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MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK

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ECONOMIC & FINANCIAL ENVIRONMENT

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CaixaBank Research

MONTHLY REPORT - ECONOMIC AND FINANCIAL MARKET OUTLOOK
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Will the COVID-19 crisis make us greener?

The title of this article is not a bad joke about the possible side effects of the vaccines that have already begun to be administered and which allow us to dream of the pandemic finally being controlled. Rather, the title questions whether the pandemic will intensify the fight against climate change. For several reasons, it is likely to do just that.

Firstly, the COVID-19 pandemic has made it clear just how devastating the forces of nature can be. We have seen how events that appear remote have a huge cost when they materialise. It is then that we look back and wonder what we could have done to mitigate those risks that were perceived by many, if not most, as being far away. In this regard, the pandemic should contribute to a greater awareness of this type of risk.

After the COVID-19 disaster, it is time to reassess the catalogue of risks we face. Anyone who did not have climate change on that list is likely to have added it by now. And those who already had it on their list may have now put it at the very top. Now that it has become clear that we were not investing enough in preventing epidemics, or in the healthcare system in general, it is time to ask ourselves whether we are doing enough to combat climate change.

The pandemic has also made it clear that, with current production structures and consumption patterns, the reduction in emissions required to curb global warming would have an enormous cost in terms of economic activity. Global greenhouse gas emissions are estimated to have fallen by more than 5% in 2020, a reduction that would need to be repeated year after year for a long time to come in order to achieve the objectives of the Paris Agreement and limit the global temperature rise to 2°C. Given that we are not going to do this if it means sacrificing economic activity like in 2020, it has become clear that we need to invest in the transformation of our productive structures and promote more environmentally-friendly consumption patterns.

In turn, the economic recovery plans that have been proposed to help us overcome the crisis caused by the pandemic will provide a huge amount of resources for the fight against climate change, and if used effectively this will further increase social support in the face of this challenge. It may seem paradoxical that governments are willing to devote more resources to this priority at a time when their accounts have been so devastated by the pandemic, but no one doubts that the current situation requires a significant fiscal impetus in order to relaunch the economy.

While we are at it, why not devote this impetus to facilitating the transition to a lower-emission economy? An «investor» approach to the fight against global warming is more likely to succeed than an approach that prioritises taxes and restrictions on certain activities, because it is much more politically sustainable. We already saw what happened in France with the yellow vests in 2018, when Macron had to reverse the rise in fuel duty. Carrots are more effective than sticks, and the recovery plans are a field of carrots.

Later on, when the time comes to address the correction of the public accounts, the measures to be taken could also have a green skew. There is no doubt that in many countries it will be necessary to increase tax revenues in order to correct the high public deficits and reduce debt. In the face of the decision on which taxes to increase, levies on greenhouse gas emissions will be an obvious candidate.

We have often characterised the pandemic as an accelerator of trends. This has clearly been the case in the digital world where, by necessity, we have learned to telework, to buy and sell more online, to practice telemedicine and to hold our meetings virtually. Now that we can glimpse an end to the COVID-19 pandemic, it is time to accelerate the fight against climate change, because we are more aware than ever that it is an indispensable fight and, moreover, because it will help to drive the recovery.

Enric Fernández
Chief economist
31 December 2020

Chronology

DECEMBER 2020

2 The United Kingdom becomes the first Western country to approve the use of a vaccine against COVID-19.
10 The ECB increases the PEPP budget to 1.85 trillion, prolongs its net purchases until March 2022 and launches three new TLTRO-III operations.
24 The EU and the United Kingdom reach a trade agreement to regulate their economic relations from 1 January 2021, when the United Kingdom leaves the single market and customs union.

OCTOBER 2020

16 The rating agency Moody's downgrades the United Kingdom's credit rating from Aa2 to Aa3.
25 The Spanish government declares a new state of emergency.
28 France announces a new lockdown and other European countries (such as Germany) also impose tighter mobility restrictions than in previous months.

AUGUST 2020

27 The Fed updates the strategic framework for monetary policy and announces that it will pursue an average inflation rate of 2%, temporarily tolerating higher inflation following periods with inflation below 2%.

NOVEMBER 2020

15 Australia, New Zealand and 13 Asian economies (including China) sign a large-scale trade agreement known as the Regional Comprehensive Economic Partnership.
20 The first COVID-19 vaccines seek official approval from the authorities after the trial phase comes to an end.

SEPTEMBER 2020

25 The European Council approves the granting of 87.4 billion euros in SURE loans to 16 Member States. Spain will receive 21.3 billion.
28 The official global COVID-19 death toll surpasses 1 million people.

JULY 2020

21 The European Council approves a 750-billion-euro recovery plan to combat the COVID-19 crisis (360 billion in loans and 390 billion in transfers), to be financed with debt issued by the EU.

Agenda

JANUARY 2021

5 Spain: registration with Social Security and registered unemployment (December).
7 Portugal: employment and unemployment (November).
8 Portugal: international trade (November).
Portugal: turnover in industry (November).
15 Spain: financial accounts (Q3).
Portugal: tourism activity (November).
21 Governing Council of the European Central Bank meeting.
22 Spain: loans, deposits and NPL ratio (November).
26-27 Federal Open Market Committee meeting.
28 Spain: labour force survey (Q4).
Portugal: home prices (December).
Euro area: economic sentiment index (January).
US: GDP (Q4 and 2020).
29 Spain: GDP flash estimate (Q4).
Spain: CPI flash estimate (January).
Euro area: GDP (Q4).

FEBRUARY 2021

2 Spain: registration with Social Security and registered unemployment (January).
Portugal: GDP flash estimate (Q4).
10 Portugal: employment and unemployment (Q4).
15 Portugal: tourism activity (December).
Japan: GDP (Q4).
19 Spain: foreign trade (December).
22 Spain: loans, deposits and NPL ratio (December).
25 Euro area: economic sentiment index (February).
Portugal: business and consumer confidence indicator (February).
26 Spain: balance of payments (December).
Spain: CPI flash estimate (February).
Portugal: CPI flash estimate (February).

The financial markets show us the way

The contrast between the situation we are currently living through and that which we hope for in a few months time is enormous. The effectiveness shown by the vaccines to date and the ambitious distribution schedule allow us to be optimistic. Although the restrictions in place today on mobility and economic activity have once again increased in most developed countries, we are confident that we will soon be free to move around again. The contrast in the economic sphere is also likely to be enormous. This is reflected in the differing trends in the economic activity and financial indicators. While the former are currently reflecting the heavy blow still being dealt by the pandemic, the latter, which have their sights firmly set on the future, are already at levels typical of an economic expansion.

Indeed, the economic activity indicators of the major developed countries suggest that the recovery process has stagnated. Following the rebound in Q3, the surge in infections and the subsequent measures imposed to reduce social interactions have stunted the recovery. In the US, GDP is likely to end up registering a positive growth rate in Q4, but it will probably be modest. In the euro area, where the mobility restrictions have been more severe, a decline in GDP can hardly be avoided (in Spain, the change in GDP is likely to be around 0%). Moreover, all the indicators suggest that Q1 2021 will not be much better. Economic activity is unlikely to be able to take a big step forward until the vaccine has been administered, at least to the groups most at risk. This is an essential condition in order for the restrictions on mobility and social interactions to be relaxed without the risk of collapsing the healthcare system.

All this stands in stark contrast to the good performance of the major stock market indices over the past two months. The MSCI index which encompasses the performance of the world's major trading floors has already far exceeded pre-pandemic levels. In the US, the S&P 500 index closed the year 16% up and is now at record highs. In Europe, the Eurostoxx 50 ended 2020 with a 5% decline compared to the 2019 year end, but it is 4% above the average value for that year. The indices of the major emerging countries have also closed the year with significant gains, especially in Asia.

The main catalyst for this stock market rally has been the effectiveness shown by the vaccines and the conviction that by mid-this year, a sufficient number of people will have already been given the vaccine in the major economies so as to allow the bulk of the mobility restrictions to be definitively lifted. When that happens, economic activity will accelerate sharply and much of the decline that occurred with the outbreak of the pandemic could be reversed. It will not be an ordinary gradual recovery, because the nature of the shock is not ordinary either. Nevertheless, there will of course be differences between countries and they will not all succeed in recovering pre-pandemic activity levels in unison. It will then be revealed which countries have better protected their business fabric while facilitating the reallocation of factors to the most productive firms and sectors. This is not an easy balance to achieve.

The stock valuations also factor in the expected positive impact of the various fiscal stimulus plans that are due to be carried out this year. In this regard, in December the US finally adopted stimulus measures amounting to 4% of GDP, while in Europe the new EU budget was approved after overcoming the threat of veto from Hungary and Poland, paving the way for the disbursements of the NGEU Recovery Plan according to the planned schedule.

Finally, the high levels achieved by the major stock market indices also rest on the assumption that the financial environment will remain highly accommodative for many years to come. The central banks, and the Fed and the ECB in particular, have managed to convince the markets that they will keep interest rates at all-time lows, even beyond the time when economic activity exceeds pre-pandemic levels. This expectation is fuelling stock valuations by reducing the rate at which companies' future earnings are discounted, but it also makes them highly sensitive to central bank decisions and to any surprises that may arise in this field.

The path laid out by the financial markets is littered with unknowns, and we cannot rule out the possibility that COVID-19 will pose further obstacles to be overcome. In the political sphere, although the main sources of uncertainty – Trump's presidency and Brexit – have largely cleared, several fronts remain open. Of course, the implementation of the fiscal stimulus plans and the various elements that are shaping monetary policy must also be closely monitored. However, while the coming months will still be difficult, we can look further ahead with optimism. The financial markets show us the way.

Oriol Aspachs
Head of Research

Average for the last month in the period, unless otherwise specified

Financial markets

	Average 2000-2007	Average 2008-2017	2018	2019	2020	2021	2022
INTEREST RATES							
Dollar							
Fed funds (upper limit)	3.43	0.55	2.50	1.75	0.25	0.25	0.25
3-month Libor	3.62	0.75	2.79	1.91	0.23	0.25	0.35
12-month Libor	3.86	1.26	3.08	1.97	0.34	0.50	0.70
2-year government bonds	3.70	0.80	2.68	1.63	0.13	0.30	0.50
10-year government bonds	4.70	2.58	2.83	1.86	0.93	1.20	1.40
Euro							
ECB depo	2.05	0.32	–0.40	–0.50	–0.50	–0.50	–0.50
ECB refi	3.05	0.90	0.00	0.00	0.00	0.00	0.00
Eonia	3.12	0.55	–0.36	–0.46	–0.47	–0.45	–0.45
1-month Euribor	3.18	0.67	–0.37	–0.45	–0.56	–0.45	–0.43
3-month Euribor	3.24	0.85	–0.31	–0.40	–0.54	–0.45	–0.40
6-month Euribor	3.29	1.00	–0.24	–0.34	–0.52	–0.43	–0.35
12-month Euribor	3.40	1.19	–0.13	–0.26	–0.50	–0.40	–0.30
Germany							
2-year government bonds	3.41	0.55	–0.60	–0.63	–0.73	–0.60	–0.45
10-year government bonds	4.30	1.82	0.25	–0.27	–0.57	–0.25	0.00
Spain							
3-year government bonds	3.62	2.06	–0.02	–0.36	–0.57	0.09	0.24
5-year government bonds	3.91	2.59	0.36	–0.09	–0.41	0.22	0.41
10-year government bonds	4.42	3.60	1.42	0.44	0.05	0.45	0.65
Risk premium	11	178	117	71	62	70	65
Portugal							
3-year government bonds	3.68	4.02	–0.18	–0.34	–0.61	0.17	0.34
5-year government bonds	3.96	4.67	0.47	–0.12	–0.45	0.34	0.53
10-year government bonds	4.49	5.35	1.72	0.40	0.02	0.50	0.70
Risk premium	19	353	147	67	60	75	70
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.29	1.14	1.11	1.22	1.20	1.22
EUR/JPY (yen per euro)	129.50	126.40	127.89	121.40	126.32	128.40	130.54
USD/JPY (yen per dollar)	115.34	98.97	112.38	109.25	103.75	107.00	107.00
EUR/GBP (pounds per euro)	0.66	0.83	0.90	0.85	0.91	0.91	0.90
USD/GBP (pounds per dollar)	0.59	0.64	0.79	0.76	0.74	0.76	0.74
OIL PRICE							
Brent ($/barrel)	42.3	82.5	57.7	65.2	50.2	55.0	60.0
Brent (euros/barrel)	36.4	63.2	50.7	58.6	41.3	45.8	49.2

Forecasts

Percentage change versus the same period of the previous year, unless otherwise indicated

International economy

	Average 2000-2007	Average 2008-2017	2018	2019	2020	2021	2022
GDP GROWTH							
Global	4.5	3.4	3.5	2.8	–4.1	5.5	3.9
Developed countries	*2.7*	*1.3*	*2.2*	*1.7*	*–5.4*	*4.4*	*3.0*
United States	2.7	1.5	3.0	2.2	–3.6	4.1	3.2
Euro area	2.2	0.7	1.9	1.2	–7.4	4.3	2.7
Germany	1.6	1.3	1.6	0.6	–5.9	3.2	2.2
France	2.2	0.8	1.7	1.2	–9.3	5.7	3.1
Italy	1.5	–0.5	0.8	0.3	–9.0	5.0	2.5
Portugal	1.5	0.0	2.9	2.2	–8.3	4.9	3.1
Spain	3.7	0.3	2.4	2.0	–11.4	6.0	4.4
Japan	1.5	0.5	0.3	0.7	–5.3	3.5	1.4
United Kingdom	2.9	1.1	1.3	1.4	–11.0	6.9	4.1
Emerging and developing countries	*6.5*	*5.1*	*4.5*	*3.7*	*–3.2*	*6.3*	*4.6*
China	10.6	8.3	6.7	6.1	2.0	8.3	4.5
India	9.7	6.9	6.8	4.9	–10.3	9.5	7.3
Brazil	3.6	1.6	1.3	1.1	–5.0	3.0	2.5
Mexico	2.4	2.1	2.2	–0.3	–10.0	3.5	2.2
Russia	7.2	0.9	2.5	1.3	–4.2	3.0	2.2
Turkey	5.4	5.1	2.8	0.9	–3.0	4.0	3.4
Poland	4.2	3.4	5.4	4.6	–3.5	3.0	4.9
INFLATION							
Global	4.1	3.7	3.6	3.5	3.0	3.1	3.3
Developed countries	*2.1*	*1.5*	*2.0*	*1.4*	*0.7*	*1.3*	*1.6*
United States	2.8	1.7	2.4	1.8	1.2	2.0	2.2
Euro area	2.1	1.4	1.8	1.2	0.3	1.0	1.4
Germany	1.7	1.3	1.9	1.4	0.4	1.1	1.5
France	1.8	1.2	2.1	1.3	0.5	1.1	1.4
Italy	1.9	1.5	1.2	0.6	–0.2	0.8	1.2
Portugal	3.0	1.2	1.0	0.3	0.0	0.9	1.3
Spain	3.2	1.4	1.7	0.7	–0.3	1.0	1.7
Japan	–0.3	0.3	1.0	0.5	0.1	0.4	0.4
United Kingdom	1.9	2.4	2.5	1.8	0.8	1.4	1.4
Emerging countries	*6.7*	*5.7*	*4.9*	*5.1*	*4.8*	*4.5*	*4.4*
China	1.7	2.6	2.1	2.9	2.4	0.8	2.3
India	4.5	8.0	3.9	3.7	6.6	9.7	4.7
Brazil	7.3	6.1	3.7	3.7	2.8	3.2	3.7
Mexico	5.2	4.2	4.9	3.6	3.5	3.5	3.7
Russia	14.2	8.7	2.9	4.5	3.3	3.5	4.0
Turkey	27.2	8.4	16.2	15.5	11.8	10.4	8.0
Poland	3.5	2.0	1.2	2.1	3.6	2.1	2.4

Forecasts

Percentage change versus the same period of the previous year, unless otherwise indicated

Spanish economy

	Average 2000-2007	Average 2008-2017	2018	2019	2020	2021	2022
Macroeconomic aggregates							
Household consumption	3.6	–0.6	1.8	0.9	–13.6	6.6	4.0
Government consumption	5.0	0.9	2.6	2.3	3.6	3.3	2.2
Gross fixed capital formation	5.6	–2.8	6.1	2.7	–12.4	8.6	7.7
Capital goods	4.9	–0.5	5.4	4.4	–13.8	16.1	8.5
Construction	5.7	–5.2	9.3	1.6	–15.1	5.5	7.2
Domestic demand (vs. GDP Δ)	4.4	–0.7	3.0	1.4	–9.5	6.0	4.3
Exports of goods and services	4.7	3.1	2.3	2.3	–21.1	8.3	7.4
Imports of goods and services	7.0	–0.3	4.2	0.7	–17.3	9.0	7.4
Gross domestic product	**3.7**	**0.3**	**2.4**	**2.0**	**–11.4**	**6.0**	**4.4**
Other variables							
Employment	3.2	–1.0	2.6	2.3	–7.3	0.0	2.2
Unemployment rate (% of labour force)	10.5	20.5	15.3	14.1	16.0	17.9	16.5
Consumer price index	3.2	1.4	1.7	0.7	–0.3	1.0	1.7
Unit labour costs	3.0	0.1	1.2	2.4	6.3	–4.3	0.0
Current account balance (% GDP)	–5.9	–0.8	1.9	2.1	1.1	1.6	2.0
External funding capacity/needs (% GDP)	–5.2	–0.4	2.4	2.4	1.5	2.0	2.2
Fiscal balance (% GDP) [1]	0.4	–6.7	–2.5	–2.8	–12.4	–9.2	–6.6

Note: *1. Excludes losses for assistance provided to financial institutions.*

Forecasts

Portuguese economy

	Average 2000-2007	Average 2008-2017	2018	2019	2020	2021	2022
Macroeconomic aggregates							
Household consumption	1.7	0.1	2.6	2.4	–6.7	4.0	3.6
Government consumption	2.3	–0.6	0.6	0.7	0.7	2.2	0.2
Gross fixed capital formation	–0.3	–2.0	6.2	5.4	–7.4	–0.6	4.1
Capital goods	1.2	1.2	8.9	2.8	–	–	–
Construction	–1.5	–4.4	4.7	7.2	–	–	–
Domestic demand (vs. GDP Δ)	1.3	–0.5	3.1	2.7	–5.6	3.4	3.8
Exports of goods and services	5.2	4.0	4.2	3.5	–16.4	20.3	8.2
Imports of goods and services	3.6	2.2	5.0	4.7	–11.0	15.5	8.4
Gross domestic product	**1.5**	**0.0**	**2.9**	**2.2**	**–8.3**	**4.9**	**3.1**
Other variables							
Employment	0.4	–0.6	2.3	1.0	–3.9	–0.8	1.7
Unemployment rate (% of labour force)	6.1	11.8	7.0	6.5	7.4	9.1	7.7
Consumer price index	3.0	1.2	1.0	0.3	0.0	0.9	1.3
Current account balance (% GDP)	–9.2	–3.6	0.4	–0.1	–1.8	–1.0	–0.6
External funding capacity/needs (% GDP)	–7.7	–2.2	1.4	0.9	–0.8	0.0	1.0
Fiscal balance (% GDP)	–4.6	–6.1	–0.3	0.1	–7.2	–5.7	–3.1

Forecasts

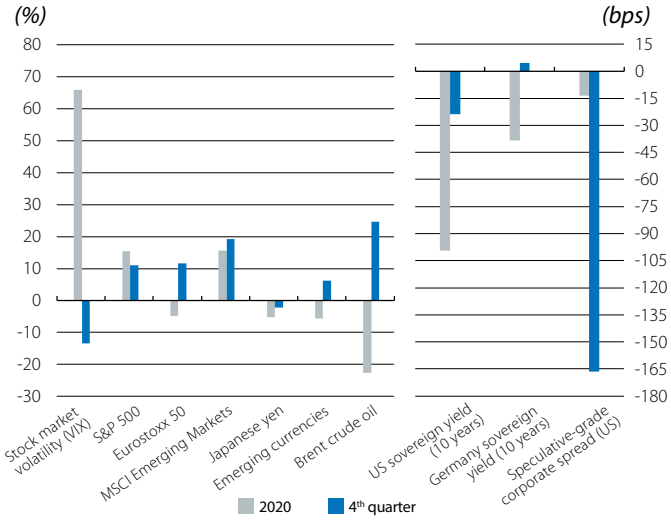
An optimistic end to the year among investors

Risk appetite is driven by hopes of a recovery in 2021. Investors closed the year giving continuity to the bullish trend that the markets had accentuated in November. Their performance was favoured by the initiation of vaccinations against COVID-19 around the world, the unblocking of the European Recovery Plan (Next Generation EU) and the signing, in the last week of December, of the Brexit trade agreement and a new fiscal stimulus package in the US. Furthermore, at their respective December meetings, the major central banks reiterated their intention to maintain accommodative financial conditions for a long period of time. Together, all of these elements fuelled investors' optimism and appetite for risky assets more closely linked to the business cycle. Thus, the financial markets closed the year with a December marked by widespread gains in the stock markets, in commodity prices and in most currencies against the dollar. This bullish trend has brought relatively high valuations, which on the one hand are sustained by the continued support from economic policies and the expectation of a stronger economic recovery in 2021. However, on the other hand they also highlight the vulnerability of the global financial scenario if the economic outlook were to take a turn for the worse. Thus, while the start of the vaccination process paves the way for the recovery in the medium term, in the short term economies continue to face a highly demanding health scenario. In this context, investor sentiment will remain sensitive to how the pandemic develops, to economic policies and, more in the medium term, to the emergence of the scars that the COVID-19 crisis could leave on the productive fabric of the economy (such as the risks of increased defaults, business failures or job destruction).

The stock markets register new gains. In a year marked by historic stock-market crashes (in March, the US stock market suffered the third worst session of the last 100 years), the major equity markets ended December with widespread gains. Moreover, indices such as the MSCI global (All Country World) index, which includes both developed and emerging economies, and the S&P 500 managed to claw back the losses of the spring and even reach new all-time highs in December. The European stock markets, meanwhile, also performed very well in the final leg of the year, driven by the recovery of the sectors most closely linked to the business cycle (such as energy and the financial sector). Similarly, the emerging market indices showed an encouraging performance (MSCI Emerging Markets +15.7% in Q4) driven particularly by the recovery of Asian economies.

Brent oil breaks through the 50-dollar barrier. Expectations of greater economic activity and mobility of goods and individuals in 2021 boosted commodity prices across the board, with monthly increases of around 10% in agricultural and precious metal indices, as well as in oil prices themselves. Specifically, the price of a barrel of Brent oil continued the climb initiated in November and approached to 52 dollars,

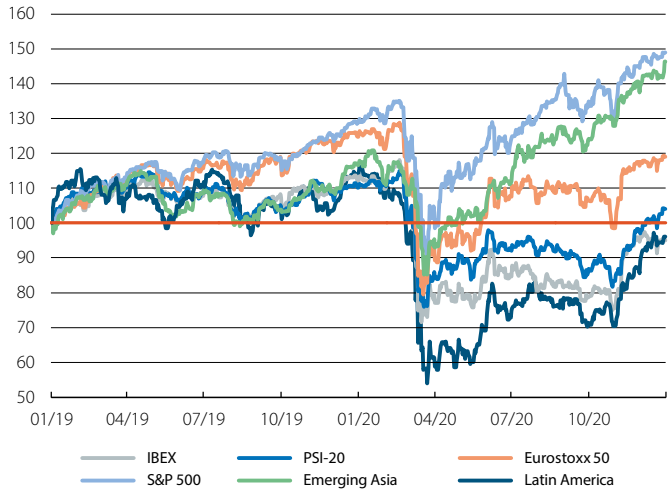
Select financial variables: change in 2020 and in Q4 2020



Source: *CaixaBank Research, based on data from Bloomberg.*

Major international stock markets

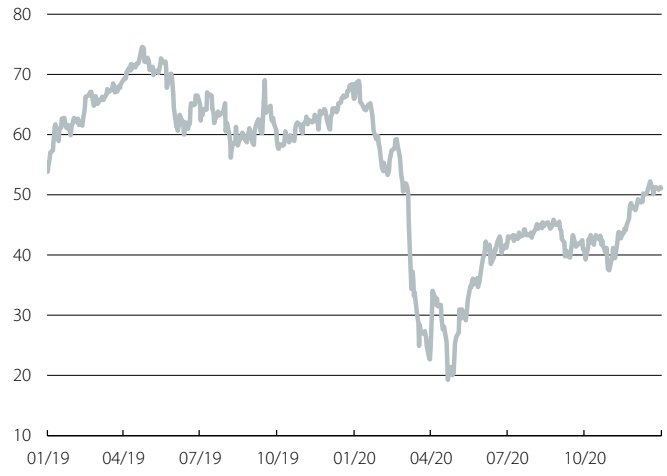
Index (100 = January 2019)



Source: *CaixaBank Research, based on data from Bloomberg.*

Oil: price of a barrel of Brent

(Dollars per barrel)



Source: *CaixaBank Research, based on data from Bloomberg.*

marking a historic rally of 160% from the low registered in April. In fact, the oil price was also supported by the decisions of OPEC and its allies, which in December agreed to increase production by a much lower amount than previously suggested (+500,000 barrels a day from January, and with monthly revisions, compared to initial indications of +2 million barrels a day).

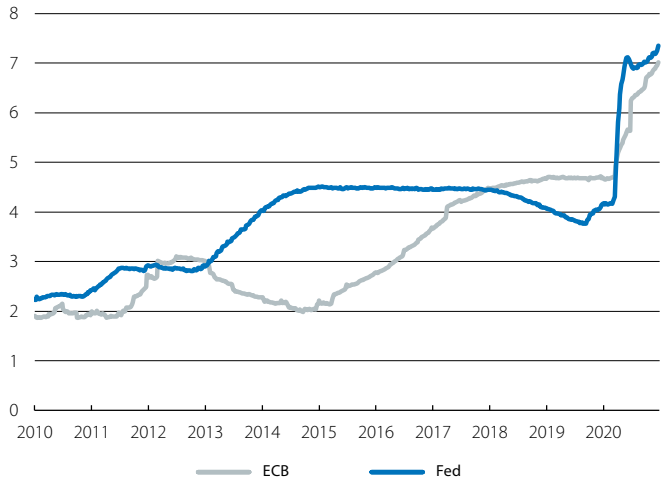
The ECB extends the measures to combat the COVID-19 crisis beyond 2021. In line with expectations, in December the ECB relaunched various measures to continue to offer highly favourable financial conditions and to stimulate the euro area's economic recovery. These included the extension of net purchases under the PEPP until at least March 2022 and an increase in the programme's budget of 500 billion, bringing the total to 1.85 trillion. Therefore, having spent just over 750 billion in 2020, the PEPP is embarking on 2021 with a spending capacity of almost 1.1 billion still remaining, in addition to the net purchases under the APP (which amount to 20 billion per month). The ECB also agreed on three new TLTRO-III liquidity injections in 2021, with favourable conditions which will be extended until June 2022 (full details can be found in the ECB Observatory of 10 December). In this context, in the fixed-income markets, sovereign yields and risk premiums in the euro area remained low in countries of both the core and the periphery.

The Fed anchors asset purchases in 2021. Like the ECB, the Fed reiterated its commitment to maintaining dovish accommodative financial conditions for a long period of time. However, in the US, the strong market performance (with the stock markets at a peak and volatility close to pre-pandemic lows) and the improved resilience of the economic activity indicators, coupled with the strong monetary measures already in place, led the Fed not to add any additional stimuli. Thus, in December the Fed held the reference rate at 0.00-0.25%, maintained asset purchases at 120 billion per month (80 billion in treasuries and 40 billion in MBSs) and limited itself to clarifying that purchases will continue at least at the current rate until «substantial further progress has been made toward the Committee's maximum employment and price stability goals». According to its own macroeconomic forecast table, this would indicate their continuity until at least the end of 2021.

Emerging currencies regain ground against the dollar. The improvement in investor sentiment in December encouraged the shifting of capital flows away from safe-haven assets, such as the dollar and the yen, towards other assets with more attractive yields, such as emerging-country currencies. This set of currencies experienced an accelerated appreciation against the dollar during the month (+2.8%), with the Chilean peso and the Turkish lira leading the rally thanks to the improvement of their domestic monetary scenarios and the recovery of demand for commodities. In advanced economies, the euro extended its strength to reach 1.23 dollars, its highest level in two and a half years, while the pound sterling also registered a notable appreciation (+2.6% against the dollar) thanks to the signing of the trade agreement between the EU and the United Kingdom.

Central bank balance sheets

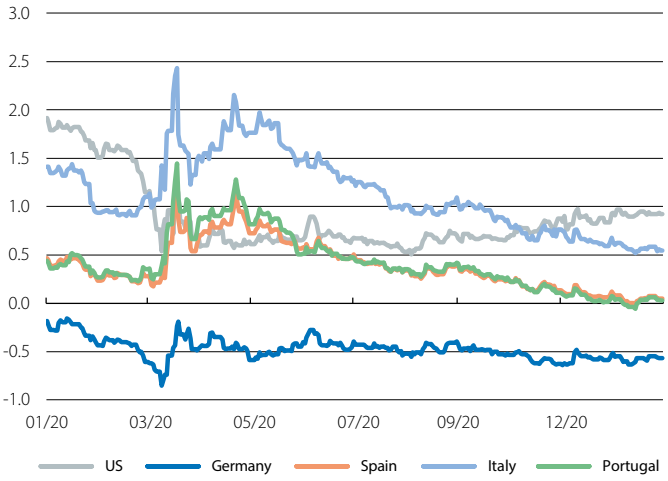
(EUR and USD trillions)



Source: *CaixaBank Research, based on data from Bloomberg.*

10-year sovereign debt yields

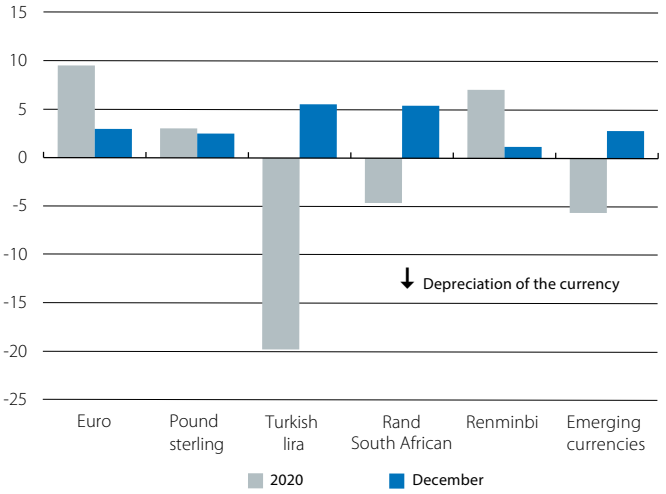
(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

Currencies against the dollar

(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

COVID-19 and country risk in the euro area: this time is different!

- **With all the implications of the COVID-19 crisis in terms of falling GDP and the resulting rise in public debt, we should see a more persistent impact on country risk. Yet this is not the case, largely because economic policy is dampening the translation of the shock of the pandemic to country risk.**
- **Our analysis shows that, in the countries hardest hit by the pandemic, the published rating lies at an intermediate level, between that which is inferred from CDSs and that indicated by the macroeconomic fundamentals.**

Intuition tells us that a shock like that of the COVID-19 pandemic should increase country risk, and the data confirm this. As shown in the first chart, the premium of the CDS on the 5-year sovereign bond[1] increased significantly at the height of the first wave of coronavirus across a large number of countries with a good or very good credit rating.[2] Country risk has subsequently reduced, as a result of the lower incidence of the pandemic and the measures taken to support the economy.

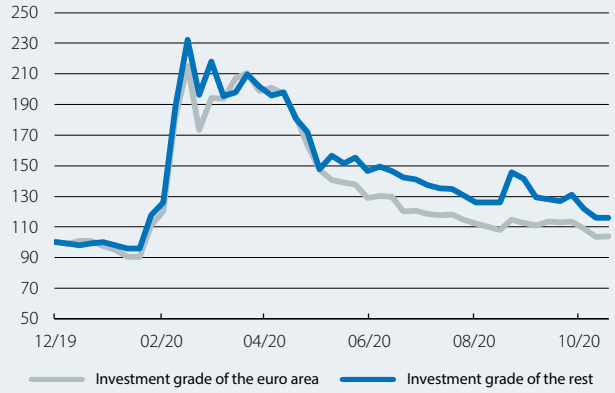
However, in this phase marked by a decline in country risk there is a dissonance: the investment-grade countries of the euro area have experienced a somewhat more significant decline in country risk, despite being one of the regions most affected by the pandemic. In other words, with all the implications of the COVID-19 crisis in terms of falling GDP and the resulting rise in public debt, we should see a more persistent impact on country risk, yet this is not the case.

Looking at dates can help us identify which factors are most likely leading investors to take a more positive view of country risk in the euro area. Specifically, the increase in the gap between the euro area and other regions occurred in June, just after the European Commission proposed an ambitious European recovery plan, Next Generation EU (NGEU), on 27 May. Furthermore, this plan was in addition to the new public debt purchase programmes launched in March by the ECB, which ensured that the funding needs arising from the pandemic could be met. Indirectly, this also helped to defuse doubts over the sustainability of public debt in Europe.[3]

Therefore, NGEU and the ECB appear to be important factors in dampening the translation of the shock of the pandemic to country risk. To try to discern the importance of these elements, we estimate the rating

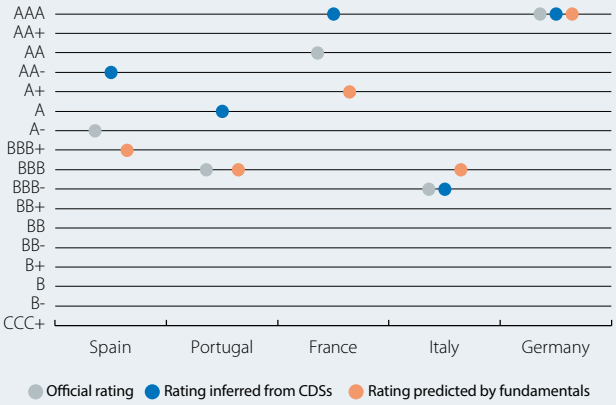
5-year CDSs

Simple average of weekly data
(index 100 = 27/12/2019)



Source: *CaixaBank Research, based on data from Refinitiv.*

Euro area: published rating, rating inferred from CDSs and rating predicted by macroeconomic fundamentals in Q3 2020



Source: *CaixaBank Research, based on data from Refinitiv and Oxford Economics.*

1. A CDS (credit default swap) is a financial derivative in which the buyer pays a periodic premium to the seller in exchange for the seller assuming the default risk of a financial asset, in our case a 5-year sovereign bond. The higher the premium of the CDS, the greater the financial asset's perceived default risk. Given their nature, in the case of CDSs on sovereign bonds, the greater the country risk or sovereign risk, the higher the premium.
2. In order to infer which countries have an investment-grade rating, we use our own model. This consists of an algorithm (support vector machine) which uses historical relationships to assign a credit rating to each country, based on the value of the CDS premium of its 5-year bond. Using this algorithm, we treat countries with a CDS of 207 points or less as being investment grade. This methodology has the benefit of incorporating virtually real-time information, which the agencies may take longer to gather. In the first chart, in the category «Investment grade of the rest» we include European countries that do not belong to the euro area (12), as well as countries in the Americas (9), Asia (14), Africa (1) and Oceania (1).
3. On 12 March, the ECB announced an additional allocation of 120 billion euros for the APP (Asset Purchase Programme), to be distributed during 2020, and on 18 March it announced the PEPP (Pandemic Emergency Purchase Programme) with a budget of 750 billion euros, also to be distributed during 2020.

which would be consistent with the macroeconomic situation of the major euro area countries based on the historical evidence[4] and compare it with the rating that is inferred from the premiums on sovereign CDSs and with the rating published by Fitch (see second chart).

We draw two major conclusions from this comparison. The first is that the financial markets currently tend to establish a better credit rating than that suggested by the macroeconomic fundamentals. This diagnosis reinforces the key role of NGEU and the ECB as «dampeners» of country risk. If investors were only dealing with information derived from the macroeconomic situation, they would perceive a higher risk. The geographical breakdown is also significant, as the mismatch between the discounted rating in the markets and that which is consistent with the macroeconomic fundamentals is more noticeable in the countries hardest hit by the pandemic, such as Spain or France, while it is non-existent in Germany, which has registered by far the lowest incidence of the pandemic among the countries analysed and also has a more robust macroeconomic situation. Thus, the investor narrative would be that in the states hardest hit by the COVID-19 pandemic, NGEU and the ECB have had a greater mitigating effect: as much as four credit rating levels in the cases of Spain and France, and three in the case of Portugal. This is profound, as it implies that the combined impact of the two elements is equivalent to the gap in the published rating between Spain and France, for instance.

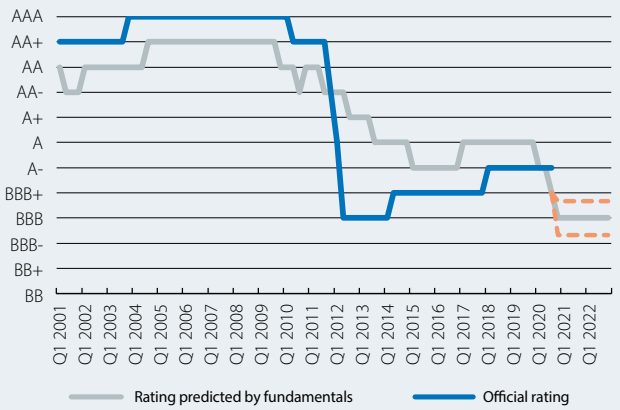
The second conclusion concerns the official rating. In general, in the countries hardest hit by the pandemic, the published rating lies at an intermediate level, between that which is inferred from CDSs and that indicated by the macroeconomic fundamentals. What implications does this have for the expected evolution of the published rating, which ultimately counts the most when it comes to investment decisions? There are two possible aspects to take into account: the inertia of the rating agencies and how country risk is assessed in exceptional times. The first is relatively less alarming: perhaps the rating agencies' valuations converging with those derived from CDSs is only a matter of time (indeed, the agencies revise their ratings at specific times, whereas CDSs are traded continuously). In fact, this is precisely what happens in normal times: CDSs generally anticipate changes which the agencies then tend to validate.

But that is precisely the question: these are not normal times. In the presence of an unprecedented shock like that of the COVID-19 pandemic, which has led to historical action being taken, the macroeconomic models surely do not adequately capture all the factors that come into play in determining countries' credit ratings. This requires greater expert judgement, which is precisely the corrective factor that the rating agencies provide. Thus, the models should be read as generators of more adverse scenarios (see last chart), because they do not taken into account all the elements that are considered by investors (CDSs, although these cannot always be isolated from global market sentiment) and by the agencies.

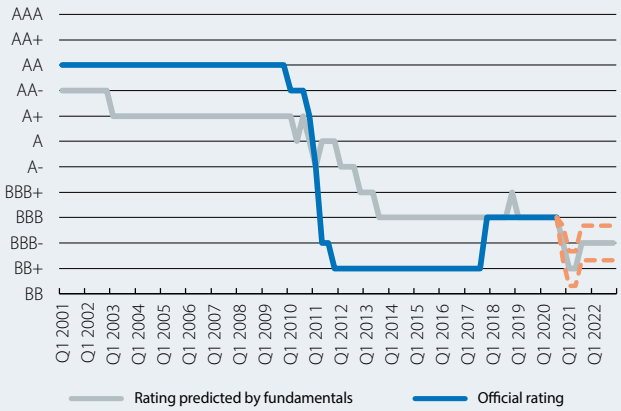
Eduard Llorens i Jimeno and Àlex Ruiz

Rating predicted by macroeconomic fundamentals and published rating

Spain



Portugal



Note: *The dotted orange lines represent a confidence interval that is calculated by adding (upper threshold) and subtracting (lower threshold) the model's average forecasting error.*
Source: *CaixaBank Research, based on data from Refinitiv and Oxford Economics.*

4. We use a model estimated using ordinary least squares which allows a credit rating to be assigned to each country based on the evolution of a set of macroeconomic variables. More specifically, these variables are GDP per capita, public debt, inflation, GDP growth forecast for the next four quarters, volatility of GDP growth over the last three years, and a binary variable equal to 1 if the rating was downgraded in the previous quarter. The sample period for carrying out the estimates ranges from Q1 2000 to Q4 2018. For more information on these types of models, see C. Broto and L. Molina (2014). «Sovereign ratings and their asymmetric response to fundamentals». Bank of Spain Working Papers.

Interest rates (%)

	31-Dec.	30-Nov.	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Euro area					
ECB Refi	0.00	0.00	0	0.0	0.0
3-month Euribor	–0.55	–0.53	–2	–16.2	–16.1
1-year Euribor	–0.50	–0.49	–1	–25.0	–26.1
1-year government bonds (Germany)	–0.71	–0.67	–4	–7.6	–11.2
2-year government bonds (Germany)	–0.70	–0.74	4	–9.9	–8.1
10-year government bonds (Germany)	–0.57	–0.57	0	–38.4	–29.1
10-year government bonds (Spain)	0.05	0.08	–3	–42.1	–33.9
10-year government bonds (Portugal)	0.03	0.03	0	–41.2	–32.9
US					
Fed funds	0.25	0.25	0	–150.0	–150.0
3-month Libor	0.24	0.23	1	–167.0	–163.6
12-month Libor	0.34	0.33	1	–165.4	–162.2
1-year government bonds	0.10	0.11	0	–146.2	–142.0
2-year government bonds	0.12	0.15	–3	–144.8	–140.4
10-year government bonds	0.91	0.84	7	–100.4	–87.5

Spreads corporate bonds (bps)

	31-Dec.	30-Nov.	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	48	49	–1	3.8	3.2
Itraxx Financials Senior	59	61	–2	7.4	5.2
Itraxx Subordinated Financials	111	113	–2	–2.6	–2.4

Exchange rates

	31-Dec.	30-Nov.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.222	1.193	2.4	8.9	9.5
EUR/JPY (yen per euro)	126.180	124.420	1.4	3.6	4.7
EUR/GBP (pounds per euro)	0.894	0.895	–0.2	5.7	4.7
USD/JPY (yen per dollar)	103.250	104.310	–1.0	–4.9	–4.5

Commodities

	31-Dec.	30-Nov.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	443.8	428.4	3.6	10.5	10.7
Brent ($/barrel)	51.8	47.6	8.8	–21.5	–24.5
Gold ($/ounce)	1,898.4	1,777.0	6.8	25.1	22.3

Equity

	31-Dec.	30-Nov.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	3,756.1	3,621.6	3,7	16,3	16,1
Eurostoxx 50 (euro area)	3,552.6	3,492.5	1,7	–5,1	–5,8
Ibex 35 (Spain)	8,073.7	8,076.9	0,0	–15,5	–16,3
PSI 20 (Portugal)	4,898.4	4,604.7	6,4	–6,1	–6,6
Nikkei 225 (Japan)	27,444.2	26,433.6	3,8	16,0	16,0
MSCI Emerging	1,291.3	1,205.1	7,2	15,8	14,9

The global V-shaped recovery, as in V for vaccine

The global economy is preparing for a V-shaped recovery in 2021. V for vaccine, of course. If everything goes as planned, by the time this *Monthly Report* sees the light, vulnerable people across Spain, Europe, Asia and the Americas will already be receiving the vaccine. This is an unprecedented medical success: a vaccine against a coronavirus (a type of a virus that is difficult to combat, as demonstrated by the poor effectiveness of the vaccines against SARS or MERS), developed in a matter of months (not years, as is usually the case) and based on an innovative technique (known as messenger RNA) authorised for use in humans. Thanks to the vaccine, the global outlook is reasonably positive: for 2021, CaixaBank Research predicts global growth slightly above 5%, compared to an estimated drop in GDP of 4% in 2020. Yet, in many of the world's economies (such as the major advanced European economies; India, among those of Asia, or Brazil and Mexico, in Latin America) the loss of wealth in 2020 will not yet be fully recovered in 2021. One way to look at this is in terms of «lost mobility», which can be approximated with the fall in flights, a good proxy for the globalised flow-based economy in which we operate.

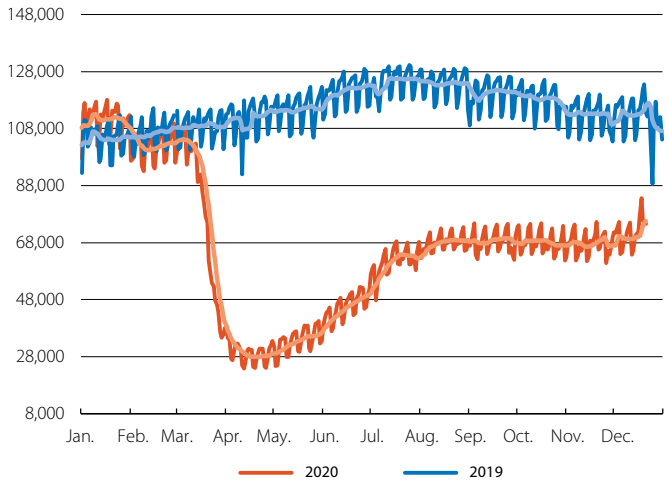
2021 will be a very different year, and this is already apparent in the latest trends. For months we have been able to describe the economic recovery that has taken place following the great lockdown of the spring in two words: uneven and unbalanced. It is uneven in the geographical sense: with different degrees of recovery in different countries; and it is unbalanced between sectors, due to the fact that industry and services had followed different paths: a more intense path in the secondary sector and a more fragile one in the tertiary sector. However, the recovery is changing, at least in terms of its geographical and sectoral distribution. This can be seen in the PMIs, which serve as indicators of economic activity. Following a sharp rise last spring, geographical dispersion in the pace of economic activity has now declined significantly (although the second wave, with its new measures restricting mobility and activity, has led to a slight rebound in the degree of disparity in recent months). Something similar is occurring with the difference between the rate of economic activity in services and in industry, which has declined significantly after reaching a peak in April, although it increased somewhat in the final stages of 2020 just like the degree of disparity in the rate of global economic activity did. Having set the scene with the big picture, a more in-depth review of certain key economies allows us to paint a more detailed picture.

CHINA

The Asian giant has been one of the great surprises of 2020. After being the first epicentre of the pandemic, China has exemplified the benefits of the approach that has come to be known as «go hard and early», involving highly-aggressive and

Number of commercial flights

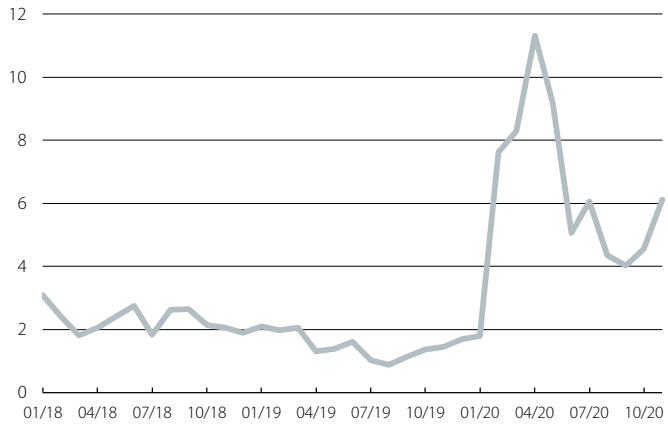
Total and 7-day moving average



Source: *CaixaBank Research, based on data from Flightradar24.*

Composite PMI

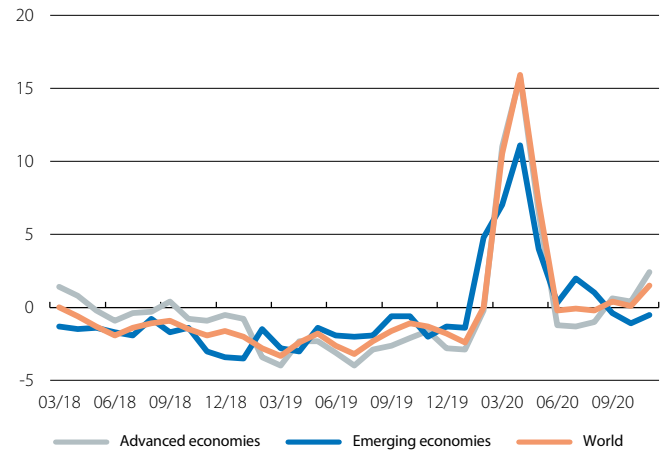
Standard deviation



Note: *Includes the following countries: Brazil, China, France, Germany, India, Ireland, Italy, Japan, Russia, Spain, the United Kingdom, and the US.*
Source: *CaixaBank Research, based on data from Markit.*

Difference between the manufacturing PMI and the services PMI

(Points)



Source: *CaixaBank Research, based on data from Markit.*

rapid lockdowns and mass testing and quarantining at an early stage. Perhaps the best example, rather than the well-known case of Wuhan, has been the outbreak in the city of Qingdao, where faced with just a dozen cases last October, the entire population of 9 million people was tested in just 5 days.

The rapid containment of the pandemic has allowed the recovery of economic activity to be rapid and intense and requiring relatively limited support from economic policy: the Bank of Spain, for instance, estimates that China's fiscal stimuli in 2020 have amounted to slightly less than half that of the Great Recession of 2008 (equivalent to 6% of GDP now; 13% in 2008). In short, in Q2 2020, after growing by almost 12% quarter-on-quarter, China's GDP had already surpassed the pre-pandemic level, a milestone not achieved in any other major global economy. Emerging from the crisis, China has benefited from a strong recovery in the industry-export binomial. China has supplied the world, first with products linked to the fight against the pandemic, and then with other products on top, such as electronics, which other producing nations were unable to supply. As a result, in November Chinese exports were more than 20% higher than a year earlier. In short, China provides a glimpse of a pattern that we will see across many economies in 2021: the important role that industry can play in the short term (we have already commented on its improved overall tone) and the supporting role of external demand (although for this to be the case, in 2021 the recovery will have to be synchronised).

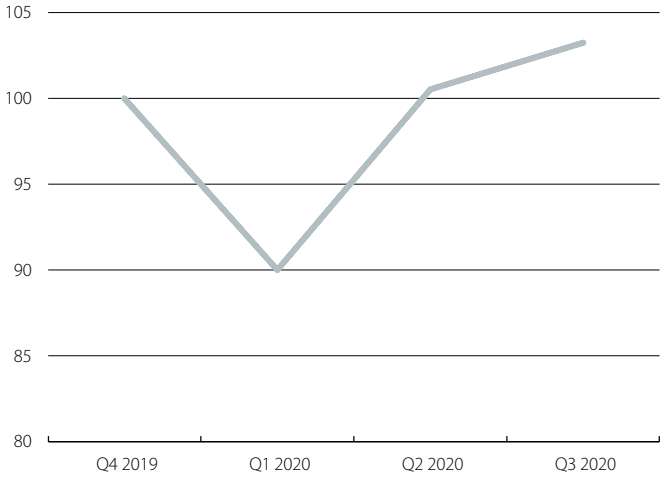
US

The other great global economy, that of the US, offers us other interesting lessons. Although there are significant differences between states, in the US overall the lockdowns and restrictions on activity can be considered less stringent than those imposed in other countries (particularly in Europe). For instance, whereas in countries such as Spain mobility (for leisure and shopping) ended the year at around –30% compared to prior to the shock, in the US the figures show a smaller decline of around –20%. This relatively laxer approach has been accompanied by a rather aggressive strategy of fiscal and monetary support.

Rapid and aggressive response from economic policy. On monetary policy, after slashing rates to 0.00-0.25% and launching a wide battery of measures (most notably, significant asset purchases), in August the Fed anchored a dovish policy for a long period of time (expected to last beyond when the economy will consolidate its revival) by altering its strategic framework and indicating that it will temporarily tolerate inflation above 2% in the future. With these broad guidelines, in December the Fed reiterated its message of support (its asset purchase programme will remain in place at least until the end of 2021, as set out in the Financial Markets economic outlook article). A similar reading, involving a prolongation of the stimulus, can be made in the field of fiscal policy. At the end of December, a new fiscal package worth some 0.9 trillion dollars, equivalent to just over

China: GDP recovery during the pandemic

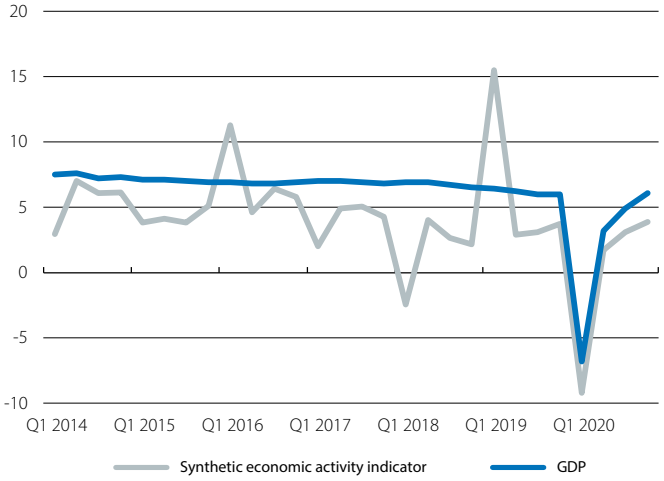
Level (100 = Q4 2019)



Source: *CaixaBank Research, based on data from the Statistics Office of China.*

China: synthetic economic activity indicator and GDP

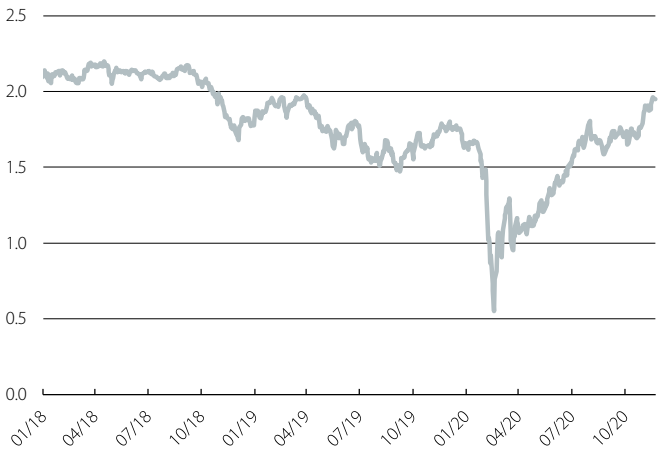
Year-on-year change (%)



Source: *CaixaBank Research, based on own data and data from the Statistics Office of China.*

Inflation expectations in the US: 10-year break-even rate

(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

4% of GDP, was approved. It will be the second largest in history, after the one adopted last March, which had a budget of some 1.8 trillion dollars. Among other measures, the latest package will include a stimulus payment of 600 dollars to a high proportion of citizens, with an additional 300 dollars per week going to those on unemployment benefits.

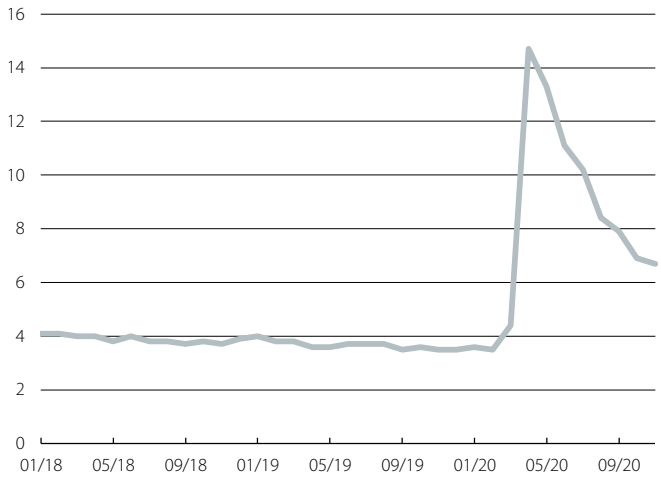
EUROPEAN UNION

Europe remains one of the regions hardest hit by the pandemic. The incidence of the second wave of COVID-19 has forced countries such as France and Germany to impose a second lockdown, and many countries continue to have restrictions on mobility and activity in place. However, the strategies applied in this second wave are more selective, and in general the incidence reflected in the economic activity indicators for Q4 is clearly lower than that of the spring. For instance, the composite purchasing managers' index (PMI) for the euro area stood at 48.4 points on average in Q4 2020. Although this represents a step back from the 52.4 points of Q3 and the index has fallen below the 50-point threshold (which separates the contractionary and the expansionary territory), the level of economic activity reflected by this indicator has remained well above the 31.3 points registered in Q2 2020.

The European political sphere ends 2020 with agreements, which will help to avoid an erosion of Europe's fragile recovery. On the one hand, at the fiscal level, the new EU budget was approved after overcoming the threat of veto by Hungary and Poland, paving the way for the disbursements of the Recovery Plan (the so-called NGEU) according to the envisaged timetable. Furthermore, Europe will have the accommodative financial environment that the ECB has prolonged for a long period of time (see the Financial Markets economic outlook article), following an initial action taken in the spring which, like that of the Fed, was rapid and aggressive. On the other hand, the EU and the United Kingdom reached a trade agreement just a week before the end of the Brexit transition period (the country's departure from the EU had been made official at the start of 2020, but its withdrawal from the single market and the customs union was not effective until 1 January 2021). The agreement, which is basic, does not prevent an increase in barriers to trade in services (there is no financial passport or automatic recognition of licences or professional qualifications), but it does guarantee that there will be no tariffs or quotas in the trade of goods (although there will be regulatory and bureaucratic barriers). It also covers a wide range of areas (fishing, transportation, energy, security, EU programmes, etc.) and establishes a mechanism for resolving disputes. This latter aspect is key, since frictions may arise in the medium term that will need to be resolved as the legal and regulatory frameworks gradually diverge. The agreement will be applied provisionally from 1 January 2021, pending final approval by the European Parliament by 28 February 2021 (the British Parliament ratified it in a lightning session before the end of 2020).

US: unemployment rate

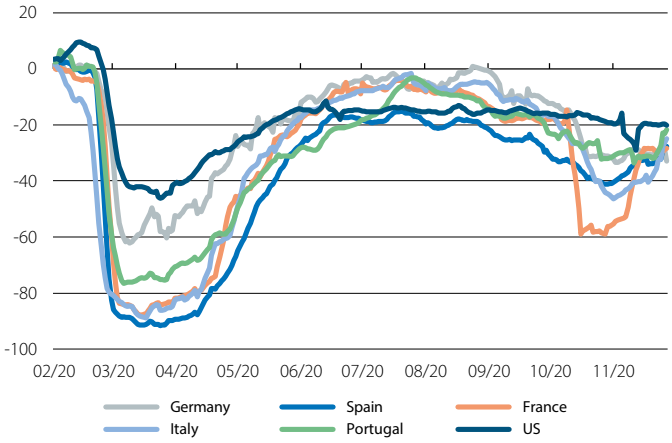
Number of unemployed relative to the total labour force (%)



Source: *CaixaBank Research, based on data from Bloomberg.*

Mobility of the population in retail

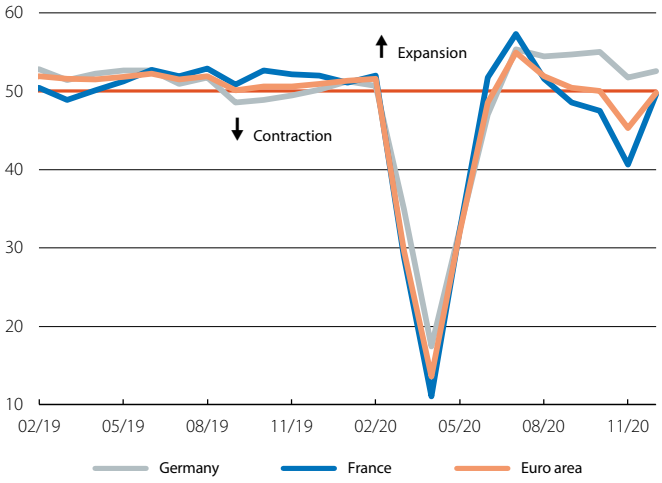
*Change relative to the baseline level (%) **



Notes: *7-day moving average figures. * The baseline level corresponds to the average mobility recorded on the same day of the week between 3 January and 6 February.*
Source: *CaixaBank Research, based on data from Google Mobility Report.*

Euro area: Composite PMI

Level



Source: *CaixaBank Research, based on data from Markit.*

China, the long road to economic dominance

- Thanks to a resounding success in the fight against the pandemic, China expects its economy to have grown by 2.0% in 2020, making it the only major economy to end the year with positive growth. Moreover, the recovery is widespread, with strong growth in investment, consumption and the foreign sector.
- Despite these recent successes, the underlying macroeconomic imbalances persist. There is a greater awareness that these imbalances must be addressed, and the authorities are beginning to place greater emphasis on the quality of growth rather than on its quantity.

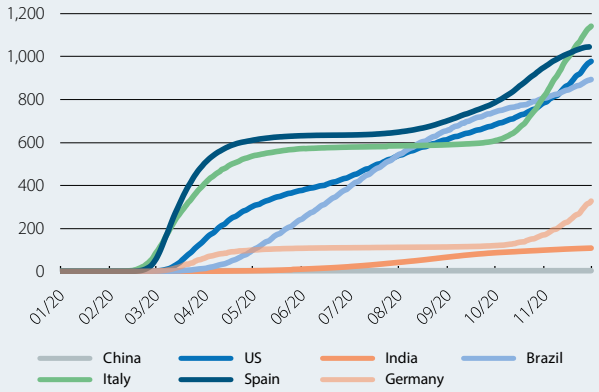
China, the so-called Middle Kingdom, was the world's leading economy for much of the period spanning from the beginning of the Shang dynasty in around 1500 AC until the beginning of the 19th century.[1] The Opium War (1842), the technological lag with respect to the West and the turbulent end to the imperial era (1911) constituted a cataclysm that lasted until the mid-20th century. However, from 1980, the situation changed. With Deng Xiaoping's reforms towards a socialist market economy with special economic areas, China began the long march to regain its lost global economic dominance. China's economic rise was dizzying, and the country went from representing 2.3% of the world economy in 1980 to 17.4% in 2019.[2] The low starting point and such rapid changes brought about an imbalance in favour of producers and state investment vis-à-vis private consumers. These imbalances, combined with a financial system lagging behind Western standards and a debt which in 2019 reached 286% of GDP (including government, firms and households), set the stage for the Chinese economy's vulnerability. Nevertheless, faced with the shock of the 2020 pandemic, the reality has been quite different.

The unique events of 2020 have done nothing but confirm that China is closer than one might think to restoring its economic dominance of yesteryear. One sign of this is the resounding success in the fight against the pandemic, thanks to strict mobility restrictions, contact tracing and mass testing (for example, after detecting 12 cases in Qingdao in October, 9 million people were tested in just five days). China's success stands out even more when compared to Western powers. Out of a total of 219 countries, in mid-December only eight had fewer than China's three deaths per million: three countries in Asia, two in Africa and three Pacific islands. Even with the doubts generated by the opacity of information coming from China, the figure is strikingly lower than the euro area's 732, the US' 943, Spain's 1,039 or Italy's 1,101.[3]

1. See A. Maddison (2006). «The World Economy», OECD. https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020.
2. In purchasing power parity terms.
3. See www.worldometer.com.

Cumulative deaths due to COVID-19 per million *

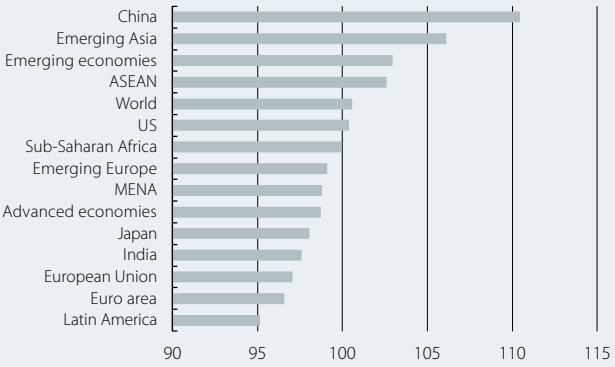
Number of deaths



Note: ** Data up until 21 December.*
Source: *CaixaBank Research, based on data from the national statistics offices.*

GDP forecast relative to the pre-pandemic level *

GDP in 2021 (100 = 2019)



Note: ** Select geographical areas, taking compound growth in 2020 and 2021.*
Source: *CaixaBank Research, based on own forecasts and those of the IMF.*

The second sign is the strong recovery of the Chinese economy, which confirms the first (the success in the fight against the pandemic), since otherwise the economic recovery would not have been possible. China expects its economy to have grown by 2.0% in 2020, making it the only major economy to end the year with positive growth. Moreover, the medium-term projections suggest that, with an expected growth of 8%, in 2021 the Chinese economy will be 10% above the pre-pandemic level. In contrast, the US will barely have recovered its

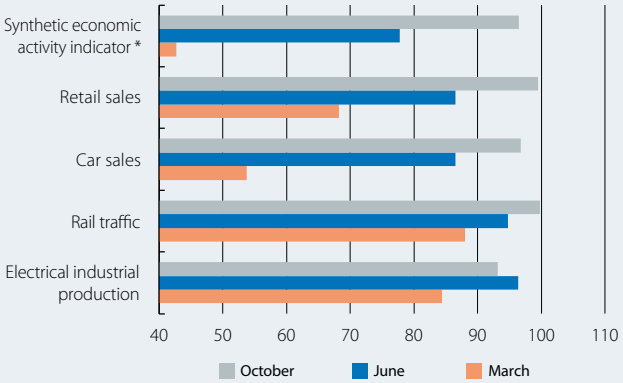
pre-pandemic level, while the euro area and most advanced economies will remain between 1.5% and 3.5% below the pre-pandemic level, and the emerging-economy bloc will surpass it by only 3%. In fact, in 2020 China's economy is already the largest in the world (accounting for more than the US' 16%).[4]

The recovery that has been operating since Q2 is also widespread. On the one hand, the macroeconomic aggregates and our synthetic economic activity indicator show robust growth in investment, consumption and the foreign sector. On the other hand, the recovery is also evident in all components of our synthetic economic activity index, suggesting that economic activity maintained a growth rate of around 6% in Q4 2020.[5] In this regard, while at first it appeared that the old pattern was being repeated and that the recovery was driven by state investment and industry (which is an important part of the activity indicator), at the end of the summer consumer retail sales and car sales, which also have a significant relative weight in our indicator, began to show continuous improvement, thus consolidating the recovery. This, together with a good performance from employment, makes it possible to relax the fiscal stimuli, which themselves have been less pronounced than in 2008, largely because of the debt problem. In addition, exports have grown significantly, although this should be taken in the context of a general recovery in trade flows. Furthermore, mobility has virtually recovered to pre-crisis levels, domestic air traffic is also at a similar level to before the pandemic, and restaurants and cinemas have practically returned to normal, a sign of the normalisation of social relations.

This growth in China should help to spur on the global economy. Firstly, there is the effect that the Chinese economy has on global trade. Exports from Europe and Latin America to China have registered strong growth since June and clearly exceed 2018 levels, while exports from North America and Africa to the Asian giant remain below those levels. A second effect of China's growth on global trade is the rise in the price of commodities, of which China is the world's largest buyer. This will also undoubtedly have positive effects on emerging economies, which are the leading commodity producers. Thus, while all commodities declined significantly in March, in November the IMF's non-fuel commodity price index showed a 12.5% rise compared to the level of December 2019. Similarly, copper, iron, nickel and aluminium have appreciated by 16%, 36%, 14% and 9%, respectively.

China: economic activity indicator

Levels (100 = December 2019)



Note: **Year-on-year GDP growth according to the synthetic indicator for Q2, Q3 and Q4, respectively, re-scaled.*
Source: *CaixaBank Research, based on data from the Statistics Office of China.*

What about the imbalances of the Chinese economy? Despite these recent successes, the imbalances persist. The relative weight of consumption in GDP, with the exception of the hiatus during the pandemic, remains slightly below 40%, whilst in many advanced economies it exceeds 60%. Furthermore, independent supervision of financial institutions remains somewhat lax. Aware of this, the authorities suspended the largest local rating agency's licence and withdrew their support for debtors with low ratings, leading to a rise in defaults and turbulence in the bond markets. On the other hand, the technological lag persists in certain areas such as semiconductors and will make it difficult for many Chinese firms to deal with the trade decoupling with the US. The difference compared to times past is that there is now an awareness that these imbalances must be addressed. Indeed, at the 19th Communist Party Congress, for the first time a greater emphasis was placed on the quality of growth rather than on its quantity, stressing the role of private consumption and high-value-added exports (the so-called «double circulation»). Furthermore, in November a package of anti-monopoly measures was announced, as was a tougher stance on low-quality debts.[6]

The future is not written, but in 2020 China has taken significant steps to recover its status as the world's leading economy, as was the norm in the past.

Jordi Singla

4. In purchasing power parity terms. In current dollars, China accounts for 16.8% of the global total, less than the US' 24.4%.
5. We presented this index for the first time in the article «China's economic growth under the microscope: past, present and future» in the MR02/2018.
6. This focus on the quality of growth helps us to understand the rise in defaults observed in the corporate bond market in recent months, since this trend has been tolerated by the authorities as they resume the process of financial cleansing, now that the economy is set on the road to recovery.

Will consumption support the US recovery in 2021?

- **Despite the pandemic, the disposable income of US households not only endured tremendously well, but increased significantly thanks to the strong support from fiscal policy. This led to an unprecedented increase in the household savings rate, which will spur consumption in 2021, when the economic revival is expected to be more sustained.**
- **The new fiscal package approved at the end of December, worth 0.9 trillion dollars, could also provide an extra boost to consumption in 2021, especially since around one-third will go towards direct aid for citizens.**

With the announement of a substantial new fiscal package to help combat the pandemic (0.9 trillion dollars, ca. 4% of GDP), and following the sharp rise in the US savings rate during 2020, we wonder whether household consumption will rebound more strongly than expected in 2021.

What happened in 2020: sharp fall in consumption and a marked increase in income and the savings rate

In the months of full lockdown, consumption fell sharply, partly as a result of many citizens losing their jobs, but also due to the shutdown of most leisure and recreational activities (see first chart).

Nevertheless, in this context of a large number of redundancies, household disposable income not only endured tremendously well, but increased significantly thanks to strong fiscal support in the form of direct transfers to households. Most notably, the unemployment benefit was increased by 600 dollars per week and cheques for 1,200 dollars were handed out to some 150 million citizens (see second chart).

Thus, the sharp fall in consumption and the resilience shown by income, together with the magnitude of the fiscal packages, led to an unprecedented rise in the savings rate of US households. Moreover, this increase is greater than that registered in other advanced regions: around 18 points between the end of 2019 and Q2 2020, compared to around 10 points in the case of the euro area.

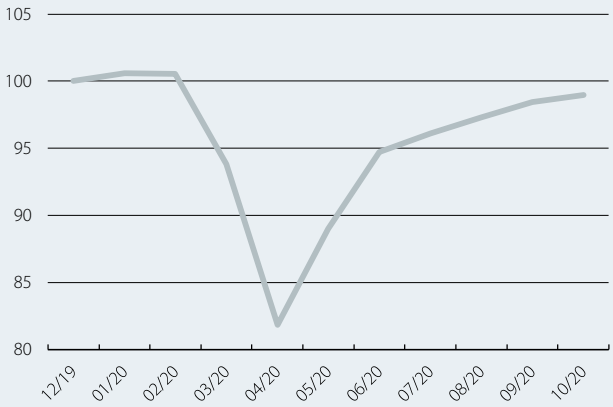
Although the US household savings rate has declined since the peak reached in the spring, it still stands around 6 points above its usual level. In this regard, it is worth considering whether in 2021 American households could boost their consumption and thus provide more decisive support to the recovery of their economy.

What 2021 could bring: more consumption, but also more saving

To the extent that these savings that have accumulated in 2020 are «pent-up» savings due to the restrictions on activity and mobility, they are likely to help spur consumption in 2021, when the economy's revival is expected to be more sustained and buoyant thanks to medical advances. However, this push factor could

US: personal consumption expenditure

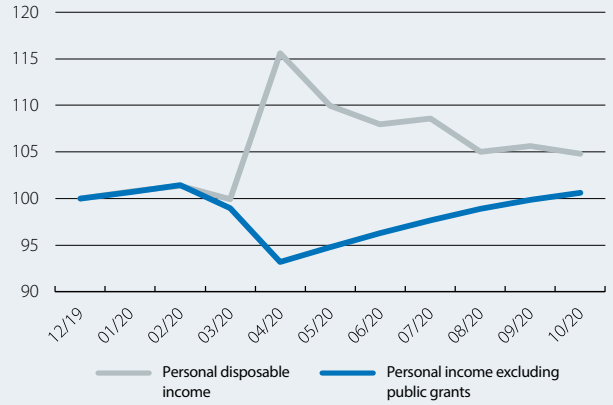
*Level (100 = December 2019) **



Note: ** In nominal terms.*
Source: *CaixaBank Research, based on data from the BEA.*

US: household income

*Level (100 = December 2019) **



Note: ** In real terms.*
Source: *CaixaBank Research, based on data from the BEA.*

be tempered by two elements: the high degree of uncertainty over the economic environment and the propensity to consume of those who have built up the most savings. Firstly, there is evidence that a significant portion of the accumulated savings is driven by precautionary reasons, that is, the desire to reduce consumption in order to accumulate a savings buffer in the face of uncertain employment and economic prospects. Specifically, according to a study by the

Kansas Fed,[1] approximately one-third of the increase in savings is due to these precautionary reasons, a factor that also tends to persist in the early stages of economic recoveries. Secondly, there are no specific data available on which groups of the US population have accumulated the most savings. However, in the United Kingdom, a Bank of England study[2] shows that the accumulation of savings has been concentrated in higher-income households experiencing fewer financial difficulties, a group that also has the least propensity to consume. This may also be the case in the US, given that US households with the most resources are also those that have suffered the least in terms of job and income loss.

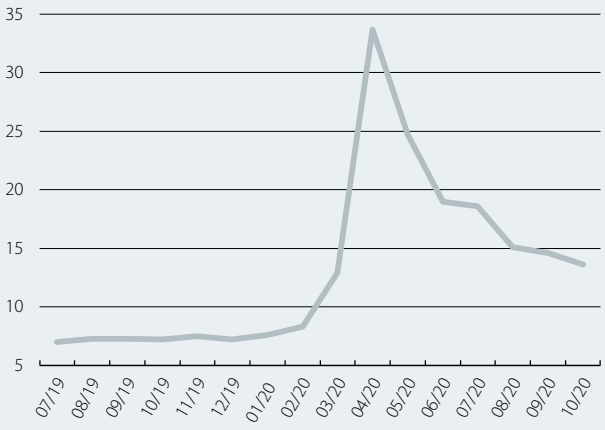
On the other hand, the new fiscal package approved at the end of December to the tune of 0.9 trillion dollars could provide an extra boost for consumption in 2021. This is particularly the case because approximately one third will be earmarked for direct grants to citizens. These include the extension of the increase in unemployment benefit until mid-March (now 300 dollars per week) and the approval of a new economic stimulus cheque worth 600 dollars per person.

In both cases, these direct spending measures are lower than those approved under the previous CARES and HEROES acts.[3] In addition, the experience from the measures taken under these acts tells us that a significant portion of the stimulus payments did not end up going towards consumption: according to a survey conducted by researchers from the universities of Texas, Chicago and California, 40% of households spent their entire cheque, but 20% saved it, 20% spent all the money on repaying debts, and the remaining 20% used it for various purposes.[4]

However, the recovery of the labour market in recent months (unemployment rate of 6.7% in November 2020, versus 14.7% in April 2020) makes it less necessary to implement fiscal aids on the scale of (or as discretionary as) those of the past. Therefore, the new package may be more likely to generate increases in consumption despite the lower amounts involved. In particular, we estimate that the contribution to GDP growth could amount to around 1%.[5] This is somewhat more than we previously anticipated here at CaixaBank Research, since we were not expecting a new stimulus payment but rather other less direct forms of aid. This, coupled with the boost from part of the «pent-up» savings, could help the US economy to grow somewhat more than currently expected, provided that the pandemic is under control.

Clàudia Canals and Adrià Morron Salmeron

US: personal saving rate
(% of personal disposable income)



Source: *CaixaBank Research, based on data from the BEA.*

1. See A.L. Smith (2020). «Why Are Americans Saving So Much of Their Income?». Blog of the Federal Reserve Bank of Kansas City.
2. «How has Covid affected household savings?», entry in the blog of the Bank of England of 25 November 2020.
3. They amount to half those approved in the first rounds of aid to combat the pandemic.
4. See O. Coibion, Y. Gorodnichenko and M. Weber (2020). «How Did US Consumers Use Their Stimulus Payments?». Nº w27693. National Bureau of Economic Research.
5. We take the multipliers estimated by the Congressional Budget Office in reference to the effect of the CARES Act for the additional unemployment benefit and the stimulus payment: 0.67 and 0.60, respectively.

Year-on-year (%) change, unless otherwise specified

UNITED STATES

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Activity									
Real GDP	3.0	2.2	2.3	0.3	–9.0	–2.8	–	–	–
Retail sales (excluding cars and petrol)	4.7	3.9	4.0	3.1	–4.9	5.3	6.8	6.4	5.9
Consumer confidence *(value)*	130.1	128.3	127.0	127.3	90.0	93.1	101.3	101.4	92.9
Industrial production	3.9	0.9	–0.7	–1.9	–14.2	–6.5	–6.3	–5.0	–5.5
Manufacturing activity index (ISM) *(value)*	58.9	51.2	48.1	50.0	45.7	55.2	55.4	59.3	57.5
Housing starts *(thousands)*	1,248	1,295	1,433	1,484	1,079	1,432	1,437	1,528	1,547
Case-Shiller home price index *(value)*	211	217	219	222	223	228	232	235	...
Unemployment rate *(% lab. force)*	3.9	3.7	3.5	3.8	13.0	8.8	7.9	6.9	6.7
Employment-population ratio *(% pop. > 16 years)*	60.4	60.8	61.0	60.8	52.9	56.1	56.6	57.4	57.3
Trade balance[1] *(% GDP)*	–2.2	–2.7	–2.7	–2.6	–2.7	–2.9	–2.9	–3.0	...
Prices									
Headline inflation	2.4	1.8	2.0	2.1	0.4	1.2	1.4	1.2	1.2
Core inflation	2.1	2.2	2.3	2.2	1.3	1.7	1.7	1.6	1.6

JAPAN

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Activity									
Real GDP	0.6	0.3	–1.0	–2.1	–10.3	–5.7	–	–	–
Consumer confidence *(value)*	43.6	38.9	38.1	36.0	24.7	30.5	32.7	33.6	33.7
Industrial production	1.0	–2.7	–6.7	–4.3	–20.5	–12.6	–10.6	–3.2	–2.6
Business activity index (Tankan) *(value)*	20.8	6.0	0.0	–8.0	–34.0	–27.0	–	–	–10.0
Unemployment rate *(% lab. force)*	2.4	2.4	2.3	2.4	2.8	3.0	3.0	3.1	2.9
Trade balance[1] *(% GDP)*	–0.1	–0.3	–0.3	–0.2	–0.5	–0.3	–0.3	–0.2	0.0
Prices									
Headline inflation	1.0	0.5	0.5	0.5	0.1	0.2	0.1	–0.4	–1.0
Core inflation	0.3	0.6	0.7	0.7	0.3	0.1	–0.1	–0.2	–0.3

CHINA

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Activity									
Real GDP	6.7	6.1	6.0	–6.8	3.2	4.9	–	–	–
Retail sales	9.0	8.1	7.7	–18.2	–4.0	0.9	3.3	4.3	5.0
Industrial production	6.2	5.8	5.9	–7.3	4.4	5.8	6.9	6.9	7.0
PMI manufacturing *(value)*	50.9	49.7	49.9	45.9	50.8	51.2	51.5	51.4	52.1
Foreign sector									
Trade balance[1,2]	352	421	421	361	412	453	453	469	507
Exports	9.9	0.5	1.9	–13.4	0.1	8.8	9.9	11.4	21.1
Imports	15.8	–2.7	3.4	–3.0	–9.7	3.2	13.2	4.7	4.6
Prices									
Headline inflation	2.1	2.9	4.3	5.0	2.7	2.3	1.7	0.5	–0.5
Official interest rate[3]	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Renminbi per dollar	6.6	6.9	7.0	7.0	7.1	6.9	6.8	6.7	6.6

Notes: *1. Cumulative figure over last 12 months. 2. Billion dollars. 3. End of period.*
Source: *CaixaBank Research, based on data from the Department of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Standard & Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Thomson Reuters Datastream.*

EURO AREA

Activity and employment indicators

Values, unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Retail sales *(year-on-year change)*	1.6	2.4	2.1	–1.2	–6.9	2.3	2.5	4.3	...
Industrial production *(year-on-year change)*	0.7	–1.3	–2.1	–5.8	–20.2	–6.6	–6.3	–3.8	...
Consumer confidence	–4.9	–7.1	–7.6	–8.8	–18.5	–14.5	–13.9	–15.5	–17.6
Economic sentiment	111.5	103.1	100.6	100.0	69.4	86.9	90.9	91.1	87.6
Manufacturing PMI	55.0	47.4	46.4	47.2	40.1	52.4	53.7	54.8	53.8
Services PMI	54.5	52.7	52.3	43.8	30.3	51.1	48.0	46.9	41.7
Labour market									
Employment (people) *(year-on-year change)*	1.6	1.2	1.0	0.4	–3.0	–2.1	–	–	...
Unemployment rate *(% labour force)*	8.2	7.6	7.4	7.3	7.6	8.6	8.5	8.4	...
Germany *(% labour force)*	3.4	3.1	3.2	3.6	4.2	4.5	4.5	4.5	...
France *(% labour force)*	9.0	8.5	8.2	7.7	7.1	9.1	8.8	8.6	...
Italy *(% labour force)*	10.6	9.9	9.5	9.2	8.5	9.8	9.7	9.8	...
Real GDP *(year-on-year change)*	...	...	1.0	–3.2	–14.7	–4.3	–	–	...
Germany *(year-on-year change)*	1.3	0.6	0.4	–2.1	–11.2	–4.0	–	–	...
France *(year-on-year change)*	1.8	1.5	0.8	–5.7	–18.9	–3.9	–	–	...
Italy *(year-on-year change)*	0.8	0.3	0.1	–5.6	–18.0	–5.0	–	–	...

Prices

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
General	1.8	1.2	1.0	1.1	0.2	0.0	–0.3	–0.3	–0.3
Core	1.0	1.0	1.2	1.1	0.9	0.6	0.2	0.2	0.3

Foreign sector

Cumulative balance over the last 12 months as % of GDP of the last 4 quarters, unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Current balance	3.0	2.4	2.4	2.1	2.3	...	...	...	...
Germany	7.4	7.1	7.1	7.1	6.8	...	...	...	...
France	–0.6	–0.7	–0.7	–0.8	–1.3	...	...	...	...
Italy	2.5	3.0	3.0	3.2	2.9	...	...	...	...
Nominal effective exchange rate [1] *(value)*	95.1	92.4	91.4	91.2	93.4	95.6	95.9	95.7	95.0

Credit and deposits of non-financial sectors

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Private sector financing									
Credit to non-financial firms [2]	3.9	3.8	3.5	3.9	7.0	7.1	7.1	6.8	...
Credit to households [2,3]	3.0	3.4	3.5	3.6	3.0	3.0	3.1	3.1	...
Interest rate on loans to non-financial firms [4] *(%)*	1.2	1.2	1.2	1.1	1.2	1.3	1.2	1.3	...
Interest rate on loans to households for house purchases [5] *(%)*	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	...
Deposits									
On demand deposits	7.9	8.0	8.7	9.3	12.9	14.1	14.4	14.3	...
Other short-term deposits	–1.5	0.3	0.3	–0.2	0.4	1.0	1.4	1.4	...
Marketable instruments	–4.2	–1.9	–3.3	3.9	7.1	10.2	11.9	14.0	...
Interest rate on deposits up to 1 year from households *(%)*	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	...

Notes: *1. Weighted by flow of foreign trade. Higher figures indicate the currency has appreciated. 2. Data adjusted for sales and securitization. 3. Including NPISH. 4. Loans of more than one million euros with a floating rate and an initial rate fixation period of up to one year. 5. Loans with a floating rate and an initial rate fixation period of up to one year.*

Source: *CaixaBank Research, based on data from the Eurostat, European Central Bank, European Commission, national statistics institutes and Markit.*

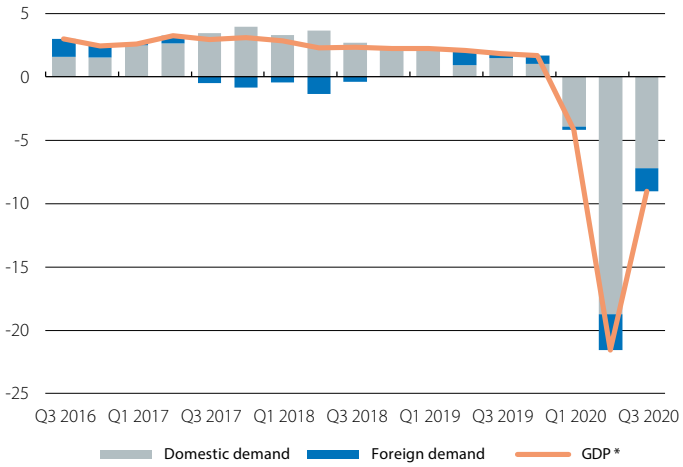
Spain: 2021, a year of partial economic recovery

The economy will continue its recovery in 2021. The COVID-19 pandemic has dominated 2020, triggering a health and economic crisis on an enormous scale. According to our projections, the pandemic will have cut 11.4% off GDP in 2020 as a whole, a figure heavily impacted by the collapse in Q2 (–17.9% quarter-on-quarter). However, the economy has also demonstrated a capacity to rapidly recover. According to the latest estimates by the National Statistics Institute, published in December, GDP had rebounded by 16.4% quarter-on-quarter in Q3, reducing the year-on-year decline from a severe –21.6% in Q2 to a more moderate –9.0%. Thus, although the restrictions imposed to contain the second wave will have weighed down growth in the last quarter of the year, economic activity is expected to continue its recovery in a more sustained manner in 2021, driven by the early availability of vaccines, the strong support from domestic and European economic policies and the accommodative financial environment anchored by the ECB. In particular, our forecasts reflect growth of around 6.0% in 2021 (incorporating the positive effect of funds from the European Next Generation EU, or NGEU, recovery plan) and paint a reasonably similar picture of the macroeconomic scenario as that set out by the Bank of Spain in its December update (economic contraction in 2020 of between 10.7% and 11.6% and a rebound in 2021 in the range of 4.2% to 8.6%). However, these forecasts also illustrate that the recovery will take time to be completed (we do not project a return to pre-COVID activity levels until 2023). Moreover, although the vaccination process already initiated should make the economic revival more resilient over the coming quarters, in the short term the environment remains highly demanding and uncertain, and the mobility restrictions required to contain the pandemic will continue to weigh on economic activity at the start of the year.

The economic activity indicators show mixed performance in the second wave. Industrial production moderated its year-on-year decline to 1.6% in October, an improvement of 1.5 pps compared to the previous month's figure, indicating that the industrial sector remained on its path to recovery despite the mobility restrictions. In contrast, the restrictions had a clearer impact on consumption in November, as retail sales broke the recovery of recent months with a 4.3% year-on-year decline (1.3 pps worse than in October). This decline eased in December, according to data on the total spending registered on CaixaBank point of sale (POS) terminals, which fell by 10% year-on-year and recovered some of the ground lost in November (–15% year-on-year). Consumption with Spanish cards fell 7% (–11% in November), while e-commerce performed particularly well and registered year-on-year growth of +14%, helping businesses to weather the declines in face-to-face consumption. Consumption on foreign cards, meanwhile, fell in December (–54% year-on-year), albeit by somewhat less than in November (–58% year-on-year).

Spain: GDP

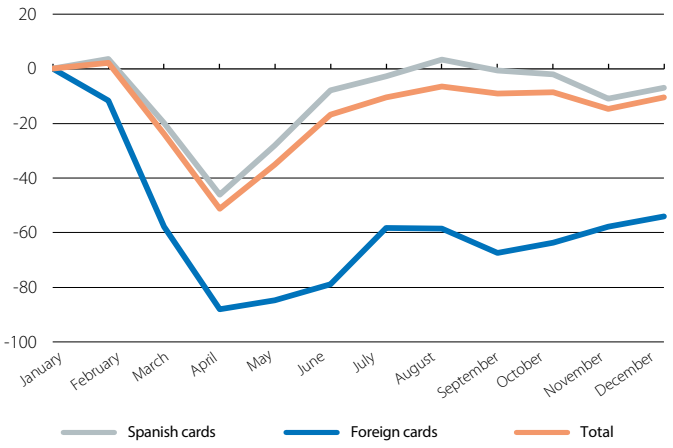
Contribution to year-on-year growth (pps)



Note: ** Year-on-year change (%).*
Source: *CaixaBank Research, based on data from the National Statistics Institute.*

Spain: card activity on POS terminals and cash withdrawals at CaixaBank ATMs

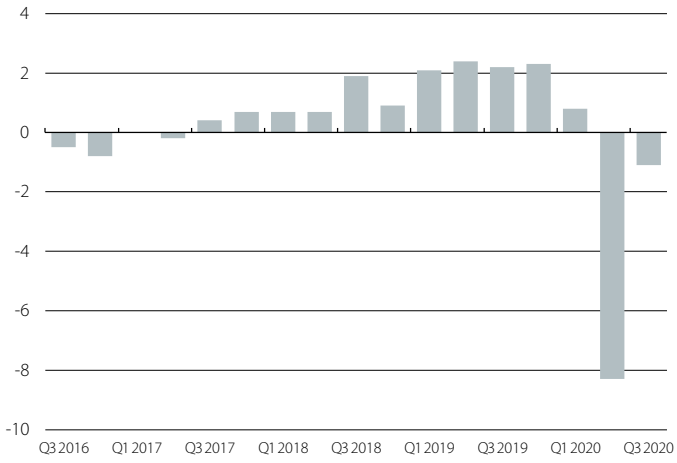
Year-on-year change (%)



Source: *CaixaBank Research, based on internal data.*

Spain: total labour cost per worker *

Year-on-year change (%)



Note: ** Series adjusted for seasonality and calendar effects.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (Quarterly Labour Cost Survey).*

Some stability in the labour market in the midst of the pandemic. The number of people registered with Social Security increased by 26,000 in December, bringing the total to 19.05 million, meaning that there were 360,000 fewer affiliates than a year earlier (–1.9% year-on-year). Also, the average number of affiliates affected by ERTE furlough schemes stood at 783,000, most notably in the hospitality sector (46%). These schemes have allowed employment to fall by less than economic activity, unlike in previous crises (for more detail, see the Focus «Employment holds up this time, but duality in the labour market continues to wreak havoc»). Labour costs, meanwhile, were less affected by the pandemic in Q3 2020. According to the quarterly labour cost survey (QLCS), the total labour cost per worker decreased by 1.1% year-on-year (corrected for calendar effects and seasonality), a smaller reduction than that experienced in Q2 (8.3%) due to the lower incidence of ERTE furlough schemes in Q3.

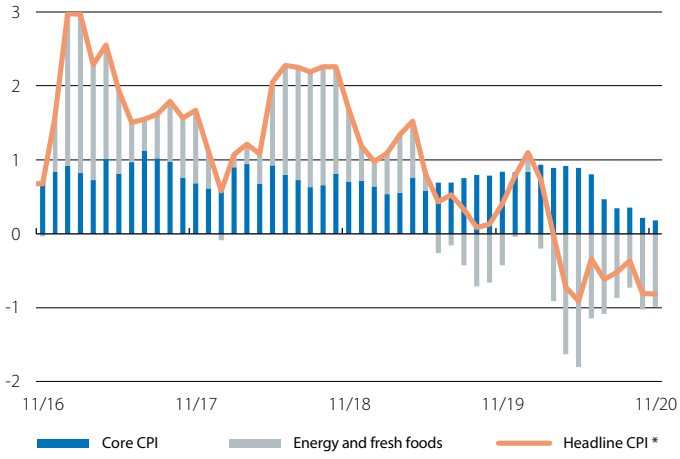
Inflation remained weak at the end of the year. In November, headline inflation stood at –0.8% and core inflation (excluding energy and fresh foods) moderated slightly to 0.2%, driven by price declines in the hospitality, leisure and cultural sectors. In December, a month for which we have an early estimate of headline inflation, there was a relative improvement, with inflation standing at –0.5% year-on-year, favoured by electricity and fuel prices. If this estimate is confirmed, inflation for 2020 as a whole would have stood at –0.3%.

The real estate sector partially recovers from the first lockdown. In October, housing sales were 13.3% below the level for the same month in the previous year, while in cumulative terms since January, sales fell by 21.2%. Meanwhile, the impact of the crisis on the price of housing is still relatively moderate. Specifically, according to transaction data, home prices rose 1.7% year-on-year in Q3, only 4 decimal points less than in the previous quarter. Traditionally, however, home prices display inertia, so we expect them to gradually reflect a correction.

The COVID-19 crisis weighs on the public accounts while the 2021 General State Budget (GSB) enters into force. The central government deficit stood at 6.5% of GDP in January-November, 1.3 pps higher than in October. The deterioration in the central government accounts occurred both due to a 19% year-on-year increase in expenditure (up to November) and because of a 12.8% year-on-year decrease in revenues. Meanwhile, the consolidated general government deficit (excluding local corporations), for which data are available up to October, stood at 7.1% of GDP. On the other hand, the GSB for 2021 successfully passed through parliament and entered into force on 1 January, replacing the 2018 extended budget.

Spain: CPI

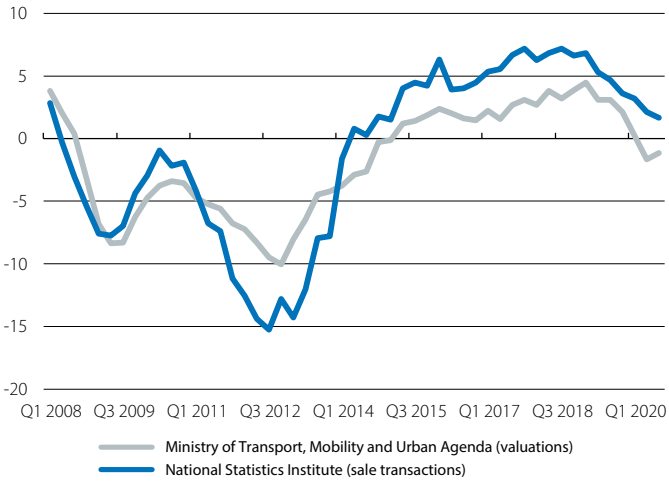
Contribution to year-on-year growth (pps)



Note: ** Year-on-year change.*
Source: *CaixaBank Research, based on data from the National Statistics Institute.*

Spain: price of unsubsidised housing

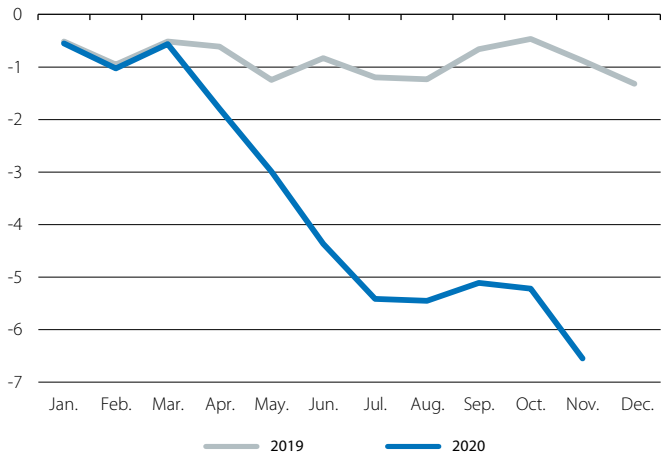
Year-on-year change (%)



Source: *CaixaBank Research, based on data from the National Statistics Institute and the Ministry of Public Works.*

Spain: state funding capacity/needs

(% of GDP)



Source: *CaixaBank Research, based on data from the General Comptroller of the State Administration (IGAE).*

Employment holds up this time, but duality in the labour market continues to wreak havoc

- The fall in employment is proving to be smaller than that of economic activity in this crisis, contrary to what used to happen in Spain.
- The widespread use of «ERTE» furlough schemes has allowed the loss of employment to be limited despite the vast reduction in the number of hours worked.
- Most of the impact is once again falling on temporary employment due to the high duality of the labour market and, yet again, young people are the hardest hit.

Spain is a country in which employment traditionally had a strong reaction to changes in economic activity, even to a greater extent (in economic jargon, the elasticity of employment to GDP was greater than 1).[1] Thus, in times of crisis the reduction in employment occurred through a significant destruction of jobs, while in periods of expansion job creation was rapid. This has not been the case in this crisis. For the first time, the declines in GDP have been accompanied by a much smaller reduction in employment. This is not only due to the unique nature of this crisis, which originated in the health sphere, but also due to a very different response from economic policy.

Reduced sensitivity of employment to declines in economic activity

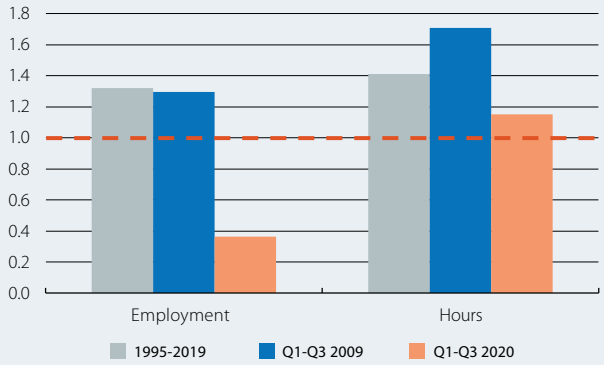
The sensitivity of employment to GDP change has been much lower in this economic crisis: for each percentage point of decline in economic activity, employment has fallen by 0.36 points during the first three quarters of 2020. In contrast, in the past employment tended to drop by more than economic activity in Spain (both historically and during the first quarters of the last financial crisis, as shown in the first chart).

The current crisis emanates from the health sphere, making it very different to previous crises, as well as giving it a shorter expected duration. However, the key factor that has led to a lesser impact on employment is the different response from economic policy. In particular, the intensive use of ERTE furlough schemes[2] has enabled greater protection of employment through either temporary lay-offs or a reduction in working hours.[3]

This does not mean that working hours have not been reduced: the sensitivity of working hours to changes in economic activity is somewhat lower than that observed in previous crises, but it remains strong and greater than 1. In other words, faced with declines in economic activity, the number of hours worked are reduced even more. It should be noted that much of the reduction in the total number of hours worked is concentrated in full ERTE schemes (in which staff are temporarily laid off), while shorter average working schedules account for less of the total reduction.[4] In future crises, it would be

Spain: relationship between the growth in employment and that of the number of hours worked, relative to GDP growth

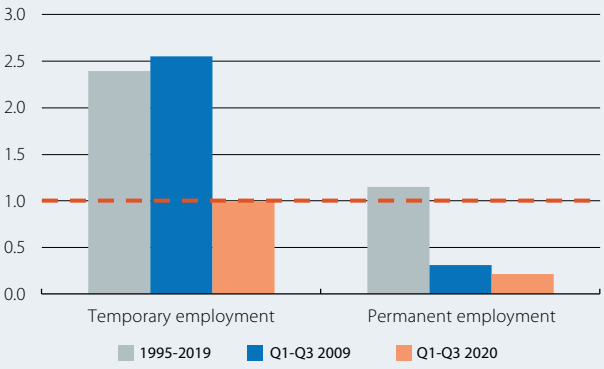
Change in pps in response to an additional 1 pp of GDP growth



Source: *CaixaBank Research, based on data from the National Statistics Institute.*

Spain: relationship between the growth in temporary employment and that of permanent employment, relative to GDP growth

Change in pps in response to an additional 1 pp of GDP growth



Source: *CaixaBank Research, based on data from the National Statistics Institute.*

1. The elasticity of employment to GDP is defined as the percentage change in employment growth relative to each percentage change in GDP, and it corresponds to a correlation (not a causal relationship).
2. In April, there were 3.4 million social security affiliates affected by an ERTE furlough scheme, and in November there were still more than 750,000 people in such schemes.
3. For more details on how ERTE furlough schemes prevent job destruction, see P. Cahuc (2019). «Short-time work compensation schemes and employment». IZA World of Labor. https://wol.iza.org/articles/short-time-work-compensations-and-employment/long

4. For more details on the type of reduction by hours worked, see the article by Manuel Hidalgo «No es la ocupación, son las horas de trabajo», https://www.vozpopuli.com/opinion/ocupacion-empleo-recesion_0_1416758423.html.

preferable for more of the overall reduction to be the result of shorter average working schedules, rather than full ERTEs, since the costs associated with the total reduction would be shared among more workers.

Workers with temporary contracts remain the hardest hit

The reduction in the sensitivity of employment to declines in economic activity has occurred among workers with both temporary contracts and permanent contracts. However, the sensitivity of temporary employment to economic activity in this crisis is still around 1, meaning that temporary employment falls by as much as GDP does, whereas in the case of permanent employment it is 0.2. This reflects the marked duality of the Spanish labour market, which is the reason why workers with the most precarious contracts are most affected by the decline in economic activity, since they have benefited less from the protection schemes put in place to avoid the loss of employment.

Young people, again

Young people suffer the most from this high duality: the sensitivity of youth employment to declines in economic activity in this crisis is close to 1 (0.9), while it is much lower for adult workers (0.3) or older adult workers (0.2). This impact on young people results in an increase in wage inequality within this larger group than among other workers, as shown by CaixaBank Research's Inequality Tracker.[5] By gender, the sensitivity of employment to declines in economic activity is reduced for both men and women, and the differences between them are less than those by age.

Greater sensitivity of employment in the hardest hit sectors

Furthermore, this less pronounced drop in employment relative to the fall in economic activity is also observed by economic sector. According to a recent survey by the Bank of Spain, the aggregate impact on corporate turnover in 2020 will be greater than the impact on employment. However, the decline in turnover is greater in some branches of services that have been more affected by the restrictions on activity, such as hospitality, transportation and leisure, and their impact on employment is different (greater in hospitality than in transportation, for example, as shown in the fourth chart).

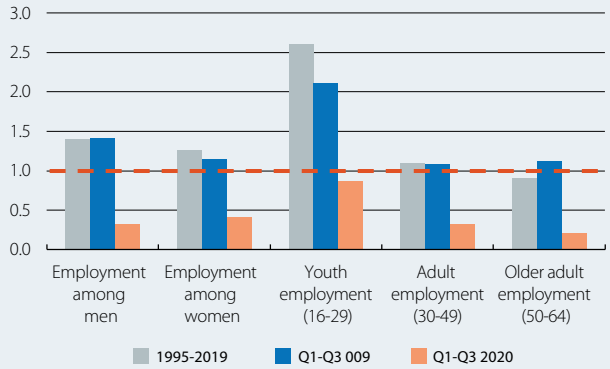
Labour market flexibility, key to safeguarding employment

All this provides us with lessons we can draw from this crisis. The first is the importance of continuing to combine labour market flexibility with a significant welfare state support network in order to safeguard employment. The second lesson is that, as a society, we should not allow ourselves to reach another crisis with a high degree of duality in the labour market, something which has been entrenched in Spain since the 1980s and inflicts great harm on the most vulnerable workers.

Josep Mestres Domènech

Spain: relationship between the growth in employment of each age group and gender, relative to GDP growth

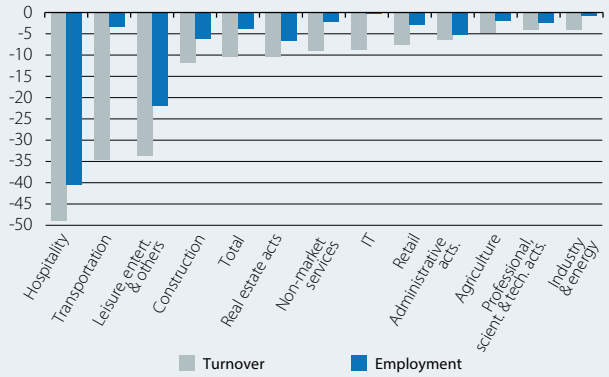
Change in pps in response to an additional 1 pp of GDP growth



Source: *CaixaBank Research, based on data from the National Statistics Institute.*

Spain: change in turnover and employment by sector

Year-on-year change (%)



Source: *Bank of Spain. «Proyecciones macroeconómicas de la economía española (2020-2023)».*

5. For more details, see https://inequality-tracker.caixabankresearch.com/.

Activity and employment indicators

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	10/20	11/20	12/20
Industry									
Industrial production index	0.3	0.7	0.2	–6.4	–24.3	–4.9	–1.6	...	...
Indicator of confidence in industry *(value)*	–0.1	–3.9	–5.2	–5.4	–27.8	–11.9	–10.8	–11.7	...
Manufacturing PMI *(value)*	53.3	49.1	47.2	48.2	39.4	51.4	52.5	49.8	51.0
Construction									
Building permits *(cumulative over 12 months)*	25.7	17.2	8.0	0.1	–12.5	–19.1	–22.0	...	...
House sales *(cumulative over 12 months)*	14.2	3.6	–2.0	–3.7	–12.3	–18.2	–18.6	...	...
House prices	6.7	5.1	3.6	3.2	2.1	1.7	–	–	–
Services									
Foreign tourists *(cumulative over 12 months)*	4.0	1.4	1.2	–1.0	–22.8	–50.7	–67.7	–72.8	...
Services PMI *(value)*	54.8	53.9	53.6	42.5	28.4	47.3	41.4	39.5	...
Consumption									
Retail sales	0.7	2.3	2.4	–3.8	–18.4	–3.4	–3.0	–4.3	...
Car registrations	7.8	–3.6	5.1	–27.6	–68.6	–7.5	–21.0	–18.7	0.0
Consumer confidence index *(value)*	–4.2	–6.3	–10.5	–10.3	–27.9	–26.9	–26.7	–29.0	...
Labour market									
Employment [1]	2.7	2.3	2.1	1.1	–6.0	–3.5	–	–	–
Unemployment rate (% labour force)	15.3	14.1	13.8	14.4	15.3	16.3	–	–	–
Registered as employed with Social Security [2]	3.1	2.6	2.2	1.2	–4.4	–3.0	–2.3	–1.8	–1.9
GDP	**2.4**	**2.0**	**1.7**	**–4.2**	**–21.6**	**–9.0**	**–**	**–**	**–**

Prices

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	10/20	11/20	12/20
General	1.7	0.7	0.4	0.6	–0.7	–0.5	–0.8	–0.8	–0.5
Core	0.9	0.9	1.0	1.1	1.1	0.5	0.3	0.2	...

Foreign sector

Cumulative balance over the last 12 months in billions of euros, unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	10/20	11/20	12/20
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	2.9	1.8	1.8	1.0	–7.2	–8.9	–9.6	...	...
Imports *(year-on-year change, cumulative over 12 months)*	5.6	1.0	1.0	–1.0	–9.3	–13.3	–14.2	...	...
Current balance	**23.2**	**26.6**	**26.6**	**27.1**	**17.7**	**11.0**	**9.5**	**...**	**...**
Goods and services	32.8	37.5	37.5	38.0	27.8	20.5	18.9	...	...
Primary and secondary income	–9.5	–10.9	–10.9	–10.9	–10.2	–9.5	–9.4	...	...
Net lending (+) / borrowing (–) capacity	**29.0**	**30.8**	**30.8**	**31.3**	**21.6**	**15.1**	**13.9**	**...**	**...**

Credit and deposits in non-financial sectors [3]

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	10/20	11/20	12/20
Deposits									
Household and company deposits	3.2	5.4	5.4	4.4	8.0	9.0	9.2	...	...
Sight and savings	10.9	10.7	10.3	8.9	13.0	13.8	14.2	...	...
Term and notice	–19.9	–13.4	–13.9	–16.4	–16.1	–16.5	–16.2	...	...
General government deposits	15.4	8.8	–2.1	–6.2	–6.6	5.2	4.4	...	...
TOTAL	**3.9**	**5.6**	**4.8**	**3.8**	**7.1**	**8.7**	**8.9**	**...**	**...**
Outstanding balance of credit									
Private sector	–2.4	–1.5	–1.5	–1.0	1.5	2.0	2.4	...	...
Non-financial firms	–5.5	–3.4	–3.0	–1.7	6.1	7.1	7.8	...	...
Households - housing	–1.1	–1.3	–1.5	–1.7	–2.1	–1.8	–1.6	...	...
Households - other purposes	2.8	3.2	2.2	2.5	0.7	0.3	0.9	...	...
General government	–10.6	–6.0	–1.2	1.7	0.1	1.1	2.8	...	...
TOTAL	**–2.9**	**–1.7**	**–1.5**	**–0.9**	**1.5**	**1.9**	**2.5**	**...**	**...**
NPL ratio (%)[4]	**5.8**	**4.8**	**4.8**	**4.8**	**4.7**	**4.6**	**4.6**	**...**	**...**

Notes: *1. Estimate based on the Active Population Survey. 2. Average monthly figures. 3. Aggregate figures for the Spanish banking sector and residents in Spain. 4. Period-end figure.*

Source: *CaixaBank Research, based on data from the Ministry of Economy, the Ministry of Public Works, the Ministry of Employment and Social Security, the National Statistics Institute, the State Employment Service, Markit, the European Commission, the Department of Customs and Special Taxes and the Bank of Spain.*

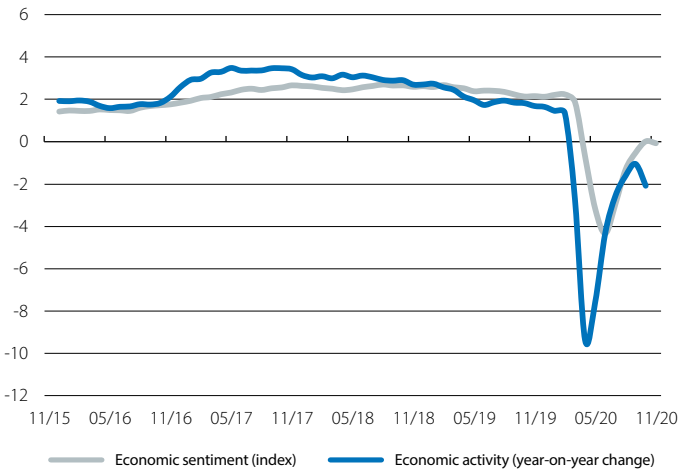
Portugal, on course for a recovery in 2021

The Portuguese recovery was temporarily interrupted in Q4. Most indicators suggest that Portugal's economic activity contracted in the last quarter of the year, albeit much more moderately than in the spring. On the one hand, mobility was again reduced by the restrictions imposed to curb the second wave of infections, and for Q4 as a whole it stood at levels similar to those at the start of the summer. On the other hand, the available economic sentiment and activity indicators had also moderated during October and November. Specifically, card spending fell by 9.3% year-on-year in November, while growth in industrial production and turnover in services went from +0.4% and –0.4% year-on-year in October to contractions of –3.6% and –5.1% year-on-year in November, respectively. However, these declines are much more contained than those of the spring, and while they indicate a further contraction of GDP, they also suggest that it will be much more moderate on this occasion than in Q2 (we project a quarter-on-quarter decline of around –2.5%). While the environment will remain very demanding in the early stages of 2021 (all the indicators suggest that, after the festive season, the restrictions will continue to hold back economic activity), over the coming quarters progress in the vaccination process, improved confidence and the support from domestic, European and ECB policies will favour a more sustained recovery. On this basis, for 2021 as a whole we project GDP growth of around 5%.

The labour market proves more resistant to the pandemic. In 2020, unemployment remained much more contained than during the sovereign debt crisis (when it peaked at 17% in early 2013). This time, after increasing to 8.1% in August, during the course of the autumn the unemployment rate gradually fell back down (7.5% in October, the latest available figure). Also, whilst in November the number of people registered as unemployed in job centres exceeded 398,000, 26.2% more than in February, this is still a far cry from the figure of more than 700,000 registered in the previous crisis. This greater resilience reflects the decisive implementation of temporary furlough schemes. In this regard, the data for November show a 17.4% month-on-month reduction in the number of workers under «traditional» schemes of this kind, although they remain above the level recorded in February (+5,334 people). Despite the resistance of the labour market data, the high degree of uncertainty surrounding the economic environment has led the government to prolong some of the measures currently in force for the first half of 2021, such as the programmes aimed at facilitating a gradual revival of employment in firms.

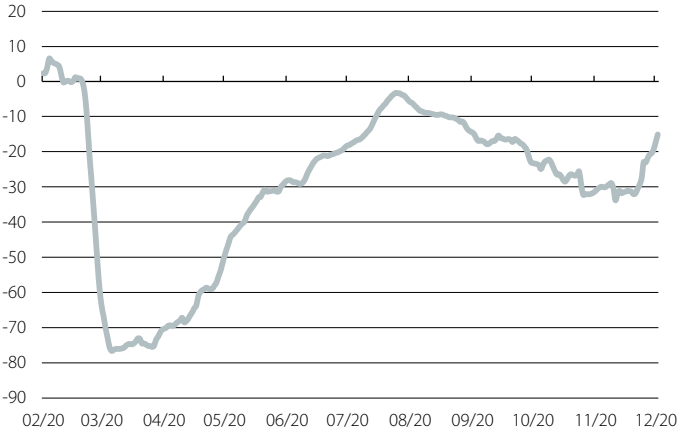
The inertia of the real estate market delays the impact of the pandemic. In Q3 2020, the housing price index increased

Portugal: economic sentiment and activity indicators
(%)



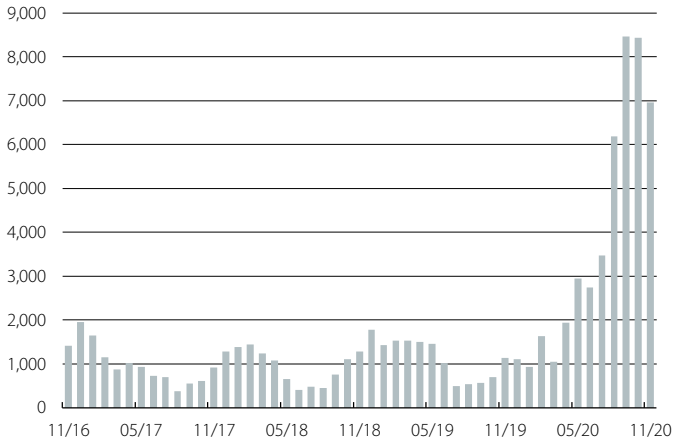
Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Portugal: mobility in retail and leisure
*Change relative to the baseline level (%) **



Notes: *7-day moving average figures. * The baseline level corresponds to the average mobility recorded on the same day of the week between 3 January and 6 February 2020.*
Source: *CaixaBank Research, based on data from Google Mobility Report.*

Portugal: workers under the traditional furlough scheme
(Number of people)



Source: *CaixaBank Research, based on data from the Social Security Institute of Portugal.*

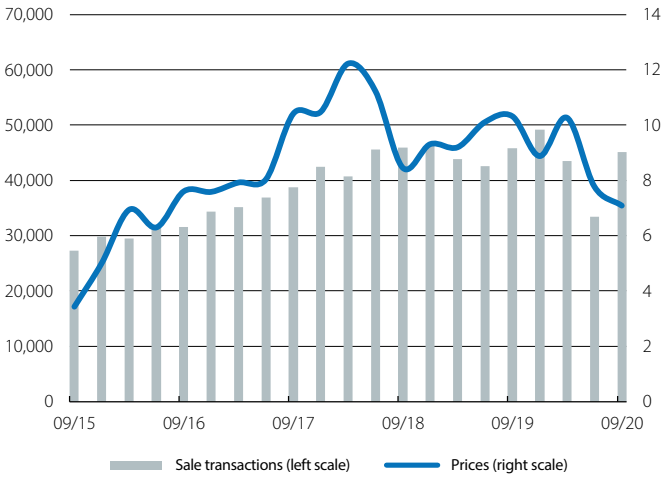
by 7.1% year-on-year (7.8% in Q2 and 10.3% in Q1) and by 0.5% quarter-on-quarter. In addition, sales rose to 45,136 homes (+35.1% compared to Q2 but –1.5% year-on-year), a figure similar to pre-pandemic levels. This resistance can be partly explained by the real estate market's inertia, although the sector has also enjoyed the support of low interest rates (with a direct impact on demand for housing credit) and the stabilising effect of the government's economic support policies aimed at minimising the adverse effects of the pandemic (for instance, through furlough schemes and credit moratoriums). However, the impact of the pandemic is expected to end up facilitating a decline in prices during the course of 2021. Furthermore, the restriction of «golden visas» from June 2021 will also weigh on housing demand from foreigners in Portugal's major metropolitan areas.

The COVID-19 crisis maintains pressure on the public accounts. The budget balance reached –4.9% of GDP in the first three quarters of 2020 as a whole. This decline relative to the slight surplus at the end of 2019 reflects a considerable fall in revenues (–6.7% year-on-year) and an increase in expenditure (+6.1%), demonstrating the impact of the measures introduced to support households and firm (such as the increase in social benefits and subsidies, which as a whole increased by almost 8% year-on-year, or the state support for TAP, amounting to 1.2 billion euros). The fight against the pandemic has also been reflected in the rise in the public debt ratio, which reached 134% of GDP in October. In 2021, the recovery in economic activity will favour a reduction in this ratio. However, in an environment in which the pandemic will continue to weigh on the economy's performance, the public accounts will remain restricted over the coming quarters.

The economy's external funding capacity fell to 0% of GDP in Q3 (four-quarter cumulative figure, –0.9 pps compared to Q2). This decrease reflects the increased funding needs of the public sector as a result of the pandemic, since all other sectors have registered an increase in their savings. As an example, households' funding capacity increased to 4.3% of GDP, while their savings rate rose to 10.8% of disposable income, 3 decimal points higher than in Q2. Firms have also registered a rise in their savings rate, up 4 decimal points to 9.1% of GDP, while their level of indebtedness reached 128.6% of GDP in September (+1.3 pps compared to June and +3.7 pps compared to a year earlier).

Portugal: housing prices and sale transactions

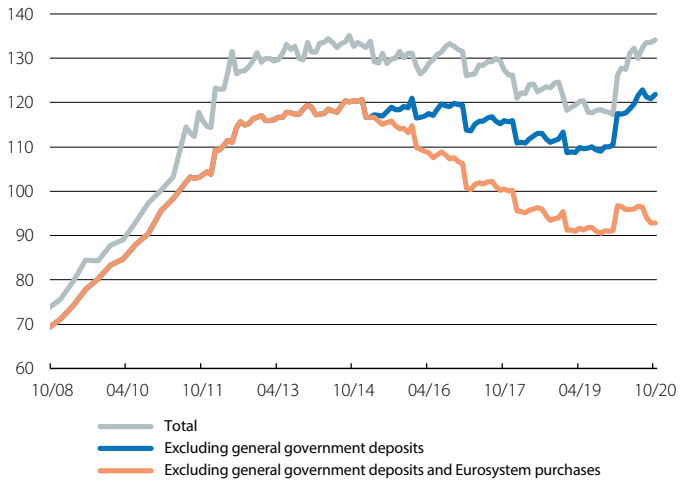
Number of transactions *Year-on-year change (%)*



Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Portugal: public debt

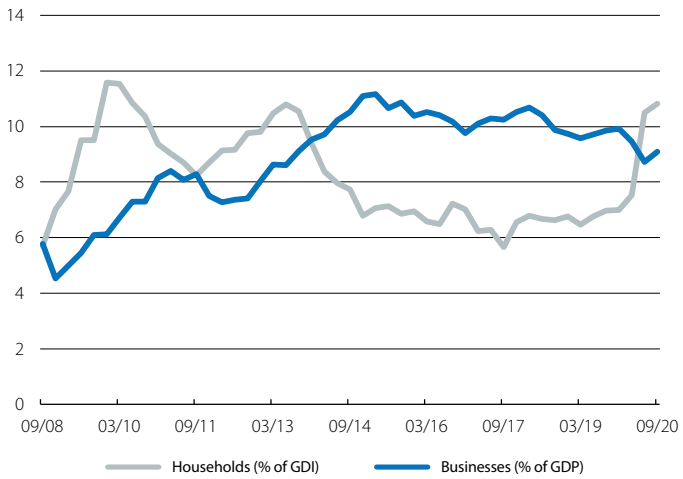
(% of GDP)



Source: *CaixaBank Research, based on data from the Bank of Portugal and the ECB.*

Portugal: household and business savings

(%)



Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Activity and employment indicators

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Coincident economic activity index	3.0	1.0	–0.8	–3.5	–7.0	–7.7	–7.4	–6.9	–6.3
Industry									
Industrial production index	0.1	–2.2	0.4	–1.4	–23.5	–0.7	2.6	0.4	–3.6
Confidence indicator in industry *(value)*	0.8	–3.2	–4.3	–4.6	–24.8	–19.1	–14.3	–14.3	–15.0
Construction									
Building permits *(cumulative over 12 months)*	20.3	5.9	5.9	2.1	–1.1	–1.2	–1.2	...	...
House sales	16.8	1.7	6.1	–0.7	–21.6	–1.5	–1.5	...	...
House prices *(euro / m² - valuation)*	8.6	10.4	11.1	11.2	8.9	6.9	5.8	5.8	6.3
Services									
Foreign tourists *(cumulative over 12 months)*	4.8	7.8	7.8	3.2	–29.7	–57.6	–57.6	–65.8	...
Confidence indicator in services *(value)*	14.1	12.9	10.6	5.8	–36.9	–37.2	–27.7	–20.0	–17.0
Consumption									
Retail sales	4.2	4.4	3.7	3.0	–12.9	–2.2	0.7	–0.8	–4.7
Coincident indicator for private consumption	2.4	1.9	0.7	–3.5	–7.4	–7.0	–6.0	–4.6	–3.1
Consumer confidence index *(value)*	–4.6	–8.0	–7.1	–8.6	–27.7	–26.9	–26.3	–25.5	–26.9
Labour market									
Employment	2.3	1.0	0.5	–0.3	–3.8	–3.0	–2.5	–2.1	...
Unemployment rate (*% labour force*)	7.0	6.5	6.7	6.7	5.6	7.8	7.9	7.5	...
GDP	**2.8**	**2.2**	**2.3**	**–2.4**	**–16.4**	**–5.7**	**...**	**...**	**...**

Prices

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
General	1.0	0.3	0.3	0.4	–0.3	0.0	–0.1	–0.1	–0.2
Core	0.7	0.5	0.4	0.2	–0.1	–0.1	–0.2	–0.1	–0.2

Foreign sector

Cumulative balance over the last 12 months in billions of euros, unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	5.2	3.6	3.6	1.5	–6.8	–7.8	–7.8	–8.7	...
Imports *(year-on-year change, cumulative over 12 months)*	8.3	6.0	6.0	2.8	–7.6	–12.1	–12.1	–13.7	...
Current balance	**0.8**	**–0.2**	**–0.2**	**–0.6**	**–0.9**	**–2.4**	**–2.4**	**–2.2**	**...**
Goods and services	1.5	0.8	0.8	0.4	–1.1	–3.0	–3.0	–3.1	...
Primary and secondary income	–0.7	–1.0	–1.0	–1.0	0.2	0.6	0.6	0.9	...
Net lending (+) / borrowing (–) capacity	**2.8**	**1.9**	**1.9**	**1.5**	**1.5**	**–0.1**	**–0.1**	**0.2**	**...**

Credit and deposits in non-financial sectors

Year-on-year change (%), unless otherwise specified

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	09/20	10/20	11/20
Deposits [1]									
Household and company deposits	4.7	5.2	5.2	6.4	9.0	9.2	9.2	9.8	...
Sight and savings	16.2	14.8	14.8	17.6	20.1	18.4	18.4	19.3	...
Term and notice	–3.3	–2.9	–2.9	–3.2	–1.0	0.4	0.4	0.7	...
General government deposits	–32.3	5.6	5.6	–10.4	–15.7	–13.8	–13.8	–13.9	...
TOTAL	**2.7**	**5.2**	**5.2**	**5.7**	**7.9**	**8.2**	**8.2**	**8.8**	**...**
Outstanding balance of credit [1]									
Private sector	–2.1	–0.1	–0.1	0.5	0.5	2.1	2.1	2.2	...
Non-financial firms	–4.5	–3.7	–3.7	–2.6	1.0	4.4	4.4	4.5	...
Households - housing	–1.7	–1.3	–1.3	–0.8	–0.3	0.5	0.5	0.7	...
Households - other purposes	4.2	16.5	16.5	15.7	2.2	2.0	2.0	1.7	...
General government	–12.9	–4.7	–4.7	–4.9	–9.7	–5.6	–5.6	–6.0	...
TOTAL	**–2.6**	**–0.3**	**–0.3**	**0.2**	**0.1**	**1.8**	**1.8**	**1.9**	**...**
NPL ratio *(%)* [2]	**9.4**	**6.2**	**6.2**	**6.0**	**5.5**	**5.3**	**5.3**	**...**	**...**

Notes: *1. Residents in Portugal. The credit variables exclude securitisations. 2. Period-end figure.*
Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal, Bank of Portugal and Datastream.*

Will the COVID-19 pandemic help to curb greenhouse gas emissions?

The fight against COVID-19 has two major points in common with the fight against climate change. Firstly, although a pandemic can spread in a matter of weeks while climate change worsens much more gradually, both have the ability to evolve exponentially: in the former case through social contagion mechanisms and in the latter case through polluting emissions accumulated over time. Secondly, once the phenomenon has been identified and the necessary measures are taken to curb it, the costs become apparent immediately, whereas the benefits take a while to become visible.

In a famous speech in 2015, the governor of the Bank of England, Mark Carney, referred to climate change as the «tragedy of the horizon»,[1] noting that, as a collective problem that surpasses the traditional horizons of the economic and political cycle, current generations do not have the right incentives to combat it, even having access to all the available information on the devastating effects it will have in the future. Is it possible that, by highlighting the risks of inaction to address adverse events, the COVID-19 pandemic will help to accelerate the fight against climate change?

Of course, while COVID-19 is having devastating consequences for health and the economy on a global scale, the mobility restrictions imposed to curb the pandemic have reduced emissions across the world. In this article, we will discuss how much of a short-term impact the COVID-19 pandemic has had on polluting emissions and to what extent this is a lasting shift. Finally, we will present different future scenarios for the trend in polluting emissions.

The immediate effect of the COVID-19 pandemic: a temporary and insignificant reduction in emissions

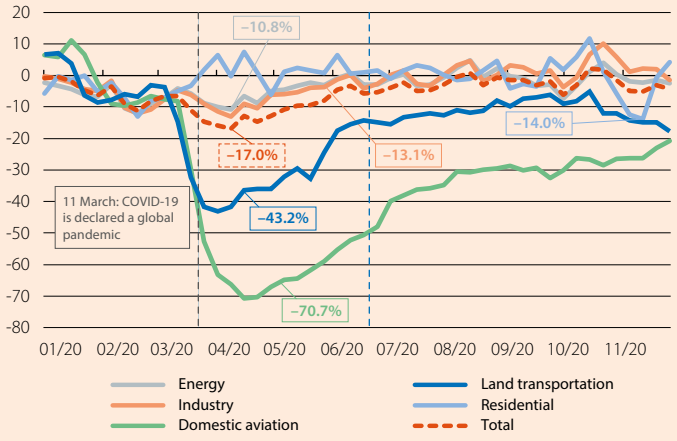
The COVID-19 pandemic has forced millions of people around the world into lockdown and has led to the closure of schools, factories, shops, hotels and airports, with a drastic reduction in the mobility of the entire population. It is no wonder, then, that this pandemic has also reduced the levels of polluting emissions.

Although there is not yet any emissions data available for 2020, studies have been carried out that estimate how they have changed by sector in real time, based on mobility and economic activity data.[2] The Carbon Monitor project, for example, allows us to obtain estimates of daily carbon dioxide emissions (which represent 80% of all polluting emissions) in the energy, industrial, residential, land and air transportation sectors, based on data on electricity generation, production, mobility and fuel consumption, among others. As the first chart shows, the most drastic declines in emissions occurred in the first weeks of April, with global levels plummeting by 17.0% year-on-year in the second week. At the end of April, at a time when around half of the world's population was in lockdown, cumulative global emissions had fallen by 8% compared to the same period in 2019. The decline was considerable, but it was quickly undone: by the end of September this cumulative drop had already been limited to 6% year-on-year with the gradual normalisation of economic and social activity, and by the end of November it had fallen even further, to 5%, despite the new restrictions imposed to curb the second wave of the pandemic.[3] Beyond this dynamic observed in global emissions, there was a significant rebound in emissions in the energy and industrial sectors, which are responsible for 70% of total emissions, registering a cumulative reduction of 3% up until the end of November, in contrast with the cumulative decline of 7% up until the end of April.

Thus, we are talking about a temporary reduction in emissions in an exceptionally adverse context marked by a very high economic and human cost.[4] In addition, it should be clarified that the effect of this temporary reduction will be small relative to the colossal challenge that climate change poses for our society. Indeed, while the Carbon Monitor estimates

Global carbon dioxide emissions in 2020

Deviation in weekly emissions compared to 2019 (%)



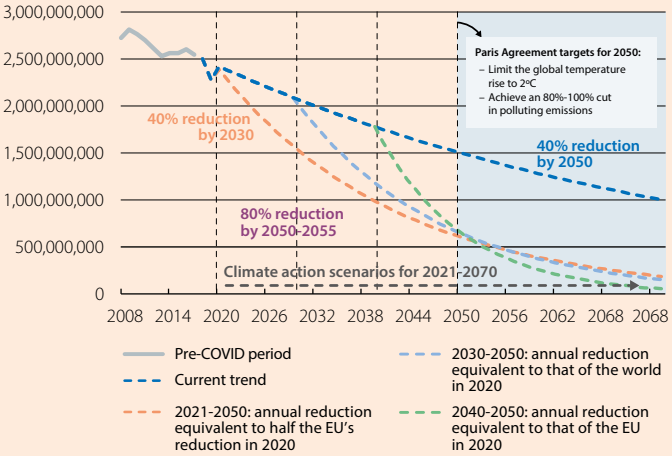
Source: *CaixaBank Research, based on data from Carbon Monitor.*

1. See M. Carney (2015). «Breaking the Tragedy of the Horizon – climate change and financial stability». Speech at Lloyd's of London.
2. See, for instance, T. Le *et al.* (2020). «Unexpected air pollution with marked emission reductions during the COVID-19 outbreak in China». Science, 369 (6504), 702-706. C. Le Quéré *et al.* (2020). «Temporary reduction in daily global CO_2 emissions during the COVID-19 forced confinement». Nature Climate Change, 1-7. Z. Y Liu *et al.* (2020). «Near-real-time monitoring of global CO_2 emissions reveals the effects of the COVID-19 pandemic». Nature Communications, 11(1), 1-12.
3. In Spain, the decline has been greater, as the total cumulative emissions reduced by 15% by the end of November, after reaching their lowest point (–19%) at the end of June. In the EU, total emissions reduced by 8% by the end of November and by almost 13% in the first half of the year.
4. Global GDP is expected to contract by around 4% in 2020, according to CaixaBank Research forecasts. In addition, as this Dossier is being written, more than 1.7 million people have already succumbed to COVID-19.

presented indicate a reduction in global polluting emissions of between 5% and 6% in 2020,[5] which would represent the biggest decline since World War II, it is estimated that the average temperature of the planet will cool as a result of this drop by only 0.01 degrees Celsius between now and 2030 relative to the counterfactual scenario without the pandemic.[6] Therefore, it is clear that only an economic recovery with a strong green imprint driven by ambitious measures to combat climate change, combined with the development of new technologies for capturing and absorbing polluting gases, can ensure we are in a position to meet the targets laid down in the Paris Agreement and limit global warming to 2°C above pre-industrial levels.

EU carbon dioxide emission forecasts: the countdown to 2050 begins

Annual carbon dioxide emissions (in tonnes)



Source: *CaixaBank Research, based on data from Eurostat.*

From COVID-19 to the long-term evolution of emissions: the ship has to change course

The magnitude of the structural change needed in our productive model to address global warming over the coming decades is evident. In order to achieve the targets of the Paris Agreement, the EU has clearly defined the various battle grounds for cutting greenhouse gas emissions by between 80% and 100% by 2050 compared to 1990 levels.

How can we achieve this end goal? Taking into account pre-pandemic emissions data, estimates of the drop in emissions in 2020 (around –9% in the EU according to estimates by the Carbon Monitor) and the targets for reducing emissions by 2050, we have developed different scenarios for the potential evolution of carbon dioxide emissions in the EU over the coming decades. In the first scenario, from 2021 countries would maintain the trend observed between 2008 and 2018, with an average decline of 1.6% per year across the EU as a whole. In this case, by 2050 the EU would have reduced its emissions by just over 40% compared to 2018, well below the recently announced targets of a 55% cut in emissions by 2030 and zero net emissions by 2050.[7] By tripling efforts and reaching a scenario in which emissions are reduced by 4.5% a year, the EU would achieve an 80% reduction between 2050 and 2055, with reductions of 40% as early as the mid-2030s.[8] This would be a fairly significant sustained rate of decline in emissions, approximately equivalent to maintaining an annual reduction of half that seen in 2020 in the EU. To illustrate this pedagogically, it would be a reduction similar to that achieved with a two-month lockdown followed by a gradual return to normal spread over a period of six weeks (Le Quéré *et al.*, 2020).

On the other hand, if the post-pandemic recovery were to postpone Europe's efforts to cut emissions, or if investments within the framework of NGEU failed to have the anticipated effects, the scenario would be different. Thus, maintaining the current trend until 2030, between 2030 and 2050 annual emission cuts equivalent to those observed globally this year (between 5% and 6%) would be necessary in order to achieve a reduction of 80% by around 2050.

Finally, postponing climate action until 2040 would be very detrimental for the planet,[9] and would also result in draconian reductions of 9% per year being required between 2040 and 2050 in order to achieve the aforementioned 80% reduction by around 2050. This rate of reduction would be similar to sustaining the levels of reduction observed in the EU in 2020, during a pandemic, for 10 consecutive years. Obviously, such a reduction in emissions would be almost impossible to sustain without inflicting enormous damage on the economy.

Ultimately, the scale of the climate challenge underscores the need to start taking ambitious action as soon as possible. The pandemic also reminds us that reducing polluting emissions cannot be done at the cost of a drastic reduction in economic activity. The smart thing to do, in order to meet the targets set, is to promote a green recovery that can revive the economy through cleaner, more sustainable technologies.

Luís Pinheiro de Matos

5. There is, in fact, a wider range for the annual fall in emissions in 2020, according to data and estimation methods other than those of the Carbon Monitor. 5% seems to be the minimum figure that attracts a consensus, but some estimates suggest an annual decline of 7%-8% (International Energy Agency, 2020, «Global Energy Review» and United Nations Environment Programme, 2020, «Emissions Gap Report 2020»).
6. See P. Forster *et al.* (2020). «Current and future global climate impacts resulting from COVID-19». Nature Climate Change, 10(10), 913-919.
7. It is important to emphasise here that the EU average masks various trends observed in individual European countries in recent years. Maintaining the current pace, and focusing on the top five emitters (Germany, Poland, Italy, France, and Spain), Italy would reach 2050 with a 65% reduction in emissions, Spain with a 50% reduction, while Poland would see an increase in emissions of 5-10% and Germany (the main emitter) would reduce its emissions by just 30%.
8. We assume that the scenario of zero emissions by 2050, or climate neutrality, will only be achievable with investments in mitigation projects or those generating negative emissions, such as efficient carbon dioxide disposal and storage technologies.
9. See, for example, the recent reports produced by the Intergovernmental Panel on Climate Change (IPCC) and the Convention on Biological Diversity (CBD).

Will environmental awareness increase after the COVID-19 pandemic?

One of the positive consequences of the mobility restrictions imposed to curb the spread of COVID-19 has been a reduction of more than 5% in global greenhouse gas emissions. However, in order to comply with the Paris Agreement and thus limit global warming to less than 2°C relative to pre-industrial levels, it would be necessary to maintain a rate of emission reduction over the next few years similar to that seen in 2020, which has been the result of an exceptional situation. Given that the reduction in emissions in 2020 has occurred at the cost of a drastic fall in economic activity which has worsened living conditions, it is desirable that other factors should be the driving forces behind the fight against climate change in the future.

These other factors include the energy intensity of GDP (i.e. how much energy is consumed for every euro of GDP produced in an economy) and how polluting each unit of energy is. The steps for reducing greenhouse gas emissions must be aimed at decoupling economic growth from the consumption of natural and energy resources, as well as at producing cleaner energy. In recent years, both factors have been key to reducing greenhouse gas emissions in many regions of the world and helping to contain the growth of global emissions. Will these dynamics accelerate in the post-pandemic world, allowing us to achieve the targets of the Paris Agreement in the medium term? In particular, will the COVID-19 pandemic provoke a change in consumer preferences?

Greenhouse gas emissions explained

$$\text{Total GHG emissions} = \text{Population} \times \frac{\text{GDP}}{\text{Population}} \times \frac{\text{Energy consumption}}{\text{GDP}} \times \frac{\text{GHG emissions}}{\text{Energy consumption}}$$

GDP per capita | Energy intensity of GDP | Carbon intensity in energy

Climate change continues to be a source of concern despite COVID-19

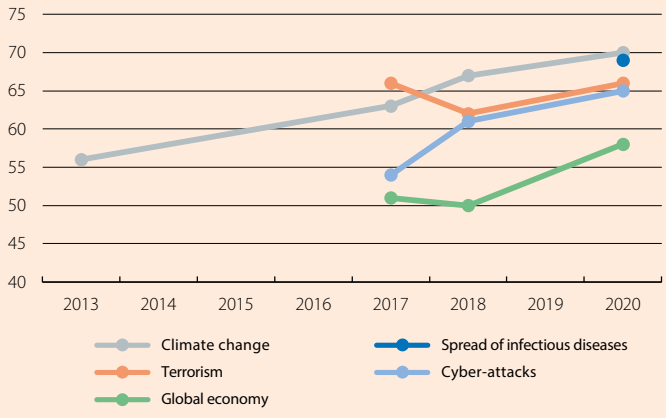
Concern about climate change has been on the rise in recent years and, following the COVID-19 outbreak, not only has it not diminished, but it has continued to grow. In fact, 70% of participants in a global Ipsos survey conducted last spring consider climate change to be at least as serious a crisis as that caused by COVID-19. Moreover, for the second consecutive year climate change is the biggest concern in countries participating in the Pew Research survey, even ahead of the pandemic or the state of the global economy, and the percentage of respondents who see it as a threat now stands at 70% (67% in 2018).[1]

If we look at the details of this survey by country, we see that concern is greatest in Europe: in 7 out of the 9 countries surveyed it is the biggest concern, while in the other two it comes second. In the US, in contrast, it ranks fifth, behind the spread of infectious diseases, cyber-attacks, terrorism, and the use of nuclear weapons. There is also a positive correlation between the countries where this concern has increased the most since 2018 and the impact of the virus, measured by deaths per 100,000 inhabitants.

As a result of the COVID-19 pandemic, heightened environmental awareness has been amplified by the perception of the benefits of living in a cleaner world. The reduction in pollution during the weeks of full lockdown allowed many citizens to see first-hand the increased quality of life and well-being that comes with breathing cleaner air. In this regard, a study conducted in China shows that, in cities that experienced the greatest reduction in air pollution during the wave of coronavirus in February and March 2020, citizens' interest in environmental issues increased to a greater extent and more measures considered green were adopted in the following months.[2]

World: perceived threats to society

Percentage of the population that considers... as a threat to their country



Source: *CaixaBank Research, based on data from Pew Research.*

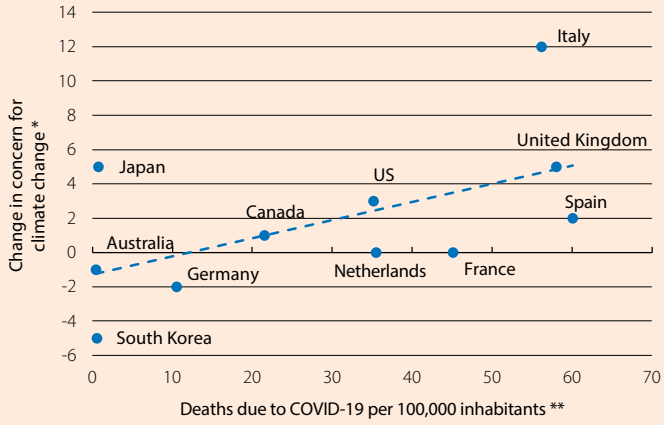
1. In a survey by the European Investment Bank, which is more focused on short-term threats, the challenge of climate change lies behind the COVID-19 pandemic and the economic and financial situation.
2. See M.E. Kahn *et al.* (2020). «Clean Air as an Experience Good in Urban China». National Bureau of Economic Research.

Changes in consumption as a result of COVID-19

Beyond the changes in consumption patterns observed during the weeks when the pandemic limited social interaction, the COVID-19 pandemic may serve as a catalyst for changing some consumption patterns that could impact the environment in the medium and long term. On the one hand, the heightened perception of the risk of climate change after having lived through the pandemic could influence people's desire to consume goods and services more responsibly. In particular, consumers could increase their preference for local products, which would help reduce emissions from transportation. This is suggested by the result of a survey conducted in Germany by Deloitte, in which 28% of participants say that in future they will purchase local products more frequently than prior to the pandemic, compared with 68% and 4%, respectively, who would not change or would reduce their consumption of local products. However, while this is a step forward, some studies indicate how this rise in local consumption will have a relatively modest contribution to reducing greenhouse gas emissions, as the pollution generated by transportation in the food industry, for instance, is not very high.[3]

Another transformation of consumption patterns that has been accelerated by the COVID-19 pandemic is the increase in e-commerce, which was particularly marked in Q2 2020. Once the mobility restrictions were eased, retail sector purchases carried out online remained well above those observed in 2019, suggesting that the COVID-19 pandemic will have a persistent effect on consumption patterns.[4] However, it is not clear in which direction a potential increase in online consumption would affect the fight against climate change, as the change in greenhouse gas emissions will depend on the delivery method used in online purchases. As an example, receiving products purchased online directly at home is more polluting than traditional retail given that, in the final step of the distribution chain, the delivery of the order from the last distribution point to the buyer (last mile delivery) results in a journey undertaken in a polluting means of transport. In contrast, with a system in which the distribution is carried out at a centralised collection point, greenhouse gas emissions are reduced compared to the two previous cases.[5]

Change in concern for climate change and impact of COVID-19



Notes: ** Change between the 2018 Pew Research survey and that of the summer of 2020.*
***Prior to 9 June 2020.*
Source: *CaixaBank Research, based on data from Pew Research.*

Thus, the COVID-19 pandemic has helped raise awareness about climate change, opening up a window of opportunity for the consolidation of changes in consumption patterns that could help combat this phenomenon. On the other hand, this heightened awareness has also reached the corporate world, either through pressure from customers or due to the awareness of firms' own managers, shareholders or workers. The pandemic could thus lead companies to act in a more environmentally sustainable manner. Furthermore, there is mounting evidence that financial profits are not necessarily at odds with responsible behaviour: in 2020, companies with higher ESG ratings performed better than the overall indices.[6] Finally, as we shall see in the article «The green recovery» of this same Dossier, there is no doubt that the COVID-19 pandemic will be a catalyst in the fight against climate change through more ambitious public environmental policies.

Ricard Murillo Gili

3. See J. Poore and T. Nemecek (2018). «Reducing food's environmental impacts through producers and consumers». Science, 360(6392), 987-992.
4. For more details, see the article «The awakening of e-commerce in the retail sector» in the MR12/2020.
5. See S. Shahmohammadi *et al.* (2020). «Comparative Greenhouse Gas Footprinting of Online versus Traditional Shopping for Fast-Moving Consumer Goods: A Stochastic Approach». Environmental Science & Technology, 54(6), 3.499-3.509.
6. An S&P 500 sub-index which groups together companies that meet a minimum set of ESG criteria had a 1.4% higher profitability than the S&P 500 index as a whole last year. ESG stands for environmental, social, and governance.

The green recovery

Since there has been broad consensus on the need to transform the economy in order to make it environmentally sustainable, there has been a lot of emphasis on the important role that public policies must play. In the years prior to the COVID-19 pandemic, this broad consensus was forged at the global level and, in the case of the EU, there was a strong political will to transform the economy through the so-called Green Deal. This conviction has been redoubled after the outbreak of the pandemic. We are thus at a unique juncture to give even greater impetus to environmental policies, with support for a green economic recovery in the short term and, above all, the transformation of the economic model in the medium and long term in order to make it more sustainable and environmentally friendly.

A stimulus that helps in the short term, but also looks to the future

One of the most noteworthy aspects of the European recovery plan, known as Next Generation EU (NGEU),[1] is the significant role to be played by projects that contribute to the fight against climate change. It is important to note that promoting such projects does not necessarily mean that the impact on economic growth will be any less.[2] In this regard, the attached table lists some of the measures that could play a leading role in driving a green recovery which have been targeted by several international agencies, such as the IMF.

Green recovery: measures it could include

Industry and homes	▪ Aid to improve energy efficiency, both in industry and in the renovation of existing buildings. ▪ Making receipt of the public aid conditional on improvements being achieved in certain environmental indicators.
Energy	▪ Strengthen the power grid to allow it to take on more capacity. ▪ Accelerate the construction of wind and solar energy generation infrastructures.
Mobility	▪ Expand the electric vehicle charging network and assist in its manufacture. ▪ Improve urban mobility through public transport and cycle paths. ▪ Strengthen the rail network to facilitate interurban mobility and encourage its use for medium/long-distance travel.
R&D	▪ Promote research and development in new technologies that will be key to the energy transition: – Green hydrogen. – Capture and storage of greenhouse gases.

However, achieving emission reduction targets will also require additional measures which, in some cases, could slow down economic growth. For example, there is broad consensus among economists on the need to impose a tax on emissions (known as carbon price) that discourages the production of polluting goods and services in favour of those that are more environmentally sustainable. In this regard, a recent IMF study notes that the implementation of a global set of measures such as those described in the table, combined with the application of a carbon price that gradually increases, would not hinder long-term growth and would have a positive effect on the environment. Specifically, thanks to these measures, greenhouse gas (GHG) emissions in 2050 could be reduced by 80% compared to current levels, and the remainder required to reach climate neutrality would be achieved by extracting emissions from the atmosphere using both natural processes, accelerated through reforestation, and artificial processes, such as carbon capture and storage. The impact of this set of measures on the global economy would end up being neutral in the long term: the cumulative growth up until 2050 in the event of taking these measures would be very similar to that in a scenario in which these measures are not carried out. Moreover, this comparison does not take into account the possibility that, without these measures, the damage to the economy could in fact be much greater, as it would increase the risk of extreme weather events that have a high economic impact. Indeed, it is estimated that the increased frequency and violence of adverse weather events and the change resulting from new weather patterns in some regions could reduce global GDP in the year 2100 by between 15% and 25% if timely action is not taken.[3]

In terms of job creation, a green recovery leads to a relocation of jobs between the most polluting and the cleanest sectors. If we focus on the energy sector, the labour intensity (the amount of employment per unit of energy produced) of renewable sources is much higher than in the fossil-fuel-based energy generation industry, especially in the case of photovoltaic solar energy. Several studies support this and find that the generation of employment when investing in renewable energies and energy efficiency is almost three times greater than in the fossil fuel industry.[4] In any case, the green recovery must take into account

1. See «Everything you ever wanted to know about the European Recovery Plan but were afraid to ask» in the MR11/2020.
2. In particular, there is a fiscal multiplier for short-term green investments of between 0.6 and 1.1, in line with the multipliers for total investment. See H. Pollitt (2011). «Assessing the implementation and impact of green elements of Member States' National Recovery Plans. Final report for the European Commission (DG Environment)». Cambridge Econometrics.
3. See M. Burke, M. Davis and N. Diffenbaugh (2018). «Large potential reduction in economic damages under UN mitigation targets». Nature.
4. In particular, it is estimated that an investment of 1 million dollars in renewable energies and energy efficiency generates 7.5 jobs (2.7 in the case of a fossil-fuel investment). See H. Garrett-Peltier (2017). «Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model». Economic Modelling, pages 439-47.

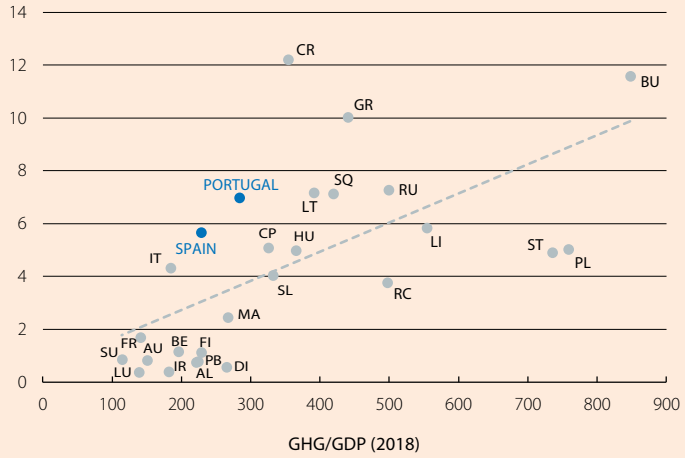
those sectors that may be adversely affected, since in the absence of compensation mechanisms, the transition could not be carried out harmoniously and fairly.[5]

The EU is strongly committed to the green recovery

In the case of NGEU, some 312.5 billion euros are expected to be paid out to EU Member States in the form of grants and a further 360 billion in loans between 2021 and 2026 in order to finance investment projects and reforms. The specific actions of the recovery plans must be presented by the Member States. However, on the climate front – one of the top priorities of NGEU, with 30% of the funds earmarked for combating climate change – they will need to focus on boosting clean and renewable energies, investing in cleaner transportation and improving the energy efficiency of buildings.[6] If we focus only on the grants, most of them will be allocated according to the GDP of each country and the impact of the COVID-19 pandemic. In this regard, although unintentional, the distribution of these funds will be positively correlated with individual countries' intensity of greenhouse gases per euro of GDP. This is a very positive development, since if investments are made properly, relatively more polluting countries will be able to catch up with those that already have a cleaner production model.

NGEU and GHG emissions

NGEU as a % of GDP (2019)



Source: *CaixaBank Research, based on data from the ECB and the European Commission.*

In the case of Spain, the European grants will amount to 72 billion euros (around 6% of the GDP of 2019), of which 37% (26,640 million euros) will go towards green investments. The impact that these aids will have on economic activity and employment could be much greater than that observed in previous recovery plans. Specifically, the estimates described in this article regarding the impact on the labour market suggest that, for every euro of the 26,640 million, up to 60% more employment could be created compared to under the PlanE of 2008, provided the investments are made properly.[7]

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5. See «The EU's climate transition: a question of justice» in the MR06/2020 for further details.
6. See «The Recovery Plan for Europe: a green wave for the real estate sector» in the *Real Estate Sectoral Report* of S1 2021.
7. The PlanE was the fiscal stimulus plan, without environmental conditions attached, which Spain implemented in 2008 in order to finance investment projects. It is estimated that for every million euros of the project, 5.7 jobs were created, whilst with green investment, according to the data shown in note 4, this figure could be around 9. See M. Alloza and C. Sanz (2019). «Jobs multipliers: evidence from a large fiscal stimulus in Spain». Working Paper 1922. Bank of Spain.

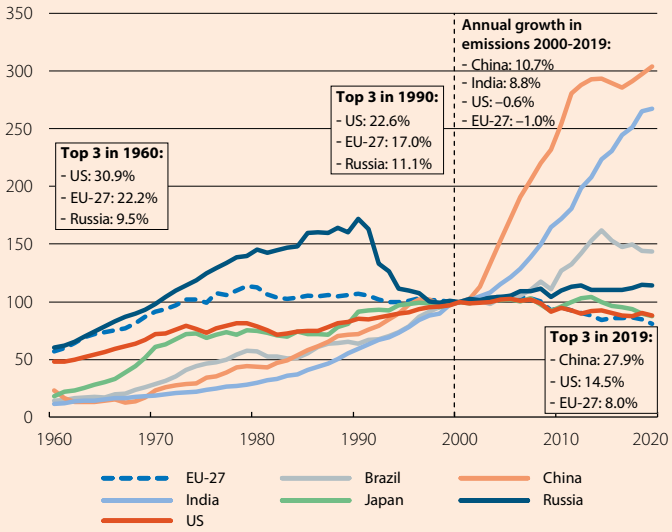
The geopolitics of climate change in the post-pandemic scenario

The pandemic of 2020 could become a major turning point of this century. This is a century marked by radical change and transformation, as demonstrated by such phenomena as the 2008 financial crisis, the emergence of the digital economy, the consolidation of China as one of the new pillars of the global economy, and... the acceleration of climate change with the resulting heightened environmental awareness.

Furthermore, the decade that is now beginning will probably also mark a turning point in geopolitics and international trade. The escalation of trade tensions between China and the US is reshaping the battlefield. As such, all the indicators suggest that over the coming years the epicentre of the discussion will not be on trade deficits, but rather will shift towards issues such as the intensity of greenhouse gas emissions and technological decoupling. Since the onset of the health crisis generated by the pandemic, the need for shorter and more resilient global value chains has already been raised. In this regard, governments could legislate to promote the local production of certain goods and services that are considered essential, such as essential healthcare equipment. The pandemic could thus reinforce protectionism at the global level, creating the political and social consensuses needed for the creation of more self-sufficient energy networks, industries and distribution chains. The EU has already given this movement a name: strategic autonomy. This change in trade relations will coincide with one of the great challenges of our time: climate change. As we will see in this article, the fight against climate change and the goal of reaching 2050 with zero net greenhouse gas emissions could serve as an important impetus to rewrite the rules of international trade and geopolitics.

Global carbon dioxide emissions: main emitters

Annual emissions (100 = year 2000)



Source: *CaixaBank Research, based on data from Global Carbon Project.*

Green international trade: ambitious targets but time for a transition

How can an international trading system be designed to be efficient, fair and to help achieve the targets outlined in the Paris Agreement? On the side of the major pollutants, there are hopeful signs: according to a report by the Global Energy Monitor (GEM), the installed capacity for coal-fired power production fell in the first half of 2020 for the first time in history. China, the country responsible for the highest share of emissions, has set itself the goal of achieving climate neutrality by 2060 and tripling its installed wind and solar power capacity over the next decade. Among the world's largest producers of oil and natural gas, meanwhile, the vast majority have announced plans this year to significantly reduce their emissions over the coming decades. Finally, US President-elect Joe Biden has reaffirmed his commitment to the Paris Agreement, his desire for the US to achieve climate neutrality by 2050 and his intention to implement a two-trillion-dollar investment plan over the next few years, with a strong focus on clean energies and sectors that are key to the green transition.

Even so, we are still in a transitional phase, and international cooperation mechanisms have been greatly weakened in recent years, which is expected to make it even harder for the good intentions announced to date to be turned into tangible and effective policies. In this context, effort must be put into devising instruments that help align each country's incentives with the global emission reduction targets, prevent environmental free-riding and establish good practices. One of these policies is cross-border emission taxes. Let's see what it is all about.

Carbon border taxes: the tariffs of the 21st century?

The course set by the EU and other major emitters for the coming decades in the field of emission reductions will lead to a significant rise in the levies on those emissions.[1] This could contribute to the relocation of the most polluting industries from «green» countries or regions to «brown» destinations, where they can gain a competitive advantage thanks to the lower price of emissions and export to other destinations from there. This phenomenon is known as carbon leakage. This has sparked a debate on how to avoid such leakage, with proposals such as a European mechanism for adjusting emissions at the border. This would

1. Mechanisms will be introduced making greenhouse gas emissions more expensive. There are two mechanisms for increasing the cost of greenhouse gas emissions: an emissions market (the regulator sets a maximum limit on the total amount of tonnes of CO_2 that can be emitted per year and region and, within the limit set, companies receive or purchase emission rights which they can then trade between one another) and an emissions tax (the regulator sets a price on greenhouse gas emissions that gradually increases).

essentially amount to a cross-border tax that is charged on the emission content of imports of goods and services, in a manner similar to the emission taxes to be imposed at the European level.[2]

Although its final design may vary, the plans outlined in the context of the European Green Deal seem to favour a cross-border adjustment mechanism targeted at specific sectors, with the aim of responding to two of the main challenges of its implementation: its administrative complexity and its legality within the framework of the World Trade Organization (WTO).[3] However, the fact that this plan only focuses on certain sectors could generate a significant substitution effect. This could result in an increase in imports of those sectors that are not taxed by this adjustment mechanism (especially products that are not subject to it) but which incorporate raw materials from sectors that are subject to the tax (an example of this problem in another context unrelated to climate change has occurred in the US, where very high tariffs have been imposed on metal, but nail imports were not taxed). Thus, a mechanism limited to certain sectors, despite its symbolic value, is likely to end up with limited effectiveness. Hence the importance of ensuring that this mechanism can be applied across most sectors and that the carbon footprint of all products and their components can be traced.

The implementation of such a mechanism is not only technically difficult, but also complex to implement at the political level. On the one hand, the countries hardest hit by this tax will tend to be emerging ones, as they generally have a lower capacity to produce clean energy. Therefore, there will be a debate over whether the revenues from this mechanism should be dedicated to strictly European projects (in which case it could be perceived as a protectionist tool) or to providing aid to the countries from which the taxed products originate in order to help them produce those products in a cleaner manner. On the other hand, this mechanism could lead to a domino effect of environmental protectionism if the countries subject to these taxes decide to retaliate.[4]

In the face of these problems, the European authorities will have to tread very carefully in order to develop an emission adjustment mechanism that is effective but avoids provoking major geopolitical tensions. Only in that case will such a mechanism succeed in setting an example for the world's other economies to accelerate the implementation of good environmental practices everywhere.

Green international trade: there are alternatives but no panaceas

What are the alternatives to the border adjustment mechanism? One possibility is international coordination for the introduction of emission caps allocated by industry or country, and taxes on excess emissions similar to the EU's emission trading system. These international coordination tools are expected to gain traction on both sides of the Atlantic, following the election of President-elect Joe Biden, as a way to apply pressure on other countries (particularly China and India) to bolster their efforts in the energy transition. A complementary alternative, which would require a greater degree of international cooperation than that shown to date, would be the creation of «climate clubs»,[5] that is, trade agreements among countries that have agreed on a certain international price on their emissions. These clubs would have two essential characteristics: on the one hand, their members would commit to setting the agreed common price on their emissions rather than negotiating national emission reductions. On the other hand, countries that decide not to participate in such clubs would be penalised, for instance through cross-border quotas, tariffs and adjustment mechanisms. These «climate clubs» could thus constitute a multilateral forum that could prove very useful for aligning the emission reduction incentive structures of the Paris Agreement's signatory countries. Moreover, the costs of not being part of the club would increase with their size, as countries that choose not to participate would lose the opportunity to gain unhindered access to the markets of the club's members.

In this context, and in a particularly volatile geopolitical environment, the importance of reaffirming and strengthening the leadership of supranational institutions is particularly significant, as it would enable ambitious and lasting policies to be adopted. Currently, shorter-term policies – such as border adjustment mechanisms – are being proposed to fill the gap left by the weakening of international cooperation in recent years. However, looking ahead to the future, new steps will have to be taken. In the case of the WTO, the main sentinel of international trade, trade disputes are likely to be rekindled over the coming years as a result of the rise in protectionism, the rethinking of global supply chains, disparate environmental targets and latent geopolitical tensions. If the negotiations for a post-Brexit trade agreement between the United Kingdom and the EU have proven to be thorny, designing new international trade mechanisms to promote environmental protection will be no less so. Commitment to the environment from all parties, in a spirit of global cooperation, will be key.

Luís Pinheiro de Matos

2. See, for instance, M. Mehling *et al.* (2018). «Beat protectionism and emissions at a stroke». Nature, 559, 321-324.
3. It is easier to restrict this mechanism to the most polluting sectors than to extend it to all products, since all contributions at all stages of the production chain would have to be calculated. Furthermore, this mechanism is only envisaged for imports of products subject to environmental taxation at the domestic level. Today, for example, only 40% of EU emissions fall under the EU emission allowance scheme. See, for instance, D. Gros and C. Egenhofer (2010). «Climate change and trade: taxing carbon at the border?» and G. Zachmann and B. McWilliams (2020). «A European carbon border tax: much pain, little gain». Bruegel Policy Contribution Issue nº 5.
4. The only border adjustment mechanism in force is currently applied in the California energy market, covering 85% of all polluting emissions, and illustrates the importance of the mechanism's design in order to minimise trade deviations (OECD. 2020. «Climate Challenge and Trade: Would border carbon adjustments accelerate or hinder climate action?»).
5. See W. Nordhaus (2019). «Climate Change: The Ultimate Challenge for Economics». American Economic Review, 109(6), 1991-2014.

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