% in Q3, in line with the previous quarter. Consumer spending and growth in inventories offset a drop in corporate investment. For the final quarter, the Atlanta Fed expects a further slowdown to 1%, meaning that President Trump's 3% growth target will not be hit. However, the fears of a recession are not materialising either. Robust consumer demand, supported by a strong labour market and rising income, remains the primary driver of growth. Non-farm payrolls surprised on the positive side, reaching 128,000 in October. Unemployment remains at the April level (3.6%), while growth in average hourly earnings returned to 3% year on year. Consumer confidence remains high and retail sales are growing at more than 4% year on year.

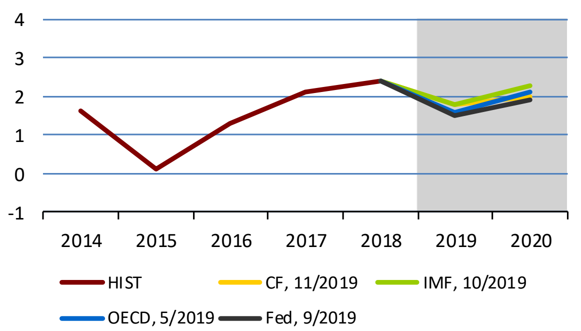
The Fed cut the range for benchmark rates by a quarter of a percentage point to 1.5%–1.75% at the end of October. This was the third rate cut this year. According to Chair Powell, the Fed's actions can be characterised as a "mid-cycle adjustment". Simultaneously, the Fed clearly indicated a pause in lowering rates, stating that it would carefully monitor the implications of incoming data for the economic outlook. The financial markets thus expect policy rates to be stable until the end of the year. The new CF outlook is also essentially unchanged, with only the 2020 inflation forecast decreasing by 0.1 pp.

GDP growth, %



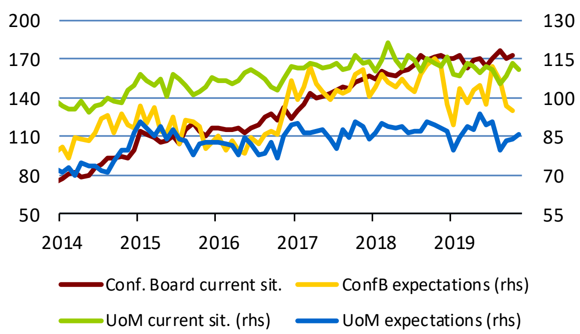
	CF	IMF	OECD	Fed
2019	2.3	2.4	2.4	2.2
2020	1.8	2.1	2.0	2.0

Inflation, %



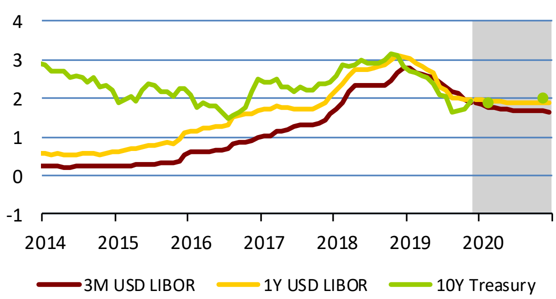
	CF	IMF	OECD	Fed
2019	1.8	1.8	1.6	1.5
2020	2.0	2.3	2.1	1.9

Leading indicators



	ConfB curr.	ConfB exp.	UoM curr.	UoM exp.
9/19	170.6	96.8	108.5	83.4
10/19	172.3	94.9	113.2	84.2
11/19			110.9	85.9

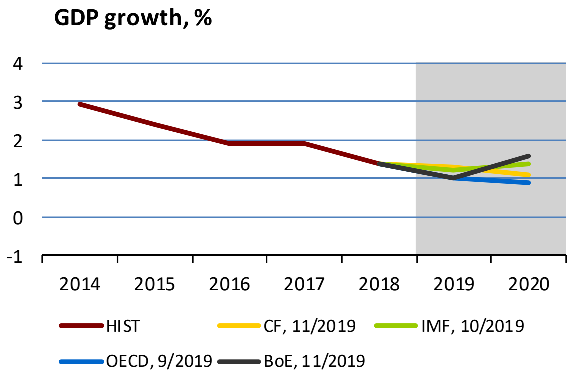
Interest Rates, %

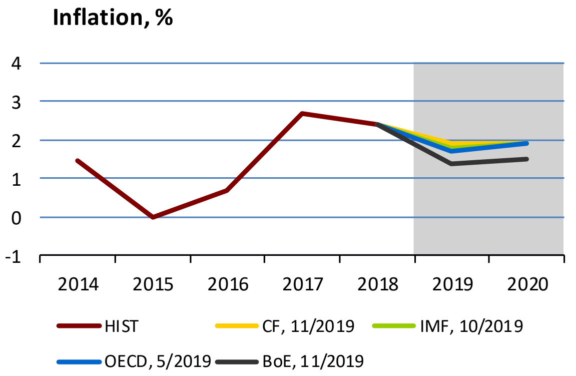


	10/19	11/19	2/20	11/20
USD LIBOR 3M	1.98	1.90	1.77	1.66
USD LIBOR 1R	1.95	1.95	1.93	1.87
Treasury 10R	1.70	1.91	1.90	2.00

II.3 United Kingdom

Brexit has been postponed to the end of January 2020 and early elections have been set for December 12. The election result will be immensely important for what comes next. The uncertainty is reflected in mixed expectations of UK economic activity and in low investment, which is reducing growth potential. In its monetary policy report, the BoE in early November released a forecast revising its GDP outlook for this year down to 1%. The NIESR sees growth two tenths higher, based on the 0.3% economic growth in Q3 and expected growth in the public sector in Q4. The growth in Q3 was supported not only by the key services sector, but also by construction. At the same time, the BoE revised its inflation outlook for next year significantly down to 1.5%, but left interest rates unchanged. The composite PMI neared 50, but was below it for the third month in a row. The OECD's leading indicator fell again.



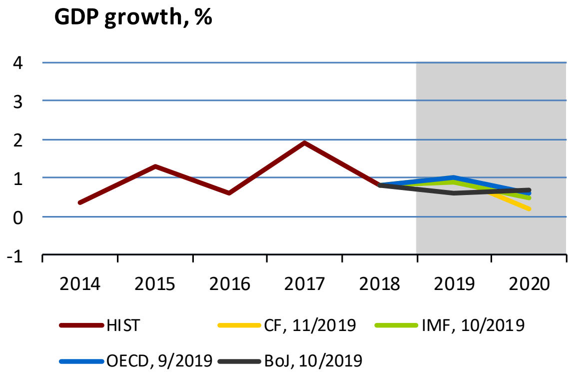


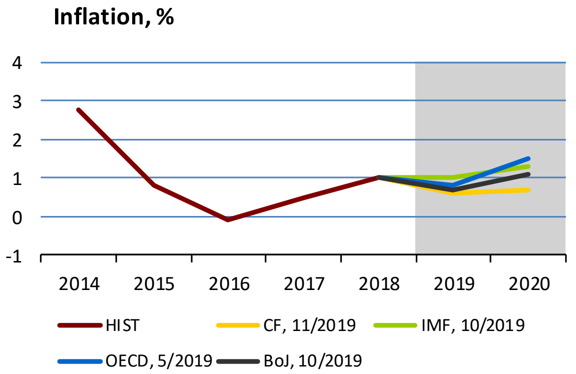
	CF	IMF	OECD	BoE
2019	1.3	1.2	1.0	1.0
2020	1.1	1.4	0.9	1.6

	CF	IMF	OECD	BoE
2019	1.9	1.8	1.7	1.4
2020	1.9	1.9	1.9	1.5

II.4 Japan

The subdued situation abroad is dampening the growth of the Japanese economy both currently and in the outlook. Japan's annualised GDP growth rate slowed from 1.8% to 0.2% in Q3, the lowest level this year. The BoJ lowered its two-year GDP growth outlook, most of all for the next fiscal year (by 0.2 pp). According to the bank, the revision is due mainly to slower growth of the world economy. The BoJ reduced its inflation outlook for this year by 0.3 pp, primarily with regard to the lower price of oil. The October excise duty increase should have a direct impact on inflation of 0.5 pp this year and next, while measures related to the introduction of free higher education from April 2020 should have an impact of -0.3 pp in fiscal year 2019 and -0.4 pp in fiscal year 2020. According to the BoJ's outlook, the growth rate of consumer prices excluding food will gradually rise, approaching 1.2%–1.7% in fiscal year 2021. The new CF left the GDP and inflation outlooks unchanged.





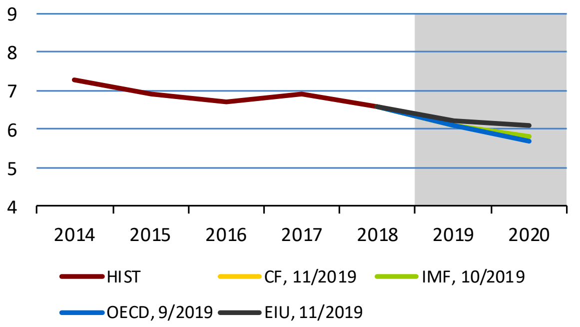
	CF	IMF	OECD	BoJ
2019	1.0	0.9	1.0	0.6
2020	0.2	0.5	0.6	0.7

	CF	IMF	OECD	BoJ
2019	0.6	1.0	0.8	0.7
2020	0.7	1.3	1.5	1.1

II.5 China

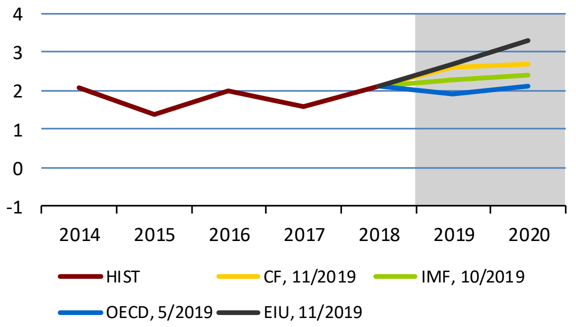
China's economy is still being hit hard by the trade war with the US, but the Chinese government is continuing to provide modest support to the economy. Chinese exports fell by almost 1% year on year in October, with shipments to the US dropping by 16.2%. Auto sales in the country have also been decreasing for 15 straight months now. In September, they dropped by 5.2% year on year to 2.27 million vehicles. However, retail sales continued to grow at a rate of more than 7% in October as domestic consumers were spurred by government incentives and tax cuts. The first rate cut by the central bank in three years sent a clear signal of support for the economy. Interest rates on one-year loans to financial institutions were lowered by a symbolic 5 bp to 3.25%. However, the Chinese government is avoiding large-scale stimulus measures on concerns of growth in debt, which is already high. According to CF analysts, however, the 2020 growth outlook has worsened, while the inflation forecast is now higher for both years.

GDP growth, %



	CF	IMF	OECD	EIU
2019	6.1	6.1	6.1	6.2
2020	5.8	5.8	5.7	6.1

Inflation, %

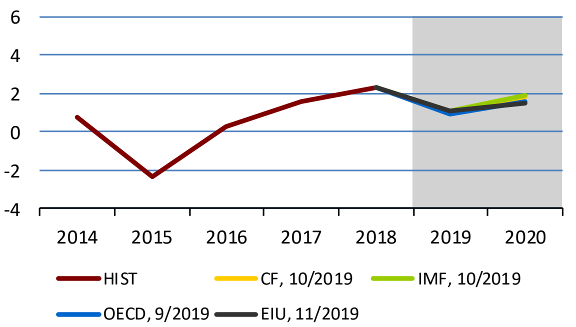


	CF	IMF	OECD	EIU
2019	2.6	2.3	1.9	2.7
2020	2.7	2.4	2.1	3.3

II.6 Russia

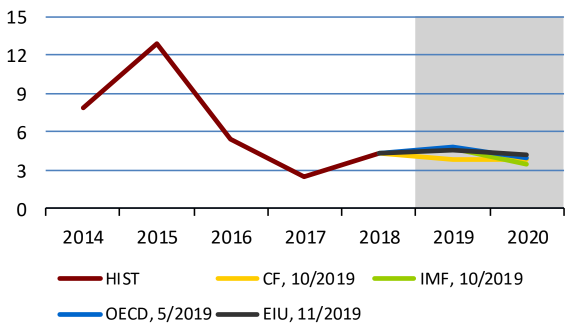
After a weak start to the year, Russian GDP growth increased for the second quarter in a row. According to Rosstat's preliminary estimate, economic growth reached 1.7% year on year in Q3 (versus 0.9% the quarter before), thanks to growth in agriculture (5.1%), industry (2.9%) and wholesale revenues. In the last week of October, the Russian central bank cut its key interest rate further (to 6.5%) as a result of a faster decline in consumer price inflation and lower inflation expectations. According to the CBR, anti-inflationary risks currently prevail. The CBR lowered its inflation outlook for this year from 4.0%–4.5% to 3.2%–3.7%, but expects inflation to return to the 4% target next year. It left its GDP outlook for 2019 unchanged at 0.8%–1.3%. The October CF likewise kept its GDP outlook unchanged but revised its inflation outlook for December down by 0.4 pp, in line with the CBR forecast.

GDP growth, %



	CF	IMF	OECD	EIU
2019	1.0	1.1	0.9	1.1
2020	1.8	1.9	1.6	1.5

Inflation, %



	CF	IMF	OECD	EIU
2019	3.9	4.7	4.8	4.6
2020	3.9	3.5	4.0	4.2

II.7 Developing countries in the spotlight

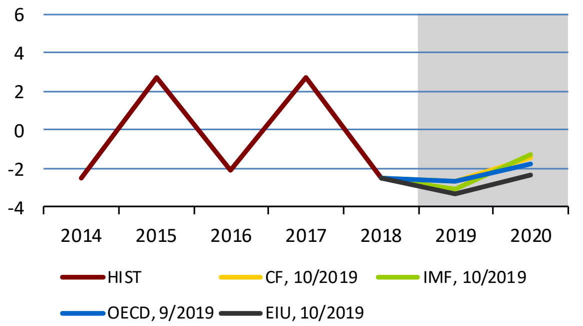
Argentina has had a month of radical change. Opposition candidate Alberto Fernández of the Justicialist Party (PJ) won the election with 48% of the votes. He was less successful in the lower house, where the opposition holds a majority. Argentina's central bank dramatically increased capital restrictions following the presidential election, cutting the amount of dollars individuals can buy in exchange for Argentine pesos from USD 10,000 to USD 200 per month. The lower limit for the key rate was also reduced by 5 pp to 63%.

The newly elected president, who will take office on 10 December, has already signalled a foreign policy return towards left-wing governments in the region. Closer relations with Mexico and Venezuela and greater tensions with Brazil, the country's largest trading partner, can therefore be expected. It is uncertain what stance Argentina will take on its alliance with the USA. US firms invest heavily in Argentina. The US is also trying to limit China's influence in the region. Last but not least, the IMF has a unique right of veto over most of its agenda, including the Argentina rescue package. It can therefore be expected that both sides will make an effort to cooperate.

Fernández will also need to tackle the gigantic debt and its repayment. Argentina faces a payment of USD 5 billion by the end of this year. Its reserves are meanwhile shrinking significantly. Since the August primaries, they have fallen by 33% to USD 43 billion. However, only part of this amount (estimated by Bloomberg analysts at USD 12.5 billion) is sufficiently liquid. A re-evaluation of Argentina's debt repayment is also inevitable. There is talk of shifting the instalments to the shorter end ("reprofiling"). In the end, however, this may be an excuse to gain time for all those involved to prepare for a haircut. The implied probability of debt repayment coming to a halt based on the Argentine five-year CDS is 97%.

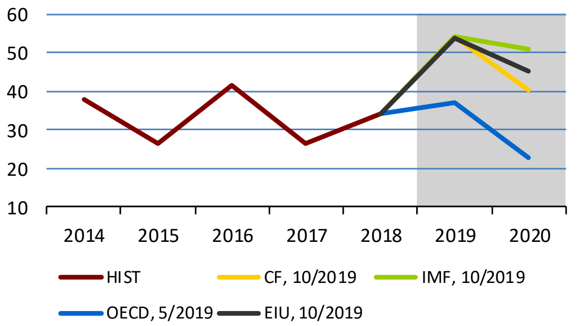
The EIU and the IMF both expect GDP to contract by more than 3% this year, while CF estimates a drop of 2.7%. Next year, these institutions project a decline of between 1.2% and 2.3%. CF and the EIU expect the currency to weaken further this year and the next, to USD 79/ARS.

GDP growth, %



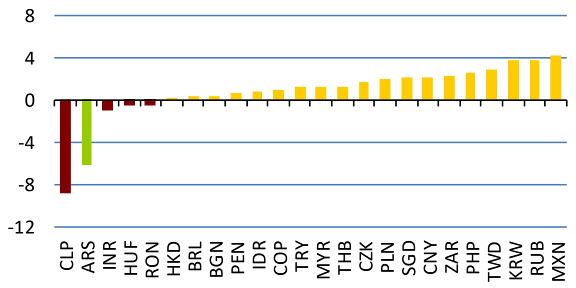
	CF	IMF	OECD	EIU
2019	-2.7	-3.1	-2.7	-3.3
2020	-1.4	-1.3	-1.8	-2.3

Inflation, %



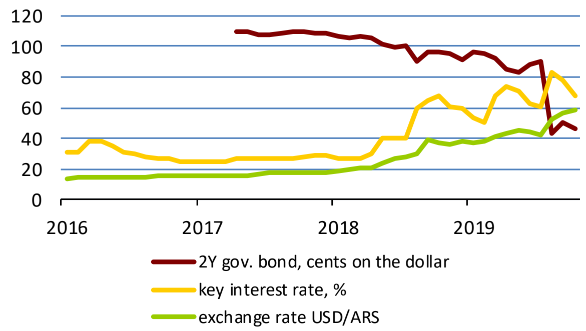
	CF	IMF	OECD	EIU
2019	54.4	54.4	37.0	53.7
2020	40.2	51.0	22.7	45.3

Currency performance vis-à-vis USD



% change over 1/9/2019 to 13/11/2019 period

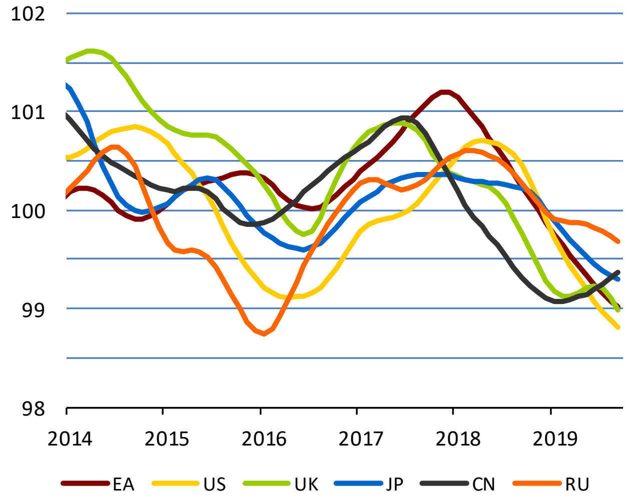
Selected indicators



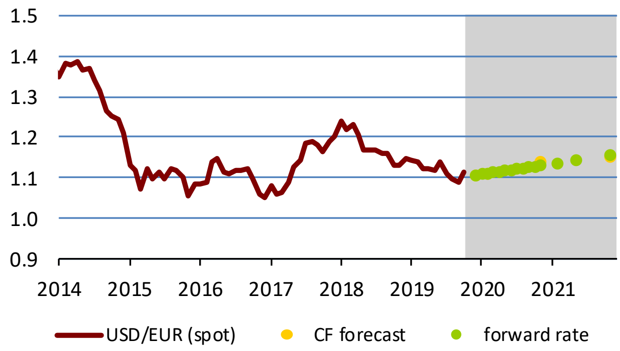
	2Y gov. bond, price	interest rate, %	USD/ARS
8/2019	43.41	83.26	52.81
9/2019	49.83	78.37	56.61
10/2019	45.95	68.00	58.47

III. Leading indicators and outlook of exchange rates

OECD Composite Leading Indicator

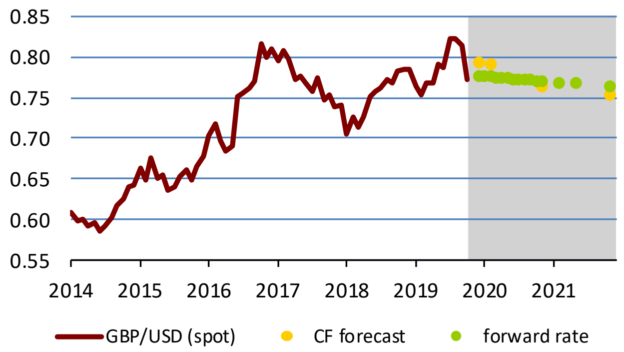


The US dollar (USD/EUR)



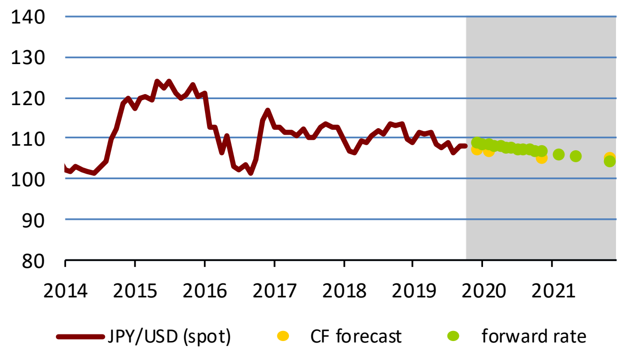
	11/11/19	12/19	2/20	11/20	11/21
spot rate	1.103				
CF forecast		1.107	1.110	1.139	1.150
forward rate		1.105	1.110	1.129	1.154

The British pound (GBP/USD)



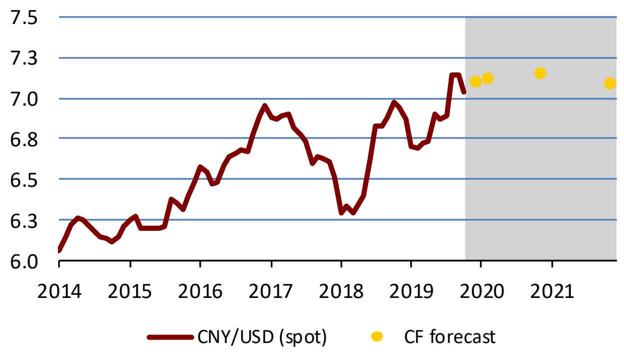
	11/11/19	12/19	2/20	11/20	11/21
spot rate	0.777				
CF forecast		0.793	0.791	0.765	0.752
forward rate		0.777	0.776	0.770	0.764

The Japanese yen (JPY/USD)



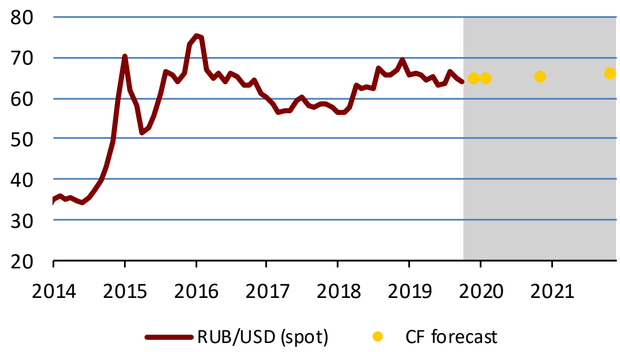
	11/11/19	12/19	2/20	11/20	11/21
spot rate	109.1				
CF forecast		107.3	106.7	105.2	105.0
forward rate		108.9	108.4	106.7	104.4

The Chinese renminbi (CNY/USD)



	11/11/19	12/19	2/20	11/20	11/21
spot rate	7.007				
CF forecast		7.095	7.121	7.156	7.091

The Russian rouble (RUB/USD)



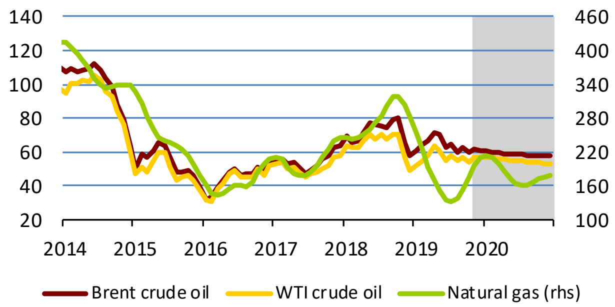
	11/11/19	12/19	2/20	11/20	11/21
spot rate	63.88				
CF forecast		64.89	64.71	65.20	65.90

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

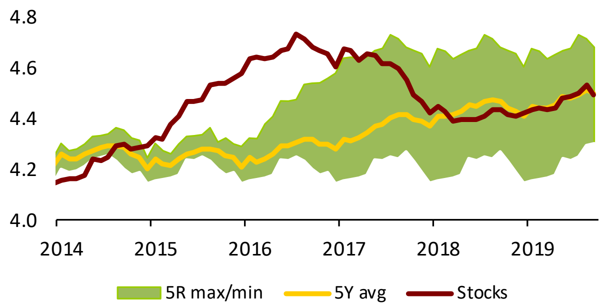
The Brent crude oil price remained below USD 60/bbl in the first three weeks of October, then rose slightly. Fears of an escalation of the Gulf conflict, which would have led to oil supply shortages, subsided at the end of September. Market sentiment thus began to be influenced again mainly by the weakening global economic outlook. A sharp rise in supertanker shipping costs, which reached record levels as a result of US sanctions on Chinese shipping companies, also contributed to the drop in oil spot prices. Only a relatively rapid depreciation of the dollar in early October prevented a larger fall in oil prices. Market sentiment improved in late October on the back of partial progress in the US-China trade negotiations. The Brent crude oil price thus rose slightly above USD 60/bbl, where it was still hovering in mid-November. This was due to a fall in transport costs, increased demand from refineries, which are gradually ending their autumn maintenance and switching to the production of winter products, and expectations of higher oil imports to China after the government there approved new import quotas for independent refineries. Hedge funds began to slightly increase their net long positions again. However, the strengthening of the dollar in the first half of November countered a stronger rise in oil prices. Analysts are meanwhile strongly divided on the need for OPEC+ to reduce production further at its meeting in early December. Some expect the weakening drilling activity in the US to result in slower growth of shale extraction there. The market curve for the price of future oil supplies is declining quite steeply and implies an average Brent crude oil price of approximately USD 58.5/bbl and USD 57/bbl for this year and the next. The November CF, on the other hand, expects the price of Brent crude oil to fluctuate roughly around the current level (at the end of 2020 it should be around USD 61/bbl).

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

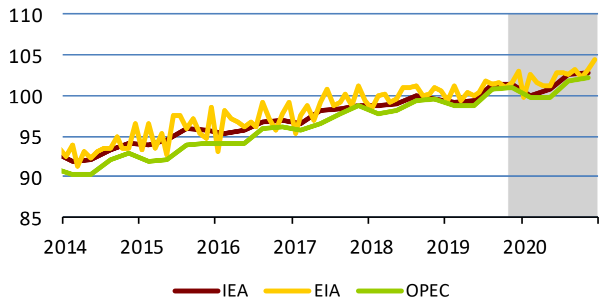


	Brent	WTI	Natural gas
2019	63.74	56.77	177.70
2020	58.64	54.82	180.08

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

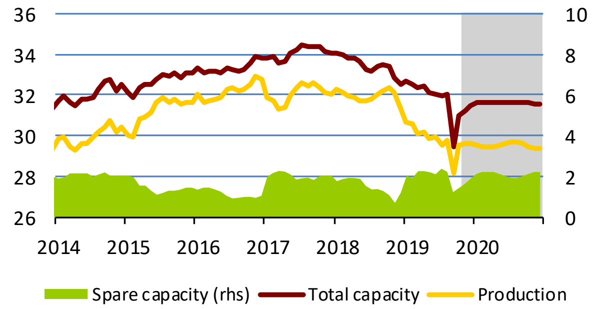


Global consumption of oil and oil products (mil. barrel / day)



	IEA	EIA	OPEC
2019	100.29	100.91	99.79
2020	101.52	102.28	100.87

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



	Production	Total capacity	Spare capacity
2019	29.81	31.77	1.97
2020	29.52	31.63	2.11

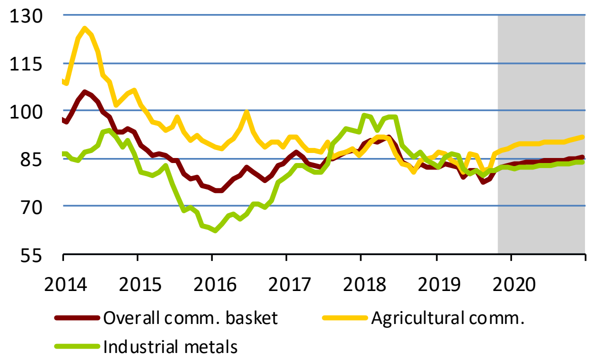
Source: Bloomberg, IEA, EIA, OPEC, CNB calculation
Note: Oil price at ICE, average gas price in Europe – World Bank data, smoothed by the HP filter. Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Total oil stocks (commercial and strategic)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

IV.2 Other commodities

The aggregate non-energy commodity price index kept rising in October and the first half of November, mainly due to food commodity prices. The outlook is also for weak growth. The food commodity price sub-index increased, especially in October. In the first half of November, it reached its highest level since May 2018, with a continued slight growth outlook. In the first half of October, wheat, corn, soy and sugar prices extended the growth that began in the second half of September. They have remained at elevated levels since. Coffee prices started rising in the second half of October. Rice and cocoa prices are maintaining their September gains. The beef price has also risen over the past two months, while the pork price has been at a seasonal low for three months now.

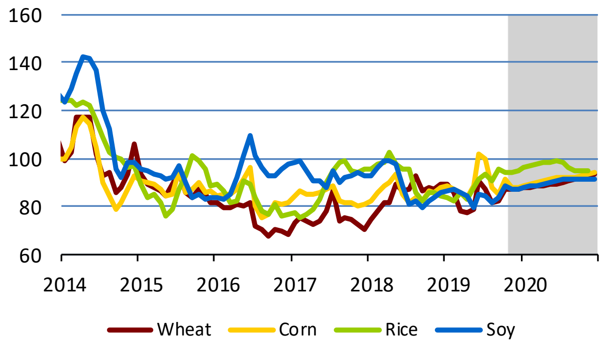
The base metals price sub-index more or less stagnated in October and rose only slightly in the first half of November. Its outlook is also slightly rising. Metal prices were supported in the second half of October by hopes of a partial trade deal between the US and China and by more positive news regarding industrial production in China. Nevertheless, the J.P.Morgan Global Manufacturing PMI rose only slightly in October, from 49.7 to 49.8. Copper and zinc prices responded to the improved sentiment by going up in October. In contrast, the price of nickel has been gradually falling since September, after previous sharp growth. The decline in iron ore prices strengthened in early November due to lower year-on-year imports to China. Conversely, coal prices were buoyed by strong year-on-year growth in imports to China and rising electricity production from coal fired power plants there. Prices of natural gas in Europe hit their lowest level since January 2003 in July and have been rising strongly since then due to restricted extraction in the Netherlands. Lately, they have also been supported by cooler weather across Europe and a fall in supplies from Norway, despite almost full reservoirs in most EU countries.

Non-energy commodities price indicies



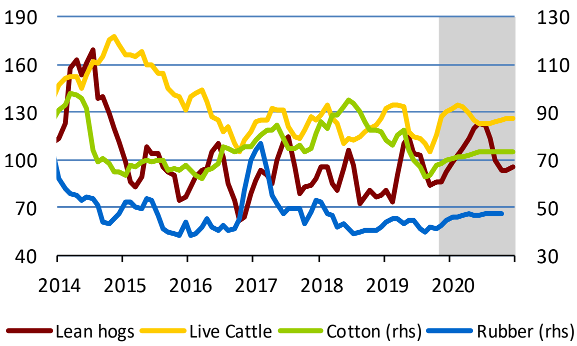
	Overall	Agricultural	Industrial
2019	81.2	84.9	82.5
2020	84.3	90.2	82.9

Food commodities



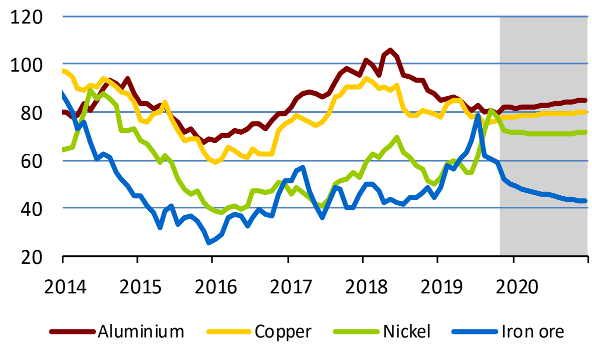
	Wheat	Corn	Rice	Soy
2019	84.5	89.7	89.9	85.0
2020	90.2	91.7	96.9	90.2

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2019	93.1	122.2	71.7	43.2
2020	106.9	126.9	72.6	46.8

Basic metals and iron ore



	Aluminium	Copper	Nickel	Iron ore
2019	82.7	79.3	64.7	59.8
2020	83.3	79.2	71.3	45.5

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.

The economic slowdown in China and its impact on commodity markets[1]

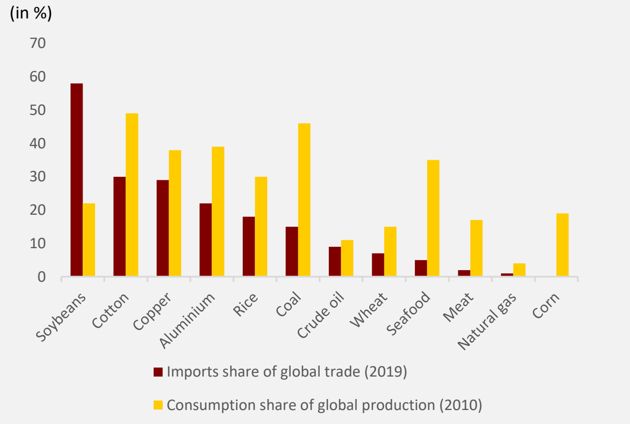
After decades of strong economic growth, industrialisation, urbanisation and rising living standards, China has become a dominant player in commodity markets. It is the largest global producer and consumer of a wide range of commodities. Although it is largely self-sufficient in most of them, it is a big importer of agricultural and some energy commodities as well as industrial metals and the commodities used to produce them. Economic growth in China is therefore closely monitored and analysed. The gradual economic slowdown in China is triggering concerns and uncertainty among many analysts as to how it might affect prices on global commodity markets. Chinese demand for commodities nonetheless remains strong.

Introduction

The strong growth of the Chinese economy over the past several decades has been driven mainly by investment in industrial production and construction. These sectors are energy- and industrial-metal-intensive. Although China is largely self-sufficient in most of these commodities, the strong economic growth, accompanied by growth in exports, has resulted in sharply rising imports of many commodities. This has made China a dominant player in commodity markets (see Chart 1).

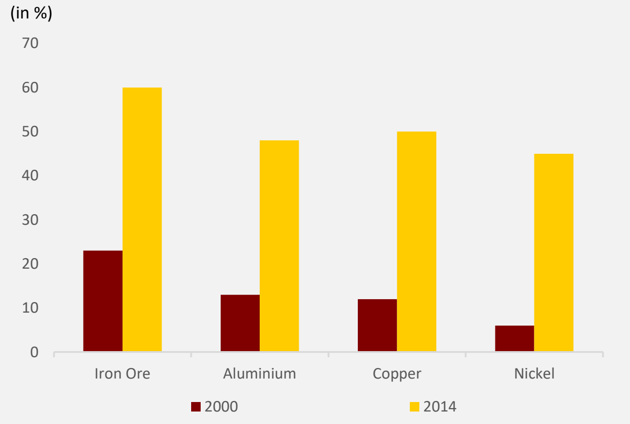
China's share in global consumption of, and international trade in, commodities rose sharply between 2000 and 2008 (see Chart 2). In this period, growth in manufacturing output and construction surged (see Chart 3) and the Chinese manufacturing industry became more commodity-intensive.

Chart 1 – China's share in global consumption and imports of commodities



Source: Roache (2012)

Chart 2 – China's share in global consumption of metals



Source: Kang (2015)

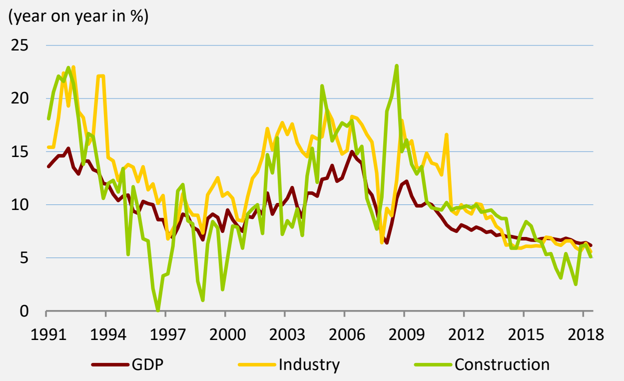
China replaced the USA as the world's largest primary energy consumer in 2011. Coal still accounts for the lion's share of its energy consumption. Most of China's coal consumption is covered by domestic resources. Thanks to government efforts to switch to greener energy, however, the share of coal is likely to decrease in favour of natural gas. Imports of natural gas – both in the gaseous phase (through transit pipelines from neighbouring countries) and in liquefied form (LNG imported by special tankers to the coast near large cities) – have therefore been rising sharply recently.

There are studies supporting the hypothesis that the rate of economic growth or industrial production growth in China affects prices on global commodity markets. For example, Klotz et al. (2014) conclude that global energy and industrial metals prices respond positively to an increase in economic activity in China. Moreover, agricultural and energy commodity prices overshoot their equilibrium levels in response to a drop in real interest rates in China. Similarly, based on a reduced-form VAR model, Roache (2012) concludes that a shock to the real activity of Chinese industry has a statistically significant impact on oil and copper prices. The effect on prices of other commodities is smaller. However, this study is also interesting from another perspective. Roache (2012) describes the empirically tested hypothesis that commodity consumption in a country that is getting wealthier initially rises but later stabilises, a phenomenon known as the S-curve. The current pattern in China fits this scheme very well (see Chart 4). Finally, the study arrives at a conclusion that may seem surprising at first glance, namely that commodity-

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

specific demand shocks that are unrelated to aggregate economic activity do not affect prices on commodity markets.

Chart 3 – Growth in GDP, industrial production and construction output



Source: Refinitiv Datastream, National Bureau of Statistics of China
Note: GDP at 2015 constant prices

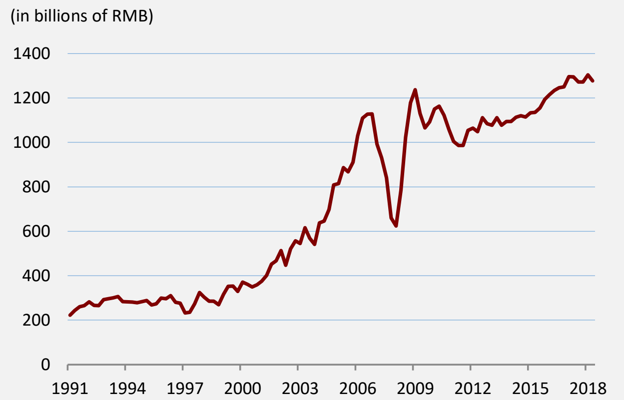
These studies focus mainly on the period of strong growth in the Chinese economy and Chinese industry, which was also characterised by sharp growth in commodity prices. Our article also covers the subsequent period, starting roughly in 2010, during which China has seen a sharp slowdown in industrial and construction output growth and real GDP growth (see Chart 3).

Economic growth in China is currently running at its lowest level in decades. Although doubt is sometimes cast on the government statistics, a gradual slowdown of the Chinese economy has been an indisputable fact over the last decade. Growing exports ceased to be a priority for the Chinese government after the 2009 global financial crisis. This was reflected in a drop in the rate of growth of Chinese industry. The financial crisis also revealed a vulnerability in the Chinese economy stemming from its overheated property market, which was reflected in a construction slowdown. Real economic growth in China is thus currently at its weakest level since at least the start of the 1990s (when quarterly data first became available). This is triggering concerns and uncertainty among some analysts as to what impacts it will have on commodity markets.

Chinese economic growth

Although economic growth in China has been gradually slowing since 2011, the increments in GDP have been getting bigger and bigger due to a rising base (see Chart 4). The increments in real GDP started to flatten out in 2018 (at very high levels), but have yet to decline. From this perspective, then, China's economic slowdown is by no means alarming, despite the fact that the growth of the Chinese economy in 2019 Q2 fell to its lowest level since at least the early 1990s (even lower than during the 2009 financial crisis).

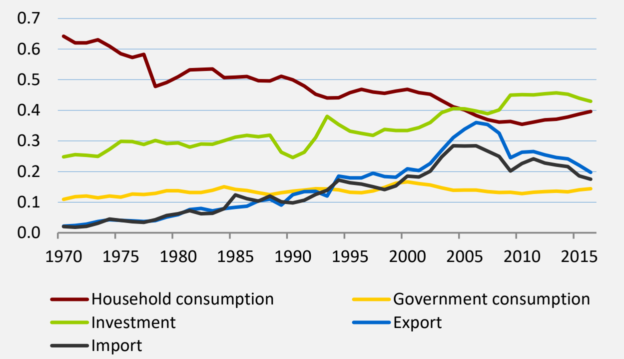
Chart 4 – Quarterly increments in Chinese GDP



Source: Refinitiv Datastream, National Bureau of Statistics of China
Note: Increases at 2015 constant prices, seasonally adjusted

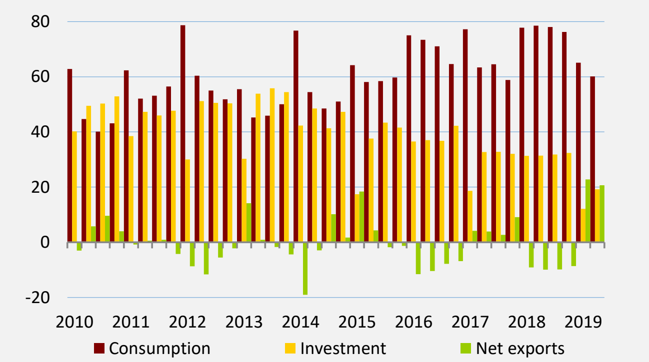
The Chinese economy has recently undergone structural changes. For several decades, growth was driven mainly by investment in industrial and construction output. The share of investment in GDP thus trended upwards at the expense of household consumption (see Chart 5). The chart also shows that as the share of investment rose, the export capacity and import intensity of the Chinese economy went up quickly as well. When President Xi Jinping assumed

Chart 5 – Share of individual components in Chinese GDP



Source: OECD, Refinitiv Datastream
Note: GDP at current prices

Chart 6 – Share of components in growth in Chinese GDP



Source: Refinitiv Datastream, National Bureau of Statistics of China
Note: GDP at 2015 constant prices, seasonally adjusted

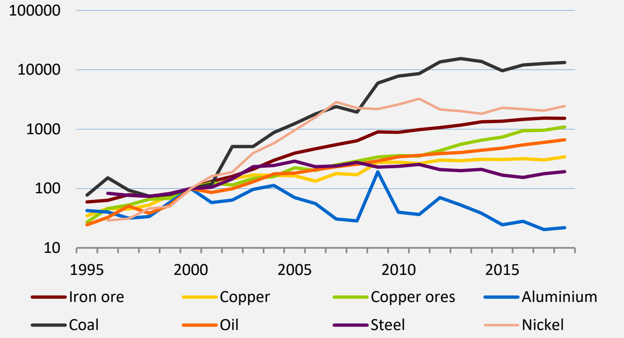
office in 2013, the focus moved from quantity to quality of growth. Massive structural reforms are being channelled in this direction. Strong growth in disposable income is fostering a gradual increase in the share of domestic consumption (of high-quality food and services, among other things) in GDP and in GDP growth, while growth in the share of investment has halted and its contribution to GDP growth has decreased (see Chart 6). It is also interesting that the shares of both exports and imports in Chinese GDP have dropped sharply since the 2009 global financial crisis.

Imports of selected industrial and energy commodities to China

Imports of most industrial and energy commodities started to grow sharply in about 2000, due to strong growth in industrial production, construction output and exports. This growth is shown in Chart 7. (As imports of some commodities recorded growth of thousands of per cent, the y-axis of the chart has a logarithmic scale.) Sooner or later, however, this growth slowed or completely stopped for most commodities (the only exception being aluminium exports, which recorded a falling trend.) The first to halt was growth in imports of manufactured metals (steel, nickel and copper, in that order) as China increased their domestic production. Imports of the ores used to make them have also stabilised over the last few years. Heavy industry required vast amounts of energy, generated mostly from coal. Despite China's high degree of self-sufficiency, imports of this commodity also surged[2] but eventually stabilised as well. Of the industrial commodities mentioned above, oil and natural gas are virtually the only ones now still recording rising imports.

Chart 7 – Imports of selected commodities to China

(index; year 2000 = 100)



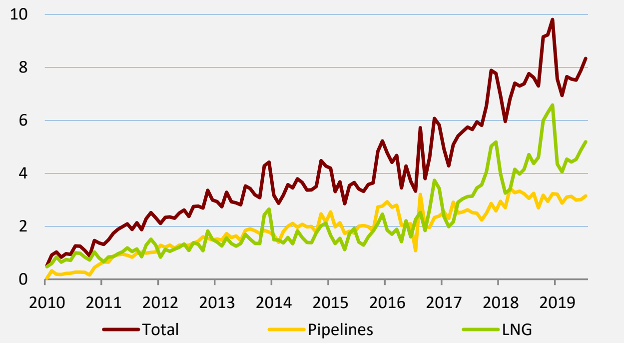
Source: China Customs, Refinitiv Datastream

Imports of natural gas to China

Although coal still accounts for the majority of China's energy mix, the Chinese government is trying to replace coal increasingly with natural gas. Natural gas produces less dust and carbon dioxide per unit of energy in electricity generation, industry and household heating. The upward trend in imports of this commodity is shown in Chart 8. Imports of pipeline (i.e. gaseous phase) gas are limited by the construction of new pipelines from neighbouring countries, Russia in particular. China also satisfies part of its consumption from domestic production. Imports of liquefied natural gas (LNG) have been growing at a dizzying pace recently. China is taking advantage of the current surplus on the LNG market as investment in LNG production – especially in the USA, but also in Russia and Qatar – increases. Importing LNG requires relatively little investment – merely the construction of coastal gasification terminals connected to the domestic natural gas distribution infrastructure. A big advantage of LNG compared with cross-border gas pipelines is that import terminals can be located close to densely populated areas, so the gas does not need to be brought into the domestic network through long-distance gas pipelines.

Chart 8 – Imports of natural gas to China

(in tens of thousands of tonnes monthly)



Source: China Customs, Refinitiv Datastream

To a lesser extent, China uses long-term contracts to import LNG and buys a large proportion of its imports on the spot market. This specific behaviour distinguishes it from most other LNG importers. On the one hand, this behaviour is necessitated by the fact that China does not yet have sufficient storage capacity to fully accommodate seasonal fluctuations in gas consumption, since imports based on long-term contracts tend to be mostly constant. On the other hand, as well as covering peaks in seasonal consumption, it can flexibly take advantage of price fluctuations on the spot market.

The upward trends in natural gas consumption and imports in China are very likely to continue. The change in the structure of the Chinese economy will tend to support these trends (unlike in the case of

[2] Coal imports were also strongly affected by administrative interventions. To mitigate the negative environmental impacts, the Chinese government limited domestic coal mining in some periods. This caused prices on global markets to rise, leading to renewed relaxation of the limits.

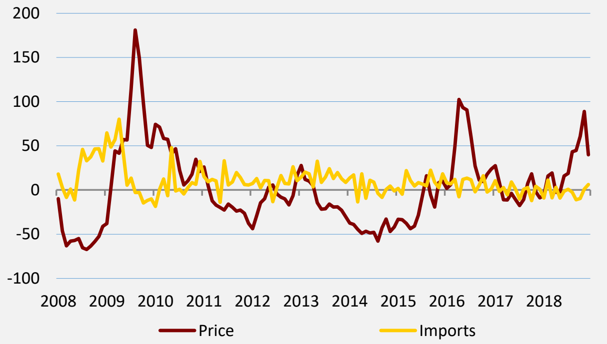
industrial metals), because an increasing percentage of the population will be able to afford more convenient gas heating as living standards go up. Electricity consumption per capita will also rise, with gas being increasingly used to generate electricity. We should add, however, that LNG and crude oil have recently also been used for political purposes in the trade war with the USA. This is resulting in decreasing imports from the USA (due to the threat or actual imposition of tariffs on imports of these commodities from the United States). However, the trade war is in this sense affecting global trade flows rather than the amounts imported into China.

The impact of these economic trends on commodity markets

A link between economic growth in China, Chinese commodity imports and prices on commodity markets is generally assumed but is hard to prove. As has been said, China is largely self-sufficient in most industrial and energy commodities.[3] Nonetheless, any imports can be significant in size relative to total global trade in the commodity concerned. While in most cases higher imports of a commodity to China produce the standard response on the commodity market, i.e. a rise in the price, there are periods when the correlation between the increments in these variables is negative (for example in the case of iron ore in 2008–2010; see Chart 9). Like Roache (2012), we are of the opinion that this is due to a managed build-up of strategic reserves. In the case of China, imports for these reserves typically increase at times of sharp (exogenous) decreases in commodity prices and vice versa. The causality is thus opposite to what exists the rest of the time. Since price movements and changes in imports are more pronounced in these non-standard cases than they are the rest of the time, the overall correlation between changes in commodity prices and imports may be negative. It is thus impossible to quantify what impact a slowdown in Chinese industry will have on commodity markets based on a simple correlation analysis.[4] One would need to specify a dynamic model taking into account the specific behaviour of Chinese imports and the build-up of inventories. However, this goes beyond the scope of this article. Moreover, this specific behaviour of imports is gradually waning as Chinese commodity stocks gradually reach the required levels.

Chart 9 – Price and quantity of iron ore imports to China

(annual percentage changes)



Source: China Customs, Refinitiv Datastream, Bloomberg

Commodity prices and China's external demand will be more affected by the above change in the structure of the economy than by the gradual decline in Chinese GDP growth. Developments in industrial production are of prime importance for consumption and imports of industrial and energy commodities. Growth in construction output is also important for coal, iron ore and copper. Demand shocks to these sectors tend to have a rapid and short-term impact on commodity prices, as does economic policy, which affects the level and rate of build-up of strategic reserves and trade relations. However, structural changes lead to change in the composition of commodity consumption and have a longer-lasting effect. Structural reforms are causing growth in Chinese demand for commodities to shift from consumption of metals and coal to consumption of food and energy in the form of fuels and household heating. Passenger car transport, housing quality and grain, meat and dairy product consumption can be expected to go up quickly as living standards and disposable income rise. Despite this, demand for industrial commodities will remain high, so the slowdown of the Chinese economy should not lead to dramatic falls in prices on global commodity markets.

Conclusion

Although China's economy is gradually slowing, the increments in its GDP will remain impressive.[5] Of greater importance, however, is the fact that the structure of Chinese GDP has changed considerably since the outbreak of the global financial crisis. The shares of exports and imports in total GDP have decreased sharply and the previous rising trend in the share of investment has come to a halt. Even so, investment is the largest item, accounting for more than 40% of GDP. By contrast, the share of

[3] In addition to its domestic resources, China is investing massive amounts to gain preferential access to resources in other countries, especially in Africa.

[4] Although the correlation between monthly imports to China and the price is high and positive for most commodities, no strong conclusion can be drawn from this. This relationship suggests that the price of a commodity is higher when imports to China are higher, but this strong positive correlation may be due to a common growth trend. The correlation usually disappears for month-on-month growth and turns very negative for year-on-year changes (for the above reasons).

[5] For example in 2018, when average real Chinese GDP growth was a "mere" 6.6%, the real increment in GDP was 17% larger than in 2007, when the real economy grew by 14.2%.

household consumption has switched to growth after several decades of trending down, so domestic consumption will be the main driver of future economic growth.

However, global industrial commodity markets are more affected by the evolution of industrial production and construction output in China. Growth in industrial production has been dampened for several years now by the ongoing structural changes in the Chinese economy, and has dropped from its previous double-digit levels to low single figures. At the same time, the rate of growth of construction output has decreased as the government has strived to return the Chinese property market to equilibrium in response to the global financial crisis. As a result, growth in imports of metals, the ores used to produce them, and coal has weakened and subsequently halted. Commodity markets have adjusted to this. However, China will remain a dominant player in commodity markets in the future, and imports will stay high. For this reason, a more pronounced fall in global prices of industrial commodities cannot be expected, despite the slowing economic growth. However, the continuing trade war between the USA and China, which is already affecting the volume of international trade, may pose a risk.

As a result of rising living standards and disposable income, demand and imports for private consumption can be expected to keep growing. Growth in passenger car transport will continue to foster growth in imports of oil, mostly in crude form, as fuel production will be ensured by sufficient domestic refining capacity. As living standards increase, eating habits are changing, leading to higher demand for higher-quality food. This will probably result in growth in imports of grains, meat and dairy products and to growth in prices of these commodities on global markets.

Strong growth in demand and hence imports can be expected for natural gas. Its consumption will increase due to demand for better-quality and more comfortable housing among the increasingly wealthy population and to the government's efforts to improve the quality of the environment. To this end, coal will gradually be replaced by natural gas (which produces less harmful emissions) for electricity generation, industry and household heating.

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Keywords

China, economic growth, structural changes, commodity prices

JEL Classification

N65, O14, Q02, Q41, Q48,

A1. Change in predictions for 2019

GDP growth, %

	CF		IMF		OECD		CB / EIU	
EA	0	2019/11 2019/10	-0.1	2019/10 2019/7	-0.1	2019/9 2019/5	-0.1	2019/9 2019/6
US	0	2019/11 2019/10	-0.2	2019/10 2019/7	-0.4	2019/9 2019/5	+0.1	2019/9 2019/6
UK	+0.1	2019/11 2019/10	-0.1	2019/10 2019/7	-0.2	2019/9 2019/5	-0.3	2019/11 2019/8
JP	0	2019/11 2019/10	0	2019/10 2019/7	+0.3	2019/9 2019/5	-0.1	2019/10 2019/7
CN	-0.1	2019/11 2019/10	-0.1	2019/10 2019/7	-0.1	2019/9 2019/5	+0.1	2019/11 2019/9
RU	0	2019/10 2019/9	-0.1	2019/10 2019/7	-0.5	2019/9 2019/5	-0.2	2019/11 2019/9

Inflation, %

	CF		IMF		OECD		CB / EIU	
EA	0	2019/11 2019/10	-0.1	2019/10 2019/4	-0.7	2019/5 2018/11	-0.1	2019/9 2019/6
US	0	2019/11 2019/10	-0.2	2019/10 2019/4	-0.7	2019/5 2018/11	0	2019/9 2019/6
UK	0	2019/11 2019/10	0	2019/10 2019/4	-0.6	2019/5 2018/11	-0.2	2019/11 2019/8
JP	0	2019/11 2019/10	-0.1	2019/10 2019/4	-0.6	2019/5 2018/11	-0.3	2019/10 2019/7
CN	+0.1	2019/11 2019/10	0	2019/10 2019/4	-1.1	2019/5 2018/11	-0.1	2019/11 2019/9
RU	-0.4	2019/10 2019/9	-0.3	2019/10 2019/4	-0.2	2019/5 2018/11	+0.1	2019/11 2019/9

A2. Change in predictions for 2020

GDP growth, %

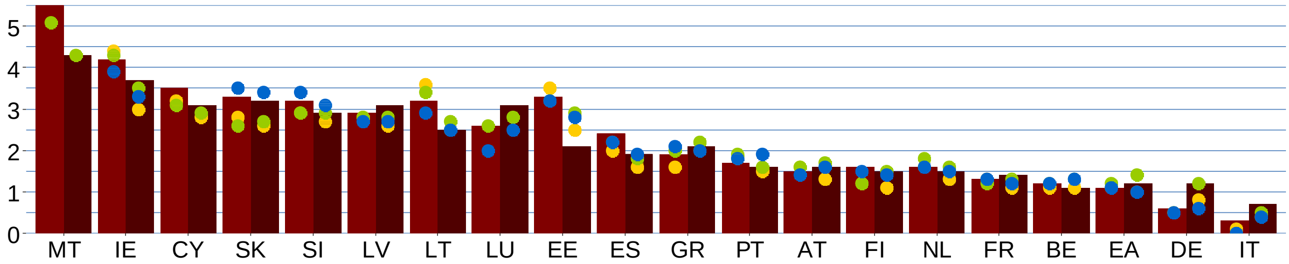
	CF		IMF		OECD		CB / EIU	
EA	+0.1	2019/11 2019/10	-0.2	2019/10 2019/7	-0.4	2019/9 2019/5	-0.2	2019/9 2019/6
US	0	2019/11 2019/10	+0.2	2019/10 2019/7	-0.3	2019/9 2019/5	0	2019/9 2019/6
UK	+0.1	2019/11 2019/10	0	2019/10 2019/7	-0.1	2019/9 2019/5	+0.3	2019/11 2019/8
JP	0	2019/11 2019/10	+0.1	2019/10 2019/7	0	2019/9 2019/5	-0.2	2019/10 2019/7
CN	-0.1	2019/11 2019/10	-0.2	2019/10 2019/7	-0.3	2019/9 2019/5	-0.1	2019/11 2019/9
RU	0	2019/10 2019/9	0	2019/10 2019/7	-0.5	2019/9 2019/5	0	2019/11 2019/9

Inflation, %

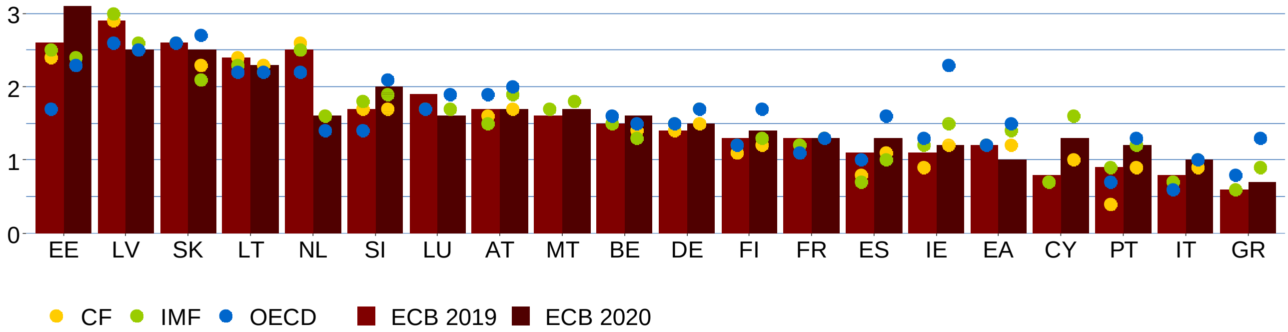
	CF		IMF		OECD		CB / EIU	
EA	0	2019/11 2019/10	-0.2	2019/10 2019/4	-0.4	2019/5 2018/11	-0.4	2019/9 2019/6
US	-0.1	2019/11 2019/10	-0.4	2019/10 2019/4	-0.3	2019/5 2018/11	0	2019/9 2019/6
UK	-0.2	2019/11 2019/10	-0.1	2019/10 2019/4	-0.2	2019/5 2018/11	-0.6	2019/11 2019/8
JP	0	2019/11 2019/10	-0.2	2019/10 2019/4	-0.4	2019/5 2018/11	-0.2	2019/10 2019/7
CN	+0.2	2019/11 2019/10	-0.1	2019/10 2019/4	-0.9	2019/5 2018/11	+0.2	2019/11 2019/9
RU	0	2019/10 2019/9	-1.0	2019/10 2019/4	0	2019/5 2018/11	+3.0	2019/11 2019/9

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

GDP growth in the euro area countries in 2019 and 2020, %



Inflation in the euro area countries in 2019 and 2020, %

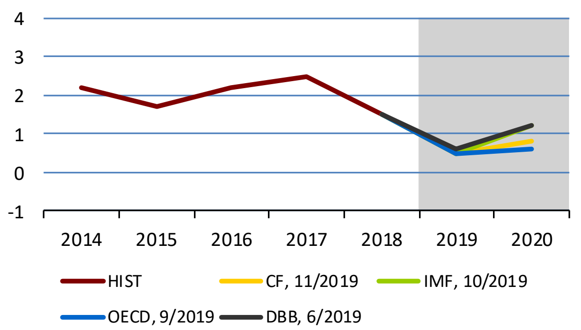


Note: Charts show institutions' latest available outlooks of for the given country.

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

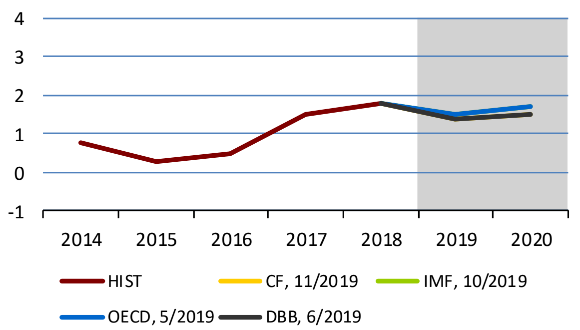
Germany

GDP growth, %



	CF	IMF	OECD	DBB
2019	0.5	0.5	0.5	0.6
2020	0.8	1.2	0.6	1.2

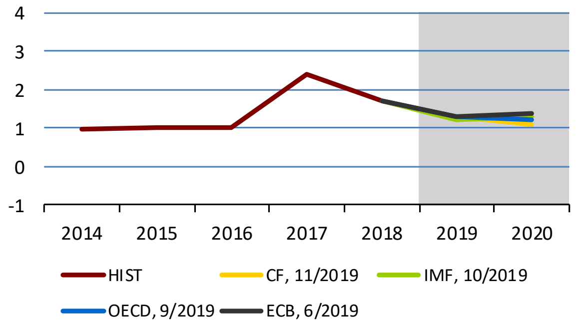
Inflation, %



	CF	IMF	OECD	DBB
2019	1.4	1.5	1.5	1.4
2020	1.5	1.7	1.7	1.5

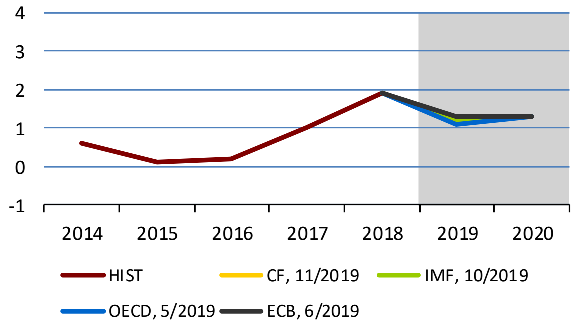
France

GDP growth, %



	CF	IMF	OECD	ECB
2019	1.3	1.2	1.3	1.3
2020	1.1	1.3	1.2	1.4

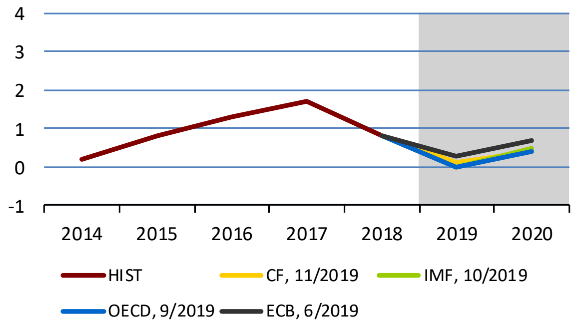
Inflation, %



	CF	IMF	OECD	ECB
2019	1.2	1.2	1.1	1.3
2020	1.3	1.3	1.3	1.3

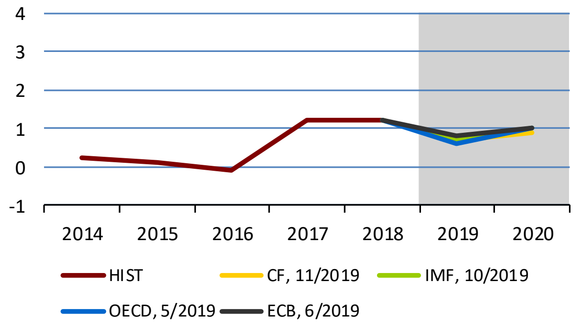
Italy

GDP growth, %



	CF	IMF	OECD	ECB
2019	0.1	0.0	0.0	0.3
2020	0.4	0.5	0.4	0.7

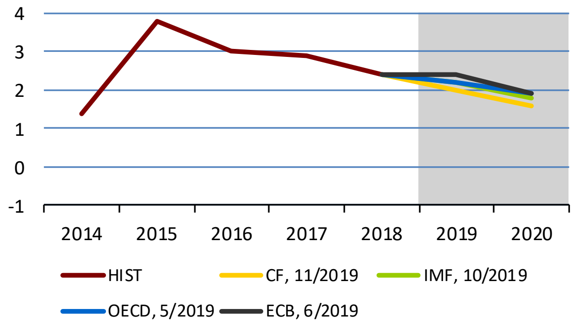
Inflation, %



	CF	IMF	OECD	ECB
2019	0.7	0.7	0.6	0.8
2020	0.9	1.0	1.0	1.0

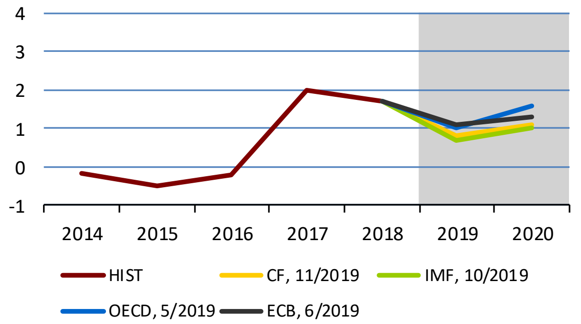
Spain

GDP growth, %



	CF	IMF	OECD	ECB
2019	2.0	2.2	2.2	2.4
2020	1.6	1.8	1.9	1.9

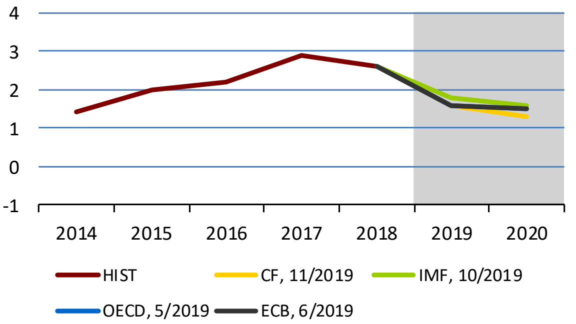
Inflation, %



	CF	IMF	OECD	ECB
2019	0.8	0.7	1.0	1.1
2020	1.1	1.0	1.6	1.3

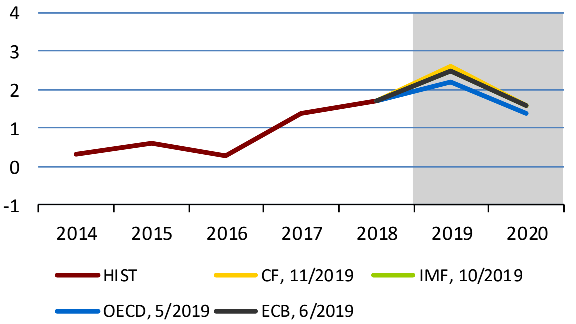
Netherlands

GDP growth, %



	CF	IMF	OECD	ECB
2019	1.6	1.8	1.6	1.6
2020	1.3	1.6	1.5	1.5

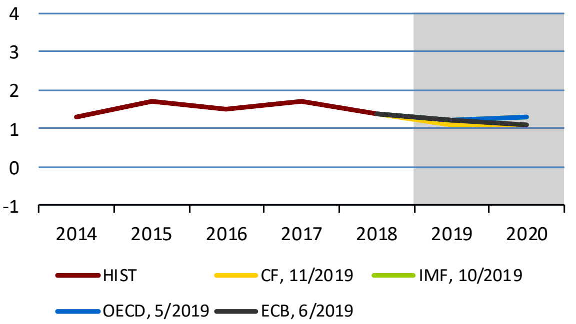
Inflation, %



	CF	IMF	OECD	ECB
2019	2.6	2.5	2.2	2.5
2020	1.6	1.6	1.4	1.6

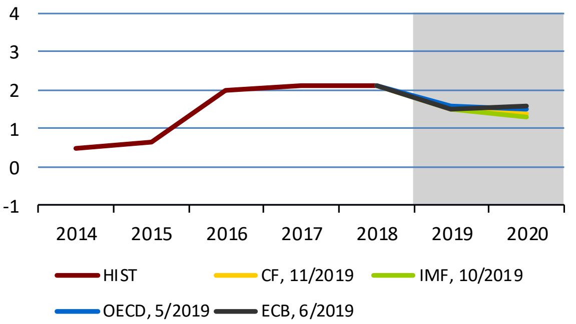
Belgium

GDP growth, %



	CF	IMF	OECD	ECB
2019	1.1	1.2	1.2	1.2
2020	1.1	1.3	1.3	1.1

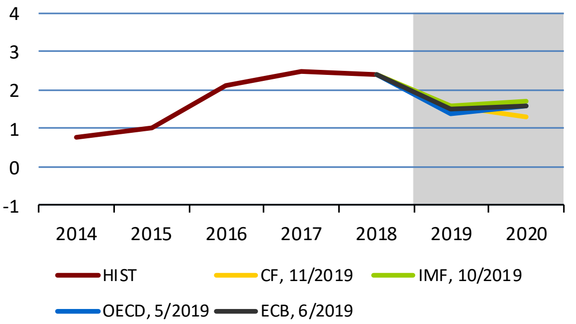
Inflation, %



	CF	IMF	OECD	ECB
2019	1.5	1.5	1.6	1.5
2020	1.4	1.3	1.5	1.6

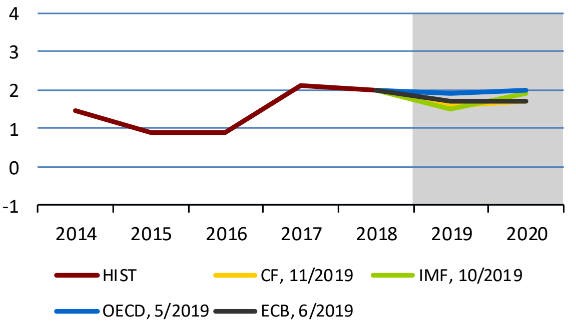
Austria

GDP growth, %



	CF	IMF	OECD	ECB
2019	1.6	1.6	1.4	1.5
2020	1.3	1.7	1.6	1.6

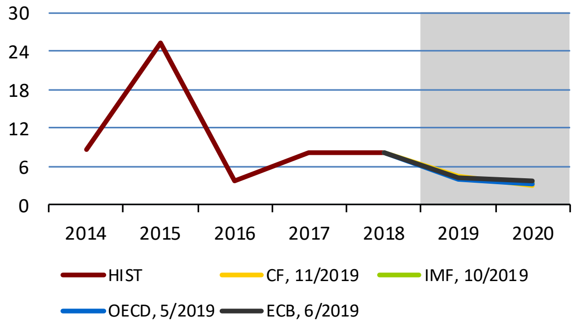
Inflation, %



	CF	IMF	OECD	ECB
2019	1.6	1.5	1.9	1.7
2020	1.7	1.9	2.0	1.7

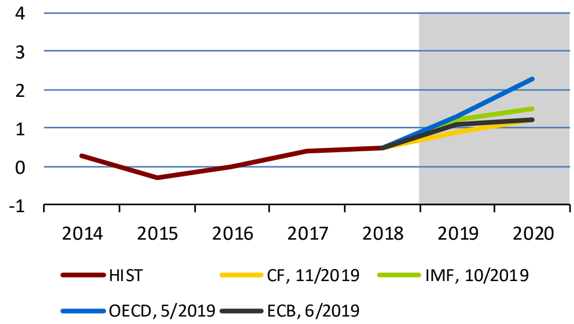
Ireland

GDP growth, %



	CF		IMF		OECD	ECB
2019	4.4	→	4.3	↗	3.9	4.2
2020	3.0	↗	3.5	↗	3.3	3.7

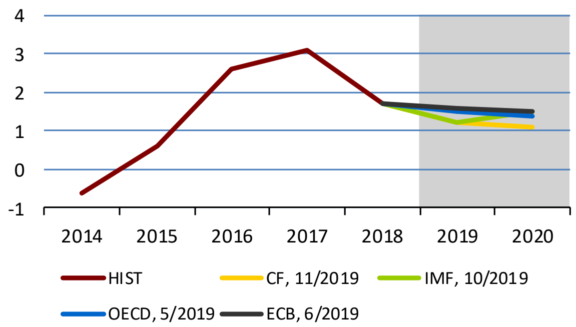
Inflation, %



	CF		IMF		OECD	ECB
2019	0.9	→	1.2	→	1.3	1.1
2020	1.2	→	1.5	→	2.3	1.2

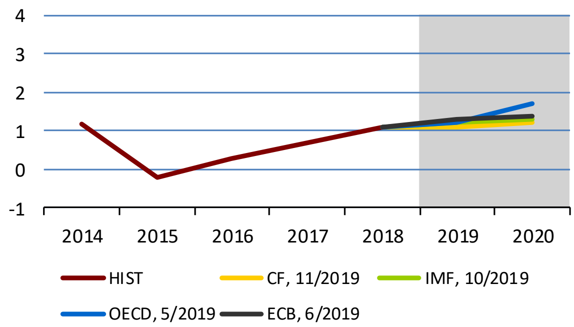
Finland

GDP growth, %



	CF		IMF		OECD	ECB
2019	1.2	→	1.2	↘	1.5	1.6
2020	1.1	→	1.5	↘	1.4	1.5

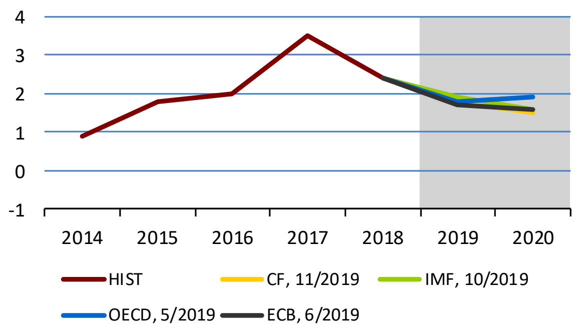
Inflation, %



	CF		IMF		OECD	ECB
2019	1.1	→	1.2	↘	1.2	1.3
2020	1.2	↘	1.3	↘	1.7	1.4

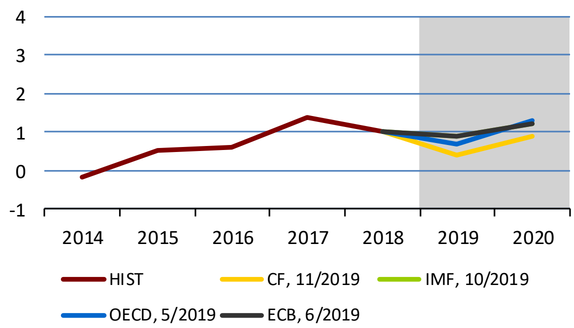
Portugal

GDP growth, %



	CF		IMF		OECD	ECB
2019	1.8	→	1.9	↗	1.8	1.7
2020	1.5	↘	1.6	↗	1.9	1.6

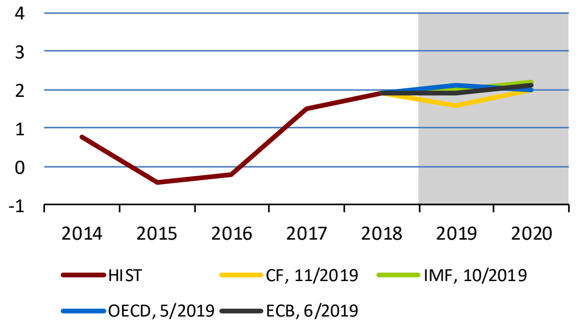
Inflation, %



	CF		IMF		OECD	ECB
2019	0.4	→	0.9	↘	0.7	0.9
2020	0.9	↘	1.2	↘	1.3	1.2

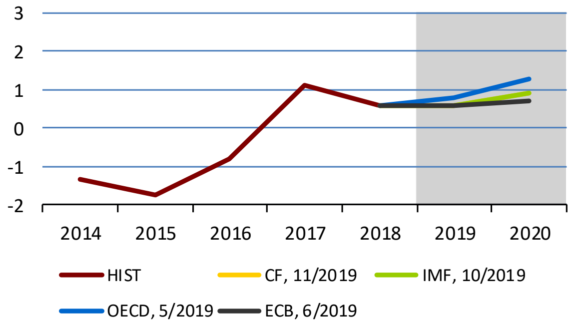
Greece

GDP growth, %



	CF	IMF	OECD	ECB
2019	1.6	2.0	2.1	1.9
2020	2.0	2.2	2.0	2.1

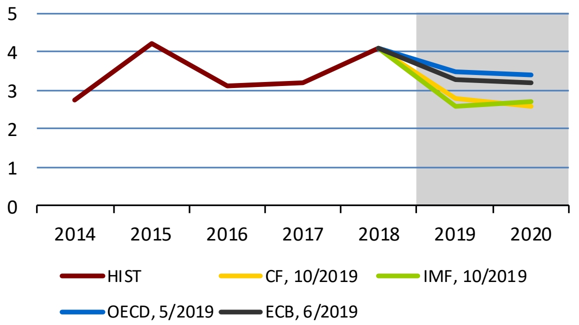
Inflation, %



	CF	IMF	OECD	ECB
2019	0.6	0.6	0.8	0.6
2020	0.9	0.9	1.3	0.7

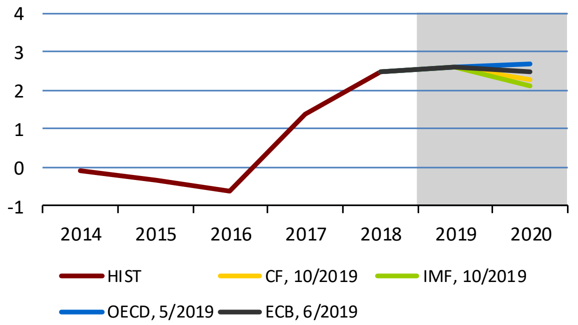
Slovakia

GDP growth, %



	CF	IMF	OECD	ECB
2019	2.8	2.6	3.5	3.3
2020	2.6	2.7	3.4	3.2

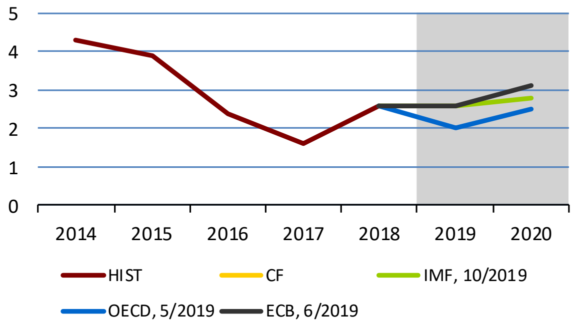
Inflation, %



	CF	IMF	OECD	ECB
2019	2.6	2.6	2.6	2.6
2020	2.3	2.1	2.7	2.5

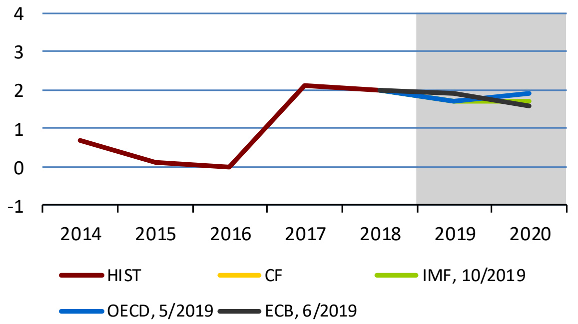
Luxembourg

GDP growth, %



	CF	IMF	OECD	ECB
2019	n. a.	2.6	2.0	2.6
2020	n. a.	2.8	2.5	3.1

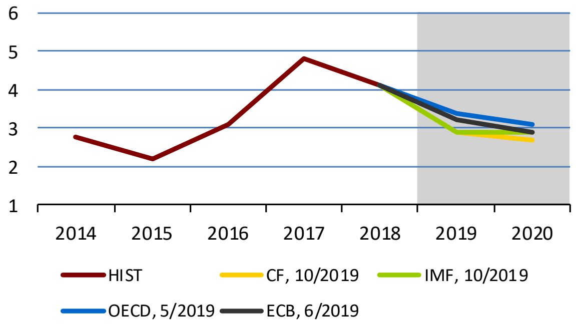
Inflation, %



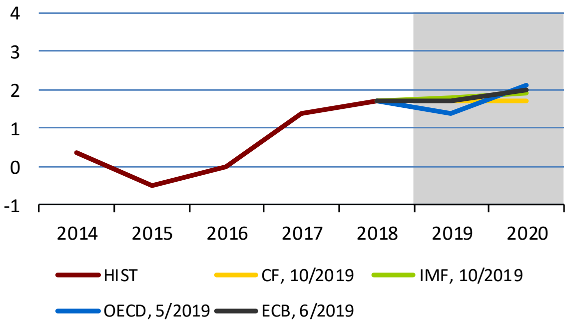
	CF	IMF	OECD	ECB
2019	n. a.	1.7	1.7	1.9
2020	n. a.	1.7	1.9	1.6

Slovenia

GDP growth, %



Inflation, %

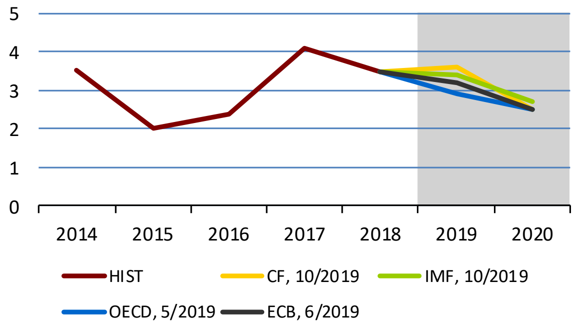


	CF	IMF	OECD	ECB
2019	2.9	2.9	3.4	3.2
2020	2.7	2.9	3.1	2.9

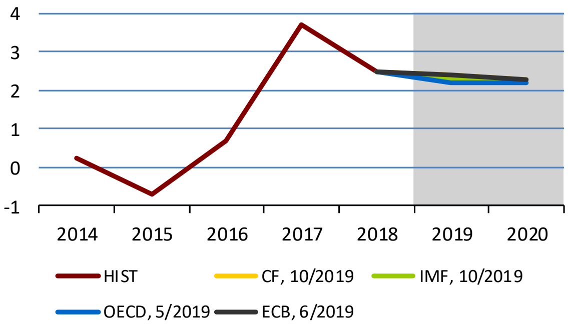
	CF	IMF	OECD	ECB
2019	1.7	1.8	1.4	1.7
2020	1.7	1.9	2.1	2.0

Lithuania

GDP growth, %



Inflation, %

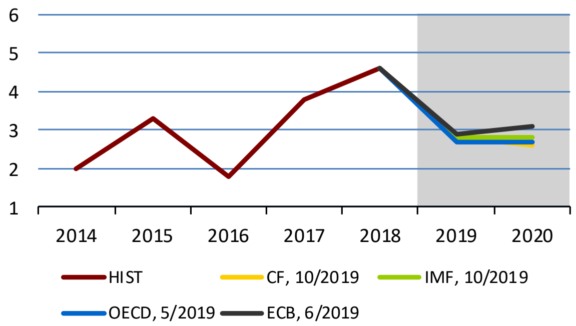


	CF	IMF	OECD	ECB
2019	3.6	3.4	2.9	3.2
2020	2.5	2.7	2.5	2.5

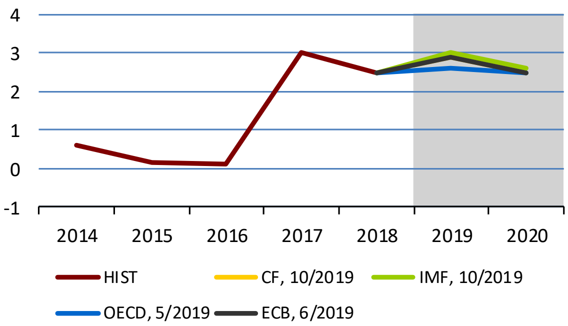
	CF	IMF	OECD	ECB
2019	2.4	2.3	2.2	2.4
2020	2.3	2.2	2.2	2.3

Latvia

GDP growth, %



Inflation, %

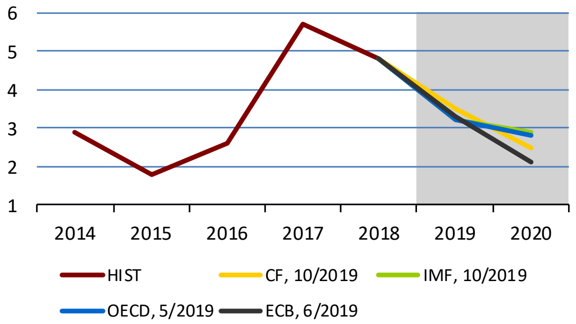


	CF	IMF	OECD	ECB
2019	2.8	2.8	2.7	2.9
2020	2.6	2.8	2.7	3.1

	CF	IMF	OECD	ECB
2019	2.9	3.0	2.6	2.9
2020	2.5	2.6	2.5	2.5

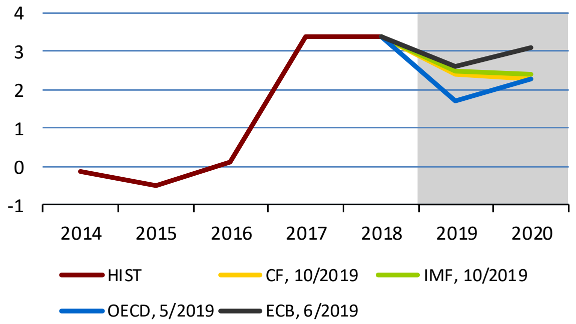
Estonia

GDP growth, %



	CF	IMF	OECD	ECB
2019	3.5	3.2	3.2	3.3
2020	2.5	2.9	2.8	2.1

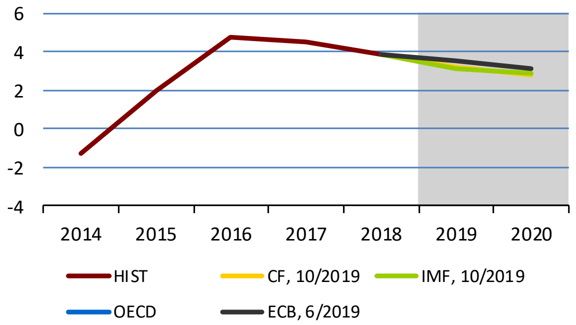
Inflation, %



	CF	IMF	OECD	ECB
2019	2.4	2.5	1.7	2.6
2020	2.3	2.4	2.3	3.1

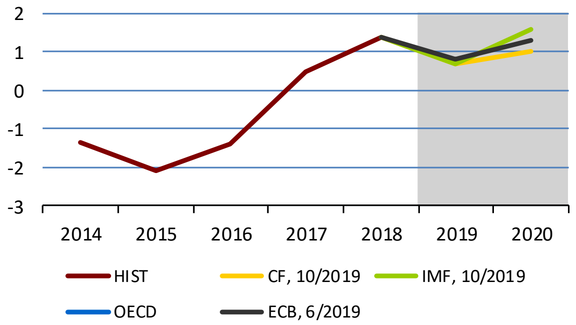
Cyprus

GDP growth, %



	CF	IMF	OECD	ECB
2019	3.2	3.1	n. a.	3.5
2020	2.8	2.9	n. a.	3.1

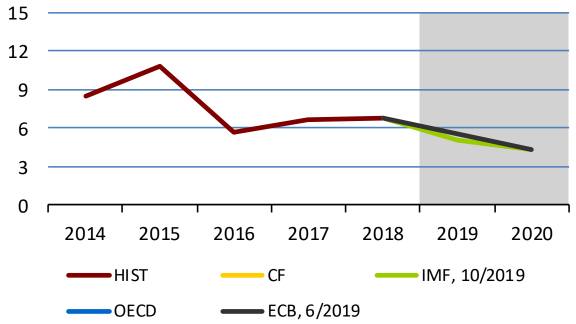
Inflation, %



	CF	IMF	OECD	ECB
2019	0.7	0.7	n. a.	0.8
2020	1.0	1.6	n. a.	1.3

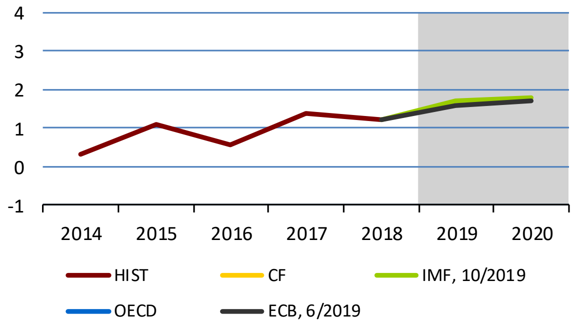
Malta

GDP growth, %



	CF	IMF	OECD	ECB
2019	n. a.	5.1	n. a.	5.5
2020	n. a.	4.3	n. a.	4.3

Inflation, %



	CF	IMF	OECD	ECB
2019	n. a.	1.7	n. a.	1.6
2020	n. a.	1.8	n. a.	1.7

A5. List of abbreviations

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