

MR11

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ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS

INTERNATIONAL ECONOMY

Everything you ever wanted to know about the European Recovery Plan but were afraid to ask

SPANISH ECONOMY

The growth of e-commerce during the pandemic: myth or reality?

PORTUGUESE ECONOMY

DOSSIER: THE IMPACT OF THE COVID-19 CRISIS ON INEQUALITY IN SPAIN

The economic impact of the COVID-19 crisis on inequality: this time is different

How the COVID-19 pandemic has affected income distribution

Which groups are suffering the most as a result of the COVID-19 economic crisis?

Effects of the crisis and inequality at the provincial level

**MONTHLY REPORT -
ECONOMIC AND FINANCIAL
MARKET OUTLOOK**
November 2020

The *Monthly Report* is a publication developed jointly by CaixaBank Research and BPI Research (UEEF)

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Recoveries and setbacks

The recovery of GDP in Q3 was very good news. Having fallen by 22% in the first half of the year, in Q3 economic activity recovered more than half of the lost ground. This was much better than most analysts expected, although the latest data, such as those from the labor force survey, already indicated that our forecasts were overly prudent. And since we do not revise the forecasts every day – it would drive both those who follow them and ourselves mad – overly prudent they were proved to be.

The news, however, has been overshadowed by the new wave of infections we are currently experiencing and which threaten to roll back economic activity in the fourth quarter. During the course of Q3, economic activity lost momentum as the quarter advanced. With the tightening of social distancing restrictions with which we have begun Q4, it will be difficult to prevent a further decline in GDP.

The situation we are currently experiencing has once again placed the supposed dichotomy between health and the economy at the heart of the debate. But does such a dichotomy really exist? In a sense, yes. Faced with the imminent risk of collapse of the health system, a situation that would trigger a surge in the number of deaths, there may be no choice but to «close the economy». What we must ask ourselves is whether we can avoid reaching the point where we have to face such a dichotomy. And the answer is that perhaps we can. At the very least, it is worth doing everything possible to try. Allow me to use a war-based simile. Can wars be won without massive collateral damage? Yes, using precision weapons and strategies.

What strategies are best suited to combat the COVID-19 pandemic and avoid massive collateral damage to the economy? The experts have been telling us for a long time: at the individual level, responsible behaviour – hand hygiene, distancing, face masks and isolation in the event of infection – and, in terms of health management, the capacity for case detection and contact tracing. If we make these strategies work, there is no dichotomy between health and the economy. The two go hand in hand.

China is perhaps one example from which lessons can be drawn. There, the pandemic appears to be under control, and the economy has already bounced back above pre-COVID levels. Some will say that the Chinese political system and its ability to restrict freedoms is what explains the country's apparent success, but I wonder to what extent the political system is related to the will and ability to conduct 9 million tests in just a few days, as occurred in the city of Qingdao after a small outbreak was discovered. Closer to home, Slovakia has recently set out to test its entire adult population in the space of a few days with rapid tests to detect asymptomatic cases and stop the spread of the virus. Rapid tests can serve as an effective tool for managing and controlling the pandemic.

Devoting resources to testing and tracing capabilities is currently the best economic policy. But, of course, it is not the only one that must be carried out. As the Dossier of this *Monthly Report* shows, the public sector is playing a key role in supporting those who have lost much or all of their income due to the pandemic. This policy of income maintenance has not only been key to mitigating the rise in inequality, but it has also helped to sustain the pulse of the economy. This is yet another example that dispels accepted blueprints: less inequality and more economic efficiency can go hand in hand. We are faced with a set of circumstances which require us to spread the costs of the crisis, for the purposes of both efficiency and equity.

Enric Fernández
Chief economist
31 October 2020

Chronology

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%.

JUNE 2020

- 4 The ECB expands the envelope for the pandemic emergency purchase programme (PEPP) by 600 billion euros (to 1.35 trillion), extends its duration until mid-2021 and announces a programme of reinvestments for the PEPP until the end of 2022.
- 21 The Government of Spain ends the state of alarm.

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.

MAY 2020

- 5 The German Constitutional Court rules that the PSPP (the Public Sector Purchase Programme that the ECB has been implementing since 2015) does not take due account of the principle of proportionality and calls for an analysis of its costs and benefits within three months.
- 27 The European Commission proposes a recovery plan which includes a 750 billion-euro fund financed by issues of debt by the Commission itself and in which 500 billion euros would be distributed among EU countries in the form of (non-refundable) transfers.

Agenda

NOVEMBER 2020

- 4 Spain: registration with Social Security and registered unemployment (October).
Portugal: employment (Q3).
- 4-5 Federal Open Market Committee meeting.
- 6 Spain: industrial production (September).
- 9 Portugal: international trade (September).
- 13 Portugal: GDP flash estimate (Q3).
- 16 Japan: GDP (Q3).
- 18 Governing Council of the European Central Bank meeting.
- 20 Portugal: Fitch rating.
Portugal: coincident economic activity indicators (October).
- 24 Spain: loans, deposits and NPL ratio (September).
- 27 Spain: state budget execution (October).
Euro area: economic sentiment index (November).
- 30 Spain: CPI flash estimate (November).

DECEMBER 2020

- 2 Spain: registration with Social Security and registered unemployment (November).
Portugal: public debt (October).
Portugal: industrial production (October).
- 10 Governing Council of the European Central Bank meeting.
- 10-11 European Council meeting.
- 11 Spain: Fitch rating.
- 15-16 Federal Open Market Committee meeting.
- 17 Spain: quarterly labour cost survey (Q3).
Portugal: tourist activity (October).
- 22 Spain: loans, deposits and NPL ratio (October and Q3).
Portugal: home prices (Q3).
- 23 Spain: quarterly national accounts (Q3).
Spain: balance of payments and NIIP (Q3).
Spain: state budget execution (November).
Spain: household savings rate (Q3).
- 30 Spain: CPI flash estimate (December).
- 31 Portugal: NPL ratio (Q3).

Relapse

Recent events recall the experience of a few months ago. The flow of news about measures and events determining the economic pulse has accelerated once again, and using traditional indicators it is difficult to accurately assess the situation we are currently in. Once again, uncertainty surrounding the immediate future has reared its head and fears have reemerged of a worsening of the situation. How much will economic activity fall by this time?

The GDP data for Q3 may appear to offer somewhat outdated information, but they are a highly valuable indicator of the state of the economy before the onset of the second wave of the pandemic. Indeed, the economy was in a better state than expected, as the data published has exceeded even the most optimistic forecasts. In the US, GDP growth stood at 7.4% quarter-on-quarter, and the year-on-year rate of change went from -9.0% in Q2 to -2.9% in Q3. In the major European countries, the figures have been equally positive, with 12.7% quarter-on-quarter growth in the euro area as a whole, bringing the year-on-year growth rate to -4.3%. Economic activity remains far from the pre-pandemic level, but the rate of decline is now more in line with that experienced during the Great Recession. For instance, in the worst quarter of 2009 GDP declined by nearly -4% in the US, while in the euro area the drop exceeded -5%.

The advance of the Spanish economy in Q3 has also been better than expected, but the fall in economic activity compared to pre-pandemic levels remains significant and clearly greater than in other developed countries. GDP rose by 16.7% quarter-on-quarter, allowing the year-on-year rate of change to moderate from -21.5% in Q2 to -8.7% in Q3. As a point of reference, during the Great Recession GDP fell by 4.4% year-on-year in Q2 2009. The only GDP decline of a similar magnitude to the current one is the total decline amassed between 2008 and 2013, amounting to -9%.

Q4 has not started on a good footing. During October, the second wave of the pandemic intensified in virtually all developed countries, forcing measures to reduce social contacts to be tightened. The latest economic activity indicators already reflect the economic impact of the new restrictions. Of particular note is the downward shift in business sentiment according to the PMIs, especially those concerning the services sector in Europe, which have entered contractionary territory. The population mobility indicators, which to date have captured the effects of the measures on economic activity with remarkable precision, have also undone some of the progress achieved in recent months. After approaching pre-pandemic levels during the summer months, at

the end of October they were back at levels similar to those registered in June, ranging from -15% in Germany to -25% in the United Kingdom.

Over the past few weeks, the Spanish economy has followed a similar pattern to that of its European neighbours, but from a lower starting point. In October, the services PMI fell to 41.4 points, mobility ended the month more than 30% down on pre-pandemic levels and expenditure with Spanish cards on CaixaBank POS terminals plus cash withdrawals fell by 8% year-on-year in the last half of the month. Overall, the economic activity indicators have taken a step backwards and are also at levels similar to those of June, but they remain a far cry from those registered between the end of March and May.

The relapse is a fact, and this will force us to review CaixaBank Research's forecast scenario over the coming weeks. If the second wave can be stopped without the need to step up the measures being imposed, then the decline in economic activity that is expected to occur in the coming months will be much lower than in the first wave. In any case, the resilience of businesses and households will be once again tested, and support measures will again be needed to cushion the blow.

In this context, the ECB has already begun to prepare the ground to announce an increase of its monthly asset purchases over the coming months, probably in December. Several European countries have already announced additional support measures for the groups that have been hardest hit. In the US, following the election of Joe Biden as the new president, and despite the fact that the Senate and the House of Representatives seem likely to be divided between Democratic and Republican hands, a major fiscal stimulus package is also expected to be approved. As for Spain, the budgets that are finally approved will play a particularly important role. The measures to support the people and sectors most affected by the pandemic must be comprehensive and effective. Accelerating the implementation of measures aimed at facilitating economic revival and transformation will also be very helpful. All of this entails enormous budgetary effort, so any increase in other current expenditure should be very prudent and the macroeconomic picture on which the budgets are based, given the uncertainty, should avoid relying on optimism. It would be better to leave a certain fiscal margin, in case more measures are needed to support the groups most affected and to ensure the credibility of the public accounts.

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	0.30	0.30	0.35
12-month Libor	3.86	1.26	3.08	1.97	0.60	0.60	0.70
2-year government bonds	3.70	0.80	2.68	1.63	0.30	0.30	0.50
10-year government bonds	4.70	2.58	2.83	1.86	0.95	1.00	1.20
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	-0.45	-0.45	-0.45
1-month Euribor	3.18	0.67	-0.37	-0.45	-0.45	-0.45	-0.43
3-month Euribor	3.24	0.85	-0.31	-0.40	-0.45	-0.45	-0.40
6-month Euribor	3.29	1.00	-0.24	-0.34	-0.40	-0.40	-0.35
12-month Euribor	3.40	1.19	-0.13	-0.26	-0.35	-0.35	-0.30
Germany							
2-year government bonds	3.41	0.55	-0.60	-0.63	-0.60	-0.50	-0.45
10-year government bonds	4.30	1.82	0.25	-0.27	-0.30	-0.15	0.00
Spain							
3-year government bonds	3.62	2.06	-0.02	-0.36	0.06	0.22	0.26
5-year government bonds	3.91	2.59	0.36	-0.09	0.21	0.38	0.44
10-year government bonds	4.42	3.60	1.42	0.44	0.60	0.65	0.70
Risk premium	11	178	117	71	90	80	70
Portugal							
3-year government bonds	3.68	4.02	-0.18	-0.34	0.17	0.33	0.38
5-year government bonds	3.96	4.67	0.47	-0.12	0.39	0.53	0.59
10-year government bonds	4.49	5.35	1.72	0.40	0.65	0.75	0.80
Risk premium	19	353	147	67	95	90	80
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.29	1.14	1.11	1.18	1.20	1.22
EUR/JPY (yen per euro)	129.50	126.40	127.89	121.40	125.40	128.40	130.54
USD/JPY (yen per dollar)	115.34	98.97	112.38	109.25	106.27	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	0.77	0.76	0.74
OIL PRICE							
Brent (\$/barrel)	42.3	82.5	57.7	65.2	42.0	55.0	60.0
Brent (euros/barrel)	36.4	63.2	50.7	58.6	35.6	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	-4.4	6.2	4.0
Developed countries	2.7	1.3	2.2	1.7	-5.6	5.4	3.0
United States	2.7	1.5	3.0	2.2	-5.3	5.1	3.9
Euro area	2.2	0.7	1.9	1.2	-8.2	6.6	2.1
Germany	1.6	1.3	1.6	0.6	-5.8	5.5	1.7
France	2.2	0.8	1.7	1.2	-11.5	7.9	2.7
Italy	1.5	-0.5	0.7	0.3	-10.8	7.2	1.6
Portugal	1.5	0.0	2.9	2.2	-10.0	5.9	3.4
Spain	3.7	0.3	2.4	2.0	-12.5	8.6	3.7
Japan	1.5	0.5	0.3	0.7	-6.0	3.3	1.4
United Kingdom	2.9	1.1	1.3	1.4	-10.4	8.7	2.2
Emerging and developing countries	6.5	5.1	4.5	3.7	-3.4	6.6	4.7
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	-7.0	3.2	2.4
Mexico	2.4	2.1	2.2	-0.3	-10.0	3.5	2.2
Russia	7.2	0.9	2.5	1.3	-5.5	3.5	2.2
Turkey	5.4	5.1	2.8	0.9	-4.3	4.0	3.4
Poland	4.0	3.4	5.4	4.2	-3.5	4.4	3.9
INFLATION							
Global	4.1	3.7	3.6	3.5	3.1	2.8	3.0
Developed countries	2.1	1.5	2.0	1.4	0.7	1.4	1.7
United States	2.8	1.7	2.4	1.8	1.2	2.1	2.2
Euro area	2.1	1.4	1.8	1.2	0.2	0.8	1.4
Germany	1.7	1.3	1.9	1.4	0.4	0.9	1.5
France	1.8	1.2	2.1	1.3	0.4	0.8	1.4
Italy	1.9	1.5	1.2	0.6	-0.3	0.6	1.2
Portugal	3.0	1.2	1.0	0.3	0.1	0.9	1.3
Spain	3.2	1.4	1.7	0.7	-0.2	1.7	1.5
Japan	-0.3	0.3	1.0	0.5	0.1	0.3	0.3
United Kingdom	1.9	2.4	2.5	1.8	0.7	1.1	1.4
Emerging countries	6.7	5.7	4.9	5.1	4.9	4.2	4.1
China	1.7	2.6	2.1	2.9	2.7	2.0	2.3
India	4.5	8.0	3.9	3.7	4.2	4.1	4.7
Brazil	7.3	6.1	3.7	3.7	2.6	3.3	4.0
Mexico	5.2	4.2	4.9	3.6	2.5	2.5	3.5
Russia	14.2	8.7	2.9	4.5	3.1	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	3.5	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	-12.1	8.6	2.9
Government consumption	5.0	0.9	2.6	2.3	3.1	1.6	1.3
Gross fixed capital formation	5.6	-2.8	6.1	2.7	-17.3	13.7	4.0
Capital goods	4.9	-0.5	5.4	4.4	-25.9	9.1	4.0
Construction	5.7	-5.2	9.3	1.6	-18.1	14.1	4.0
Domestic demand (vs. GDP Δ)	4.4	-0.7	2.8	1.5	-9.5	7.9	2.7
Exports of goods and services	4.7	3.1	2.3	2.3	-26.6	15.1	9.1
Imports of goods and services	7.0	-0.3	4.2	0.7	-20.2	13.0	6.2
Gross domestic product	3.7	0.3	2.4	2.0	-12.5	8.6	3.7
Other variables							
Employment	3.2	-1.0	2.5	2.3	-8.5	0.4	3.6
Unemployment rate (% of labour force)	10.5	20.5	15.3	14.1	17.5	18.9	16.3
Consumer price index	3.2	1.4	1.7	0.7	-0.2	1.7	1.5
Unit labour costs	3.0	0.1	1.2	2.3	8.1	-5.5	2.2
Current account balance (% GDP)	-5.9	-0.8	1.9	2.0	1.1	1.5	1.9
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	-13.1	-9.5	-7.3

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	-8.3	6.7	3.5
Government consumption	2.3	-0.6	0.6	0.7	-0.2	2.3	0.2
Gross fixed capital formation	-0.3	-2.0	6.2	5.4	-10.3	-1.7	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	-7.6	4.9	3.2
Exports of goods and services	5.2	4.0	4.2	3.5	-21.8	11.7	8.2
Imports of goods and services	3.6	2.2	5.0	4.7	-16.4	8.8	7.4
Gross domestic product	1.5	0.0	2.9	2.2	-10.0	5.9	3.4
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	8.3	10.4	9.0
Consumer price index	3.0	1.2	1.0	0.3	0.1	0.9	1.3
Current account balance (% GDP)	-9.2	-3.6	0.4	-0.1	-1.9	-1.0	-0.6
External funding capacity/needs (% GDP)	-7.7	-2.2	1.4	0.9	-0.9	0.8	1.3
Fiscal balance (% GDP)	-4.6	-6.1	-0.3	0.1	-8.6	-5.6	-2.6

■ Forecasts

Volatility returns to the financial markets

Investors remain cautious. Continuing the tone set in September, in October investor sentiment continued to deteriorate with the notable spread of COVID-19 in developed countries. Market attention was focused on what new measures would be imposed to contain the pandemic, as well as the continued support from central banks (the ECB appears set to announce further stimuli in December) and the negotiations over a new fiscal package in the US Congress. Against a background of nervousness in the run-up to the US presidential election, these factors fuelled the surge in volatility in the financial markets, and particularly in the stock and commodity markets, which registered significant losses in October. Meanwhile, the increased demand for lower-risk assets hoisted up the dollar and sovereign US and German debt. In short, the reality of a volatile autumn in the financial markets is beginning to set in among investors, although the prospect of continuity of the accommodative monetary environment in the medium term will help to dampen the risk of financial stress like that suffered in March. This being the situation up until the end of October, at the cut-off date of this report there was confirmation of the Democratic victory in the US presidential election, which was followed by a change in sentiment and gains beginning to be registered in the stock markets.

The second wave of infections punishes the stock markets. In this scenario of uncertainty over the economic recovery, in October the major stock market indices added further declines to those already experienced in September. On this occasion, unlike in the previous month, the losses were more pronounced in the European stock markets (above 5% on average) due to the severity of the mobility restrictions imposed across much of the continent as well as the composition of the indices (with greater predominance of cyclical sectors). The US indices, meanwhile, registered smaller losses, partly thanks to a relative improvement in corporate earnings during Q3 this year. Specifically, and up until the cut-off date of this report, around 70% of the firms that have announced their results have managed to beat the sales and profit expectations of the analyst consensus, and many expect their revenues to improve over the coming quarters. The emerging-economy indices, meanwhile, overcame the September blip and registered gains of around 2%, driven by the Asian stock markets and favoured by the rising demand for raw materials, such as industrial metals.

The pandemic threatens the demand for crude oil. Volatility also spread in the oil market due to fear of the impact that the new mobility restrictions would have on the demand for fuel over the coming months. The price of a barrel of Brent suffered its biggest monthly decline since March, bringing it to around 37 dollars. In recent weeks, forecasts by the major international energy agencies and OPEC have coincided in anticipating the slowdown in demand for crude oil in the

Implicit volatility in the financial markets

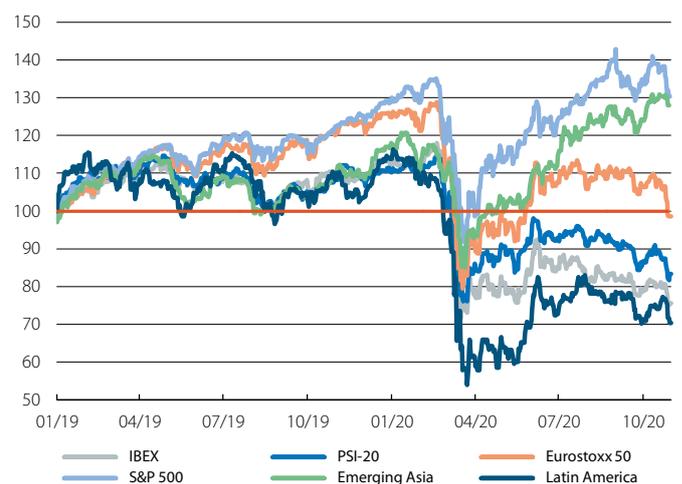
Index (100 = January 2019)



Source: CaixaBank Research, based on data from Bloomberg.

Main international stock markets

Index (100 = January 2019)

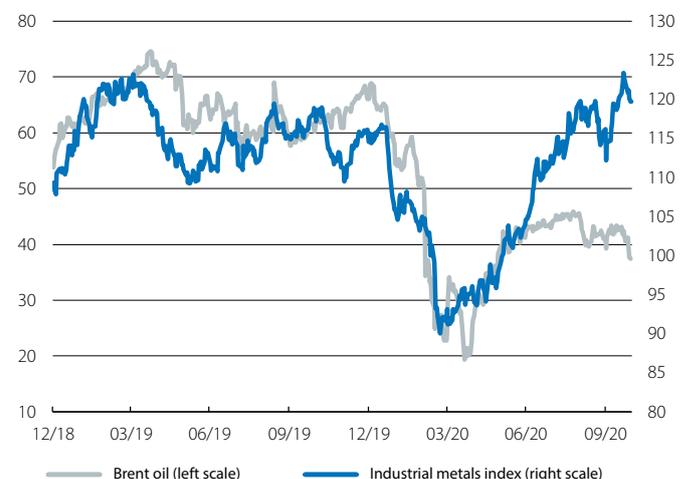


Source: CaixaBank Research, based on data from Bloomberg.

Price of Brent oil and industrial metals

(Dollars per barrel)

(Price index in dollars)



Source: CaixaBank Research, based on data from Bloomberg.

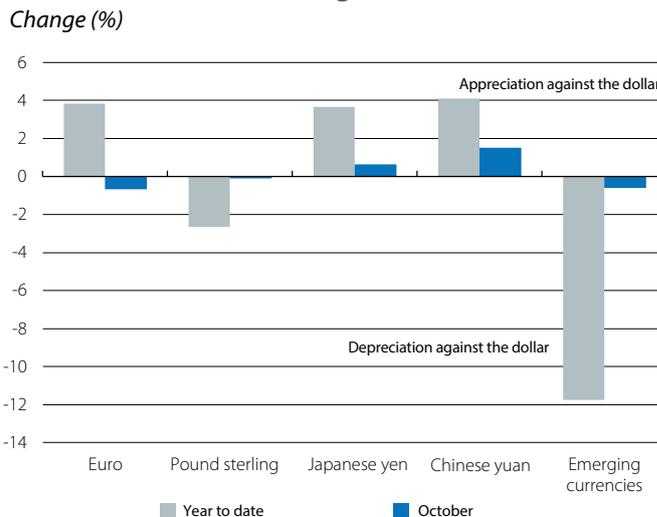
coming quarters, a process that could be accentuated by a surge in new outbreaks of the virus. Therefore, and in order to limit the rise in downward pressure on the price of the barrel, OPEC and its allies agreed to meet at the end of this month to address their strategy for action in the current environment of excess demand.

The dollar continues to gather strength. Investors favoured flows towards safe-haven currencies (the dollar, Japanese yen and Swiss franc), taking a defensive position in view of the worsening health crisis in Europe and the deterioration of the economic outlook. In this context, the dollar appreciated against the euro and emerging currencies. Among the latter group of currencies, of particular note was the continuing depreciation of the Turkish lira which, far from achieving any sort of stability following the rate hike by Turkey's central bank, continued to weaken to historic lows.

Sovereign rates remain low. US and euro area sovereign debt continued to offer very low yields. However, in October the rate curves followed a different path on each side of the Atlantic. In the US, the improved economic activity and consumption data for Q3 fuelled a rise in the yield on 10-year bonds in excess of 0.80% (a five-month high), despite the lack of an agreement on a new fiscal stimulus. In the euro area, in contrast, the long-term yields on the German *bund* fell to the levels of six months ago in the face of the surge in the pandemic and the potential deterioration in economic growth. Nevertheless, the ECB's message about the possible extension of its monetary stimulus measures before the end of the year somewhat dispelled investors' pessimism. Furthermore, the risk premiums of the euro area periphery remained relatively stable, held down by an ambitious response from European policy both at the fiscal level (in October, EU Member States began drawing up their recovery plans in order to receive funds from Next Generation EU) and at the monetary level (in the year to date, the ECB has acquired both public and private debt assets worth around 920 billion euros under its PEPP and APP purchasing programmes, equivalent to 8% of the euro area's nominal GDP in 2019).

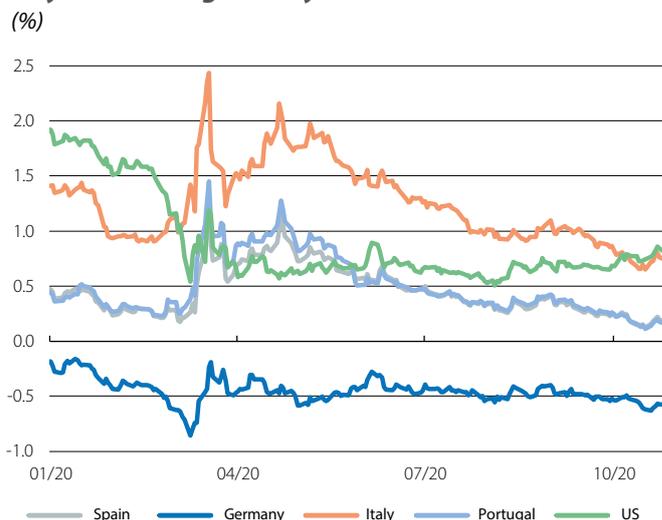
The ECB prepares the ground for action in December. Following the Governing Council's meeting held last month, while the ECB did not alter its monetary policy, it did announce that it will be launching a new stimulus in December. According to Christine Lagarde, the rise in infections and the subsequent measures aimed at containing the COVID-19 pandemic are causing the economic scenario to deteriorate in Q4 2020. The monetary policy measures launched since March have been very decisive and allow the ECB to take a few weeks to properly gauge the new monetary stimulus, which will most likely be announced in December. In this regard, Lagarde's words at the post-meeting press conference suggest that the ECB is very likely to step up its asset-purchase programmes (the so-called PEPP and APP). However, she also stressed that the entity has not ruled out the possibility of using other tools and even stated that they will study how the various tools available might complement one another.

International currencies against the dollar



Source: CaixaBank Research, based on data from Bloomberg.

10-year sovereign debt yields



Source: CaixaBank Research, based on data from Bloomberg.

Market inflation expectations for the euro area



Source: CaixaBank Research, based on data from Bloomberg.

Interest rates (%)

	31-Oct.	30-Sep.	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	-0.52	-0.50	-3	-14.0	-12.4
1-year Euribor	-0.49	-0.44	-5	-24.0	-20.8
1-year government bonds (Germany)	-0.70	-0.60	-10	-6.7	-8.2
2-year government bonds (Germany)	-0.79	-0.70	-9	-19.3	-13.8
10-year government bonds (Germany)	-0.63	-0.52	-11	-44.2	-24.5
10-year government bonds (Spain)	0.14	0.25	-11	-33.3	-13.9
10-year government bonds (Portugal)	0.11	0.26	-16	-33.7	-9.8
US					
Fed funds	0.25	0.25	0	-150.0	-150.0
3-month Libor	0.22	0.23	-2	-169.3	-167.5
12-month Libor	0.33	0.36	-3	-166.6	-159.5
1-year government bonds	0.12	0.12	0	-144.9	-140.1
2-year government bonds	0.15	0.13	3	-141.7	-140.0
10-year government bonds	0.87	0.68	19	-104.4	-83.7

Spreads corporate bonds (bps)

	31-Oct.	30-Sep.	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	65	60	6	21.2	15.0
Itraxx Financials Senior	85	78	6	33.0	27.4
Itraxx Subordinated Financials	164	154	10	50.2	44.7

Exchange rates

	31-Oct.	30-Sep.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.165	1.172	-0.6	3.9	4.3
EUR/JPY (yen per euro)	121.930	123.650	-1.4	0.1	0.9
EUR/GBP (pounds per euro)	0.900	0.907	-0.8	6.3	4.2
USD/JPY (yen per dollar)	104.660	105.480	-0.8	-3.6	-3.3

Commodities

	31-Oct.	30-Sep.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	409.6	406.0	0.9	2.0	5.1
Brent (\$/barrel)	37.5	41.0	-8.5	-43.2	-39.3
Gold (\$/ounce)	1,878.8	1,885.8	-0.4	23.8	24.1

Equity

	31-Oct.	30-Sep.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	3,270.0	3,363.0	-2.8	1.2	6.6
Eurostoxx 50 (euro area)	2,958.2	3,193.6	-7.4	-21.0	-18.4
Ibex 35 (Spain)	6,452.2	6,716.6	-3.9	-32.4	-30.8
PSI 20 (Portugal)	3,945.1	4,067.0	-3.0	-24.3	-22.9
Nikkei 225 (Japan)	22,977.1	23,185.1	-0.9	-2.9	0.6
MSCI Emerging	1,103.5	1,082.0	2.0	-1.0	5.2

A difficult end to the year amid new outbreaks

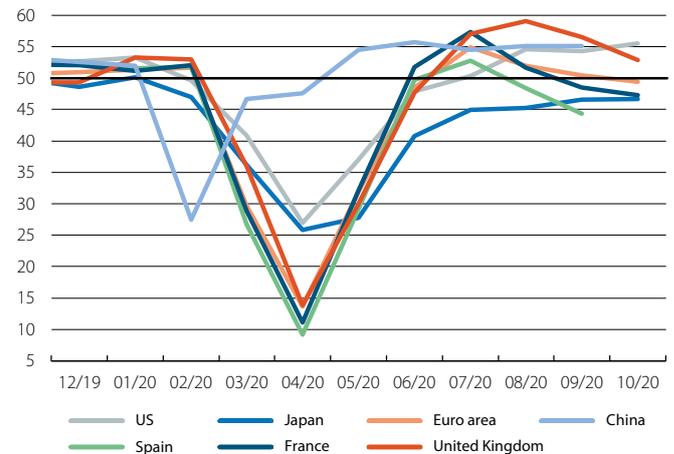
Loss of buoyancy in the closing stages of the year. Despite the rebound of GDP in Q3, the latest economic activity indicators show a loss of buoyancy towards the end of 2020, especially in European economies, where the composite Purchasing Managers' Index (PMI) fell for the third consecutive month in October to 49.4 points (-1.0 compared to September). The deterioration was due to the fall in the services component (the manufacturing component improved), reflecting the fact that the new restrictions on socialising are already beginning to hit numerous service sub-sectors. In contrast, in the US the composite PMI increased to 55.5 points (54.3 in September), comfortably above the 50-point threshold. However, the US economy's greater buoyancy could be compromised by the new coronavirus outbreaks that are already occurring, and it would come as no surprise if the second wave were to occur somewhat later on the American continent, as was the case with the first wave. In this context, CaixaBank Research's outlook for global GDP forecasts that the decline in economic activity in 2020 will be followed by a relatively vigorous recovery in 2021 (in the order of 5%-6%). Again, however, what happens during the first few months of 2021 will be key and will depend on the fluctuations of the pandemic and the progress made in the field of healthcare to combat COVID-19.

ADVANCED ECONOMIES

Considerable rebound in US economic activity in Q3 2020. US GDP increased by 7.4% quarter-on-quarter, a significant advance following the sharp fall registered in Q2 (-9.0% quarter-on-quarter) due to the impact of the COVID-19 pandemic. With this solid recovery, the year-on-year growth rate improved substantially, although it remained in contractionary territory (-2.9% year-on-year in Q3, compared to -9.0% in Q2). This rebound is both expected and logical, following the lifting of the strict lockdown in place in April and May. Nevertheless, the progress has been greater than that expected by many analysts (including CaixaBank Research). Indeed, the high degree of uncertainty that surrounded the revival of the economy in Q3 was apparent in the disparity between the estimates of the Atlanta Fed and the New York Fed just before the figure was published (9% non-annualised quarter-on-quarter and 3.5%, respectively). By components of demand, the improvement was widespread, although private consumption registered a particularly high increase (+8.9% quarter-on-quarter), supported by spending on durable goods. In contrast, public spending declined compared to Q2, although this trend should be reversed if the new stimulus measures being discussed by Congress are approved (see the [Brief Note of 29-10-2020](#) for details).

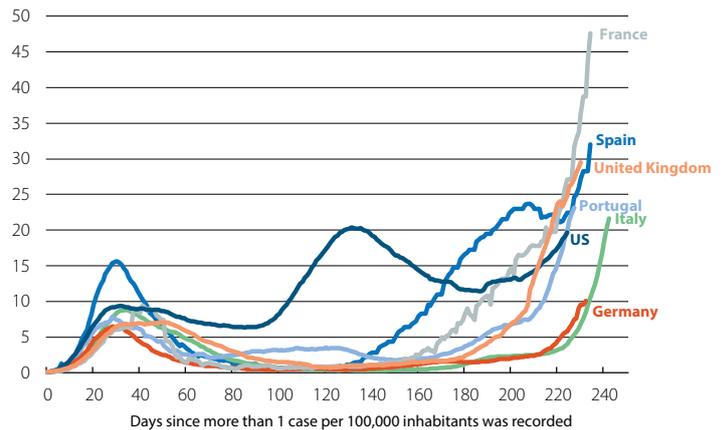
The US faces some very difficult months ahead. Although several of the latest economic activity indicators show that the US economy is resisting the current crisis better than most

Composite PMI by country
Level



Note: The PMIs for October are flash estimates.
Source: CaixaBank Research, based on data from Markit.

Daily COVID-19 cases since 1 case per 100,000 inhabitants was recorded
Infections per 100,000 inhabitants (14-day averages)



Note: Data available up to 26 October 2020.
Source: CaixaBank Research, based on data from Johns Hopkins CSSE, UN World Population Prospects.

US: GDP
Change (%)



Source: CaixaBank Research, based on data from the Bureau of Economic Analysis.

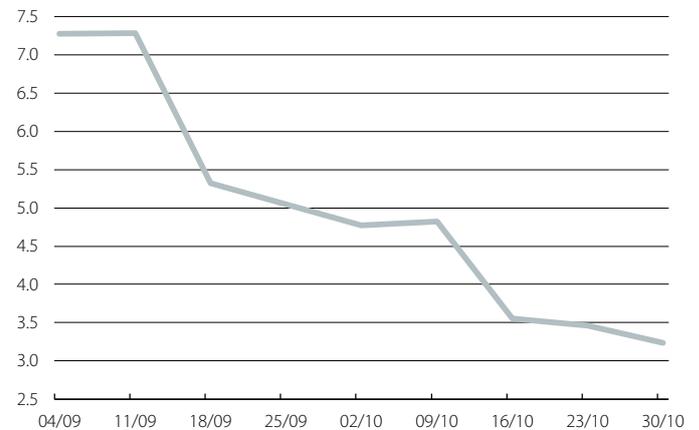
advanced economies (in addition to the good composite PMI figure, several indicators for the real estate sector and the labour market have registered gains), the rise in new infections could hold back the recovery. The counterpoint to the favourable data can be seen in the deteriorating expectations of the Conference Board’s consumer confidence index and the slight decline in the New York Fed’s weekly economic activity index. In fact, according to the latter’s forecasting model, the GDP projection for Q4 2020 has been gradually eroded in recent weeks.

The Democratic victory raises the prospect of a new fiscal stimulus. At the close of this report, we learned of the US election result, where, finally, Democratic candidate Joe Biden defeated Republican President Trump in the presidential elections. In the case of Congress, it seems that it will maintain its division (although this is not yet definitive): the Democrats have a majority in the House of Representatives, and the Republicans in the Senate. In this political context and with COVID-19 threatening the US recovery, the government will continue to offer support to the economy. This support could end up being confirmed during the months of December and January for an amount of ~1.5 trillion dollars (7.5% of GDP), and it would come in addition to the 3 trillion dollars already approved (with some 2 trillion in direct-spending measures). Monetary policy is also providing a strong mainstay for the economy in the form of low interest rates, large-scale asset purchases and support programmes for firms (see the [Financial Markets](#) section for details).

In Europe, GDP also registered a significant rebound in Q3. Economic activity advanced by a solid 12.7% quarter-on-quarter in Q3 2020, following an 11.8% drop in Q2. However, as in the case of the US, although growth was considerable, economic activity remains well below pre-pandemic levels (the year-on-year change was -4.3%). By country, France registered the biggest rebound (+18.2% quarter-on-quarter), followed by Spain (+16.7%) and Italy (+16.1%), while in Germany the increase was also respectable but somewhat lower (+8.2%). This disparity in growth was to be expected, since the German economy suffered the smallest contraction in Q2, while the Spanish economy was by far the hardest hit (see the [economic outlook article on the Spanish economy](#) for details on the figure for Spain). Despite the rebound, the German economy was 4.2% below the level of Q3 2019, the French economy 4.3% below, the Italian economy 4.7% and the Spanish economy 8.7% (see the [Brief Note of 30-10-2020](#) for details).

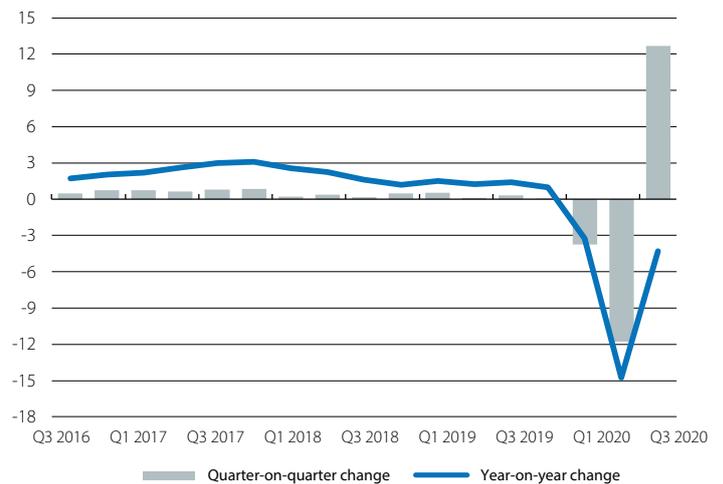
European economic activity loses momentum in Q4. The latest economic indicators show that the improvement has been losing momentum since the end of the summer, as infection rates have increased. This is indicated by the new deterioration in the composite PMIs in October, mentioned at the beginning. In the same vein, the mobility index drawn up by Google points towards a sharp decline since the end of September in most European countries, a trend that will continue in light of the new restrictions on mobility imposed in most economies in recent days. On the other hand, in this

US: Q4 2020 GDP estimate, New York Fed
Annualised quarter-on-quarter change (%)



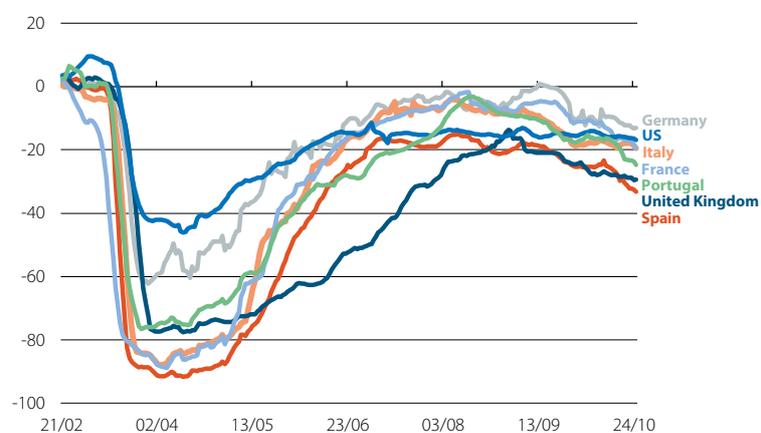
Source: CaixaBank Research, based on the Nowcasting model of the New York Fed.

Euro area: GDP
Change (%)



Source: CaixaBank Research, based on data from Eurostat.

Mobility of the population in retail
Change relative to the baseline level* (%)



Notes: 7-day 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.

context of pandemic, inflation remains very weak: in October, headline inflation remained at -0.3%, a far cry from the ECB's target rate and with no clear signs of improvement in recent months. Core inflation also remained stable at a weak +0.2% (not only due to the impact of the COVID-19 pandemic, but also due to the base effect of different tax cuts). These levels, and the prospect of them persisting over the coming quarters, led the ECB to prepare additional monetary stimuli ahead of its next meeting in December (see the [Financial Markets section](#) for further details).

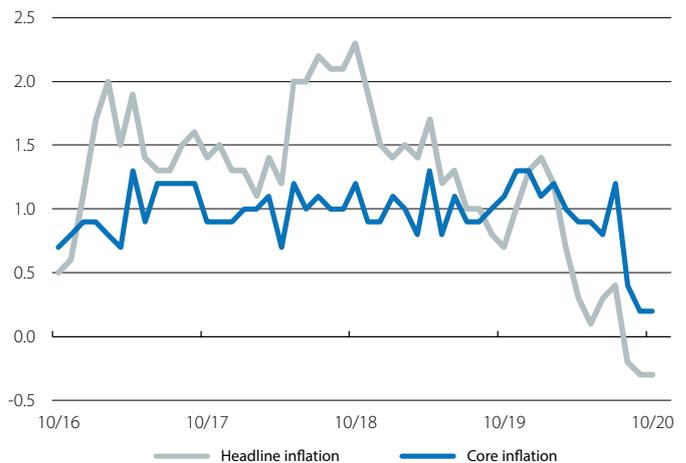
EMERGING ECONOMIES

The recovery gains strength in China. China's GDP advanced 4.9% year-on-year in Q3 2020 (+2.7% quarter-on-quarter), well above the 3.2% year-on-year rate of the previous quarter and with a more favourable composition (less reliance on public investment). Furthermore, the economic activity data for September, which were published together with the GDP figure, indicate an increasingly widespread consolidation of the recovery. Industrial production increased by 6.9% year-on-year (5.6% in August) and retail sales grew by 3.3% (0.5% in August). China's ability to control the pandemic has been key to establishing a rapid and comprehensive recovery. Strict restrictions on mobility, contact tracing and mass testing have been the tone of the country since the beginning of the year. Looking ahead to the coming months, we expect the Chinese economy to settle into its recovery. In this regard, the strength of domestic demand, with sturdier employment, should allow the fiscal stimuli to be relaxed by the end of the year in an economy in which debt, both public and private, remains a risk to be taken into consideration (see the [Brief Note of 19-10-2020](#) for details).

In clear contrast to China, most emerging economies remain highly constrained by the COVID-19 pandemic. The epicentre of the pandemic was located in China earlier this year, but it gradually spread to the rest of the world. The Chinese economy contracted in Q1, but already showed a significant rebound in Q2, which has only been consolidated in Q3. In contrast, in the rest of the emerging economies, the rebound did not occur until Q3. Furthermore, none of them seem to be exhibiting the same buoyancy in their recovery as the Asian giant did. Mexico, for example, grew by 12.0% quarter-on-quarter in Q3, partly offsetting the substantial decline of Q2 (-17.1%). In year-on-year terms, the drop in GDP amounted to 8.6%, placing it among the hardest hit countries. The outlook for the Mexican economy over the coming months does not look terribly promising either, since it remains in the midst of the pandemic and no decisive economic policy measures have been implemented to alleviate the shock of the COVID-19 crisis. In any case, certain other, so-called «fragile» emerging economies are in an even more delicate position. The sharp depreciation of the Turkish lira in recent weeks indicates that Turkey is suffering from a combination of heightened geopolitical risk (with Russia and France, recently) and macroeconomic imbalances (with high inflationary pressures and excess debt denominated in foreign currencies), which are proving difficult to bring under control.

Euro area: CPI *

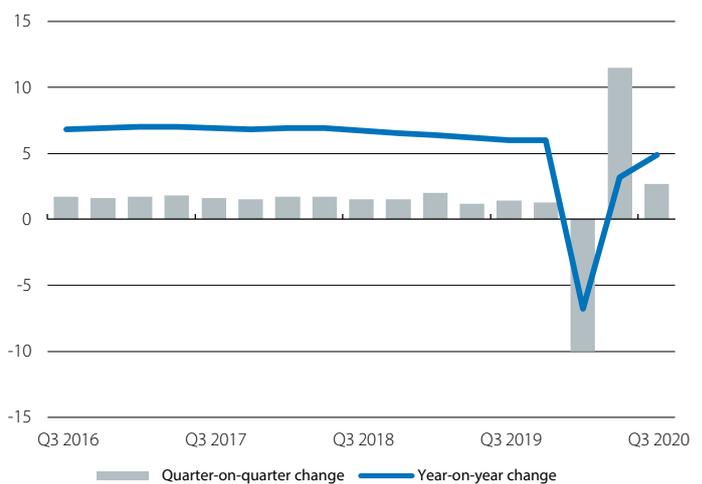
Year-on-year change (%)



Note: * The data correspond to the HICP. Source: CaixaBank Research, based on data from Eurostat.

China: GDP

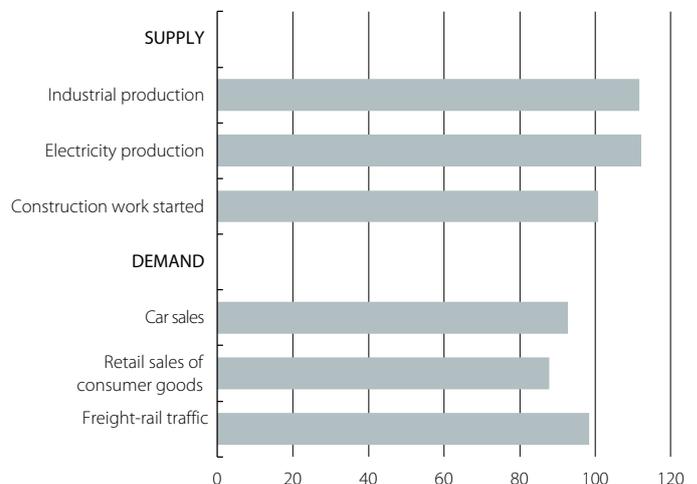
Change (%)



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

China: economic indicators

Level (100 = Q4 2019)



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

Everything you ever wanted to know about the European Recovery Plan but were afraid to ask

- The Recovery Plan must still be approved by the European and national parliaments.
- The main element is the Recovery and Resilience Facility, which will provide up to 312.5 billion euros in grants and 360 billion in loans to Member States according to their size and the impact of the COVID-19 crisis.
- To access these funds, each country must prepare a national recovery plan, which will be evaluated by the European Commission.
- The first disbursements, representing 10% of the total for each country, should occur in Q3 2021.

In July, after intense negotiations, the European Council agreed on the European Recovery Plan, known as Next Generation EU (NGEU). Through this plan, the EU will grant up to 750 billion euros to its Member States to boost the European economy's recovery following the shock of the COVID-19 pandemic. What exactly is the NGEU and how will it work? Below we answer the frequently asked questions about the Plan, the timetable for its approval and implementation, the conditions attached to it and the distribution of the funds.

What is Next Generation EU?

NGEU is a new European instrument with a budget of 750 billion, created to support Member States' efforts to respond to the COVID-19 crisis and to boost the EU's green and digital transition. It is additional to the European budget for 2021-2027.

Its main component is the Recovery and Resilience Facility, which will provide 312.5 billion euros in grants and 360 billion in loans to EU Member States to finance investment projects and reforms that boost the recovery and improve the resilience of their economies. Furthermore, it will provide additional funds for European initiatives such as ReactEU and the Just Transition Fund, which are aimed at supporting employment and mitigating the socio-economic impact of the green transition in the most affected regions, respectively.

In the remainder of the article, we will focus on the Recovery Facility, which constitutes the bulk of NGEU.

What steps are pending for the approval of NGEU and the first disbursements of the Recovery Facility?

Although NGEU has been agreed at a political level by the European Council, it still requires the approval of the European Parliament and its ratification by the national parliaments of the countries whose constitution requires it. The Recovery Plan is based on an increase in the EU's own resources ceiling, and it is this decision that must be ratified by the national parliaments. This increase in the own resources ceiling will allow the EU to issue European debt in the markets to finance the fund.¹

Next Generation EU: amounts of the various programmes (EUR millions)

Recovery and Resilience Facility	672,500
– Transfers	312,500
– Loans	360,000
ReactEU	47,500
Horizon Europe	5,000
InvestEU	5,600
Rural Development	7,500
Just Transition Fund	10,000
RescEU	1,900
TOTAL	750,000

Source: CaixaBank Research, based on data from the European Council.

The negotiations with the European Parliament are under way. There are still differences over the rule of law conditionality mechanism (the Parliament wants a strong mechanism that allows for the suspension of disbursements to countries that violate the rule of law), as well as on the introduction of new own resources.² Nevertheless, we can expect the European Parliament to give its approval soon and the ratification process by the various national parliaments to be completed during the first half of 2021. Although this is somewhat later than originally expected, it should not delay the disbursements to Member States.

In parallel, EU countries must draw up national recovery plans and detail both the investment projects they will finance with the European funds and the reforms that will accompany them. The deadline for submitting the final national plans is 30 April 2021. Once received, the Commission will have up to two months to assess them

1. The own resources ceiling is the maximum legal amount that the EU can request from Member States to fund the European budget. The increase in this ceiling serves as a guarantee for the issue of European debt and is necessary in order for the debt that is issued to obtain the maximum rating.

2. The European budget's resources have barely changed for more than 30 years and are mainly based on direct contributions from Member States (according to their size), customs taxes and transfers of a percentage of the VAT collected by each country. The European Parliament would like to introduce new resources linked to European targets, such as taxes on digital services or the carbon content of imports.

and recommend their approval to the European Council, which in turn will have a maximum of four weeks to approve them. Although national plans can be sent earlier (as soon as the Recovery Plan is approved by the European and national parliaments), most countries are likely to wait until well into 2021 in order to adjust the final version according to the economic scenario. Furthermore, sending the plans at the same time as most other countries will allow them to avoid individual scrutiny. The whole process should thus be completed by mid-2021, and the EU could begin to disburse the first tranche of funds in the third quarter (10% of the total funds that each country will receive).

What amount of grants and loans will each country receive and when might they receive these funds?

Of the 312 billion euros of transfers, 70% will be distributed to each country according to its GDP, population and level of unemployment between 2015 and 2019. The remaining 30%, meanwhile, will be calculated in 2022 taking into account the drop in GDP suffered by each country in 2020 and 2021. According to the Commission's current forecasts, it is estimated that Spain and Italy could receive some 60 billion euros (4.8% and 3.7% of GDP, respectively)³ from the Recovery Facility, France some 30 billion (1.3% of GDP), Portugal 13 billion (6.2% of GDP) and Germany some 20 billion (0.6% of GDP). The countries that would receive the most funds as a proportion of their GDP are Croatia, Bulgaria and Greece (see chart).

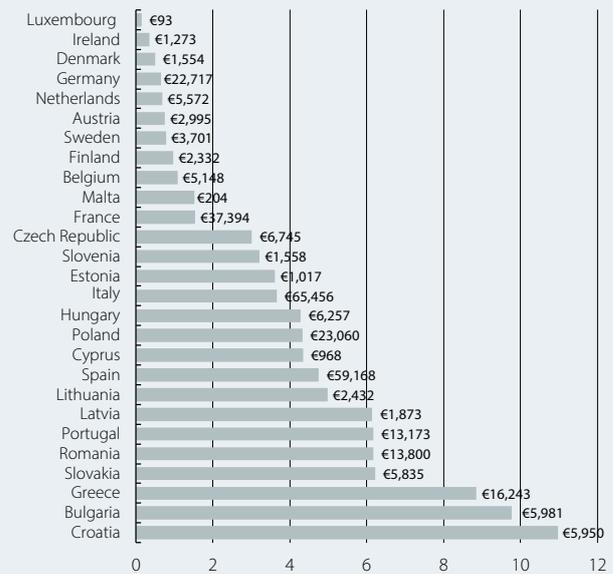
Each country will also be able to borrow up to 6.4% of its GNI⁴ to finance part of its investments and reforms, although it is quite possible that Member States will opt not to use the full amount of these loans. This is because, while they may be low-interest loans, they would increase the recipient countries' public debt. Several European countries may therefore choose to apply for them only in the event that the crisis deteriorates, since they have several alternatives available: EU countries also have access to ESM loans, which have fewer conditions attached, as well as to sovereign debt markets at historically low interest rates.

As we have already mentioned, once their national plans have been approved, each country will receive 10% of the funds from the Resilience and Recovery Facility. The remaining disbursements will occur depending on the achievement of objectives and the progress made with the reforms and investment projects detailed in the national plans. On this basis, according to the Commission itself, most of the funds will be disbursed between 2023 and 2024, and the final disbursements will occur before the end of 2026. However, some countries may receive slightly more than the initial 10% in 2021 if they succeed in making progress on certain projects and reforms. This

3. The 72 billion which Spain expects to receive from the EU includes 12.5 billion from the ReactEU fund.
 4. Gross national income (GNI) measures the final production of goods and services generated by a country's national residents and enterprises, even if they are located abroad.

Allocation of transfers from the Recovery and Resilience Fund

(% of GDP)



Note: The amounts in the labels are in millions of euros.
 Source: CaixaBank Research, based on data from the European Commission and Eurostat.

is what Spain is aiming for, as it expects to receive some 27 billion in 2021 (see the Focus [«Next Generation EU: a golden opportunity for the Spanish economy»](#)).

What are the conditions for accessing the Recovery Facility?

In order for the European Council to approve the various national plans, and so that the funds can begin to be disbursed, those plans must be coherent with the recommendations that each country received from the Commission as part of the European Semester (specifically those of 2019 and 2020). Moreover, the reforms and investments should contribute towards four general objectives: promoting the EU's economic, social and territorial cohesion; strengthening economic and social resilience; mitigating the social and economic impact of the current crisis; and supporting the green and digital transitions. These contributions should be detailed in the national plans with figures that estimate the plan's impact in these areas. Upon receiving the respective national plans, the European Commission will assess whether the conditions have been met. Following the Commission's recommendation, the European Council will have to approve each plan individually by a qualified majority.

Beyond the initial 10% disbursement, countries will have to move ahead with their reforms and investments and achieve milestones before more funds can be disbursed. In addition, each Member State has the possibility to request an evaluation by the European Council if it considers that another country has not met its milestones. This could delay the disbursement of funds to certain countries, but crucially, no country will have veto power over another country's recovery plan.

Álvaro Leandro

The US-China technology conflict: an initial insight

The new technology restrictions that the US has imposed on China represent an escalation of the decoupling policy pursued by the current US Administration. Although the distancing between the two powers has a long history, under Trump's presidency it has become a fully-fledged conflict.

While the First Phase trade agreement reached in early 2020 seemed to defuse the trade dispute,¹ the battle is now focusing on the technology sphere, and in particular on the information and communication technology (ICT) sector. Moreover, this is a battle with a broad bipartisan consensus in the US. But what has happened so far, and why? What could the consequences be?

The what (chronology)...

The trade conflict itself already included technology restrictions in its early days, such as tariff increases and controls being imposed on exports of ICT products. In May 2019, the tone of these restrictions was raised when Huawei and its subsidiaries were added to the US Entity List, which details individuals, institutions and companies that are considered to pose a threat to US national security. In the case of Chinese tech companies, with this measure the US Administration sought to prevent them from using US technology in the production of their goods and services.

Up until August 2020, this ban was circumvented through the multiple extensions granted to Huawei by the US Department of Trade itself, as well as through a legal loophole in the ban. In August, however, the US stopped granting these extensions and significantly stepped up the restrictions imposed on Huawei and other large Chinese tech companies such as ZTE from acquiring US technology. In the highly-integrated global ecosystem of information technologies, this meant practically halting the supply of high-end chips to Huawei. This was a somewhat unexpected move, since the first chapter of the partial trade agreement reached in early 2020 focused on improving the protection of intellectual property, especially on China's part. As we shall see below, this is one of the US' great concerns regarding China.

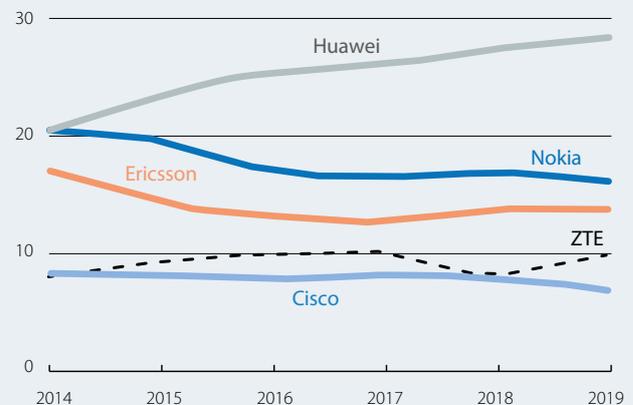
... the why (reasons)...

The concerns raised by the US in the technological sphere since the escalation of the economic and political conflict with China have focused on three aspects: the pressures applied on US firms operating on Chinese soil

1. See the Focus «[International trade: first impression of the First Phase](#)» in the MR01/2020 for details about the First Phase agreement.

Global sales of ICT equipment

(% of total global sales)



Source: Dell'Oro Group (The Telecom Equipment Market 2019).

to hand over their technology, the government aid that Chinese tech firms receive in acquiring US firms, and the theft of sensitive business information through computer networks.

However, the true motivations behind the conflict run deeper: China's technological rise and the threat it poses to US dominance. As was the case with basic manufacturing goods, China is making significant headway in the ICT race, a sector that is seen as key to the new industrial revolution we are entering. For instance, in just over 20 years, Huawei has gone from being a local company to becoming the world leader in ICT equipment sales (see first chart), and in particular in mobile sales (overtaking Apple in 2018 and, most recently, Samsung in 2020) with 55 million devices sold in Q2 2020.

Furthermore, China is a very different hegemon in political, geopolitical and social terms. In this regard, the US is not the only country taking a stand against China's technological advance. The United Kingdom, Japan and Australia have all banned the use of Huawei equipment in their 5G networks. France and Germany, meanwhile, have not yet declared their stance, although the former seems likely to impose significant restrictions on the Chinese tech giant.

The political scientist Graham Allison describes the US-China rivalry as a case of Thucydides's trap, alluding to the ancient Peloponnesian War: an established power (the US in this case) sees its dominant position threatened by an emerging power (China). Generally, the trend favours the emerging power, so the dominant power has an interest in stopping it in its tracks. This suggests an element of rationality in the US approach and indicates that the conflict will continue regardless

of what may happen in the November presidential election.²

... and the potential consequences

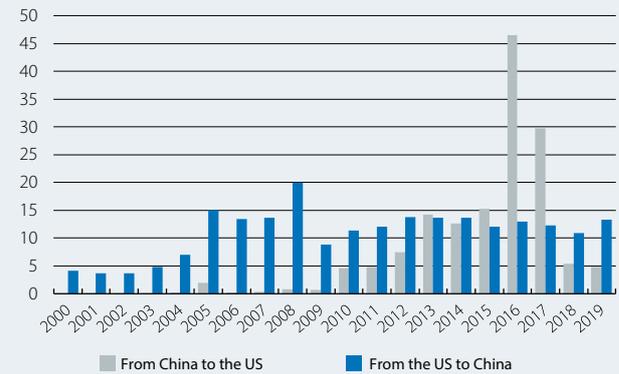
The technological struggle between the two countries could have substantial economic consequences. Strong economic ties exist, so the decoupling process will not be easy. For instance, the leading Chinese ICT companies listed on the US stock market at the end of August had annual sales amounting to 463 billion dollars and a market capitalisation of 1.3 trillion dollars (slightly more than double the trade flows between the US and China).³

Moreover, in the middle of this year the US Senate passed a new law that increases control over all Chinese companies (not just technology companies) listed on the country's stock exchanges, which could lead to the expulsion of some of them. The magnitude of such an expulsion would be vast: the 300 Chinese companies that were listed on US stock exchanges at the end of the summer (including both tech firms and non-technology companies) had total sales amounting to 5.3 trillion dollars and a market capitalisation of 5.7 trillion dollars (10 times the volume of bilateral trade and on a similar scale to the famous American FAANGs).

Another sign of the close ties between the two economies is the high stock of US foreign direct investment (FDI) in China and what this represents in terms of sales. In particular, much of the US' FDI in the Asian country is focused precisely on selling in the Chinese market itself: sales which in 2018 amounted to 600 billion dollars (slightly more than the trade flows between the two economies and around three times the volume of US exports to China).⁴

The bilateral FDI flows between the US and China in recent months can also offer us an indication of the direct impact that the dispute is having on the two countries. Just before the start of the technology-focused trade conflict, foreign direct investment flows between the two countries averaged 37 billion dollars a year (2013-2017), with investments from China to the US of around 24 billion and some 13 billion in the opposite direction. This figure fell by half in the average for 2018-2019, mostly due to the stagnation of investment from China (see second chart).⁵ As expected, this stagnation has been much more pronounced in the ICT sector, in which direct investment from China to the US has been virtually nil since 2018.

Direct investment flows between China and the US (USD billions)



Note: In 2016, the flow of investment from China increased substantially, partly as a result of HNA China's acquisition of the Carlson hotel group. However, the flows in 2018 and 2019 are abnormally low compared to the growth trend of previous years.
Source: CaixaBank Research, based on data from The US-China Investment Hub.

It is also essential to point out that the ICT sector has a knock-on effect on other major sectors and countries, so a dispute between the world's two biggest players will have global consequences. For instance, Europe is highly dependent on Chinese equipment to deploy its 5G network (which is key to the new industrial revolution), and this restricts the partnerships it can enter into with the US.

The current tech war also has the potential to weaken or curb progress in the field of international technology governance. The rapid development of new technologies and their capacity for economic and social disruption require international standards in order to minimise such disruptive effects. However, cooperation is difficult in an environment in which the two leading technological exponents are embroiled in a battle.⁶ In fact, when cooperation fails, progress in global terms suffers. It was Chinese drones that helped to put out the fire at Paris' Notre Dame in 2019. French legislation was quickly changed to let drones fly over the country's capital. But if Notre Dame were to burn again, Chinese drones may no longer be there to quell the flames.

Clàudia Canals and Jordi Singla

2. See Graham Allison (2017). «Destined for war: Can America and China escape Thucydides's trap?». Houghton Mifflin Harcourt.
 3. These are companies whose shares could be purchased either through ADRs (American depositary receipts) or OTC (over-the-counter). The market capitalisation figure is expressed in terms of market value.
 4. Data from Gavakal Dragonomics and Macrobond.
 5. Figures calculated using data from The US-China Investment Hub.

6. See Haiyong Sun (2019). «US-China Tech War: Impacts and Prospects». China Quarterly of International Strategic Studies 5, nº 02, 197-212.

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

UNITED STATES

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	07/20	08/20	09/20
Activity									
Real GDP	3.0	2.2	2.3	0.3	-9.0	-2.9	-	-	-
Retail sales (excluding cars and petrol)	4.7	3.9	4.0	3.1	-4.9	4.6	3.8	4.1	5.9
Consumer confidence (value)	130.1	128.3	127.0	127.3	90.0	93.1	91.7	86.3	101.3
Industrial production	3.9	0.9	-0.7	-1.9	-14.3	-7.0	-6.8	-7.0	-7.3
Manufacturing activity index (ISM) (value)	58.9	51.2	48.1	50.0	45.7	55.2	54.2	56.0	55.4
Housing starts (thousands)	1,248	1,295	1,433	1,484	1,079	1,430	1,487	1,388	1,415
Case-Shiller home price index (value)	211	217	219	222	224	...	225	226	...
Unemployment rate (% lab. force)	3.9	3.7	3.5	3.8	13.0	8.8	10.2	8.4	7.9
Employment-population ratio (% pop. > 16 years)	60.4	60.8	61.0	60.8	52.9	56.1	55.1	56.5	56.6
Trade balance ¹ (% GDP)	-2.2	-2.7	-2.7	-2.6	-2.7	...	-2.8	-2.9	...
Prices									
Headline inflation	2.4	1.8	2.0	2.1	0.4	1.2	1.0	1.3	1.4
Core inflation	2.1	2.2	2.3	2.2	1.3	1.7	1.6	1.7	1.7

JAPAN

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	07/20	08/20	09/20
Activity									
Real GDP	0.3	0.7	-0.7	-1.9	-10.1	...	-	-	-
Consumer confidence (value)	43.6	38.9	38.1	36.0	24.7	30.5	29.5	29.3	32.7
Industrial production	1.0	-2.7	-6.7	-4.3	-20.5	-12.5	-14.7	-12.3	-10.5
Business activity index (Tankan) (value)	20.8	6.0	0.0	-8.0	-34.0	-27.0	-	-27.0	-
Unemployment rate (% lab. force)	2.4	2.4	2.3	2.4	2.8	3.0	2.9	3.0	3.0
Trade balance ¹ (% GDP)	-0.2	-0.3	-0.3	-0.2	-0.5	-0.4	-0.6	-0.5	-0.4
Prices									
Headline inflation	1.0	0.5	0.5	0.5	0.1	0.2	0.3	0.2	0.1
Core inflation	0.3	0.6	0.7	0.7	0.3	0.1	0.4	-0.1	-0.1

CHINA

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	07/20	08/20	09/20
Activity									
Real GDP	6.7	6.1	6.0	-6.8	3.2	4.9	-	-	-
Retail sales	9.0	9.0	7.7	-18.2	-4.0	0.9	-1.1	0.5	3.3
Industrial production	6.2	5.8	5.9	-7.3	4.4	5.8	...	...	...
PMI manufacturing (value)	50.9	49.7	49.9	45.9	50.8	51.2	51.1	51.0	51.5
Foreign sector									
Trade balance ^{1,2}	352	421	421	361	412	453	430	455	453
Exports	9.9	0.5	1.9	-13.4	0.1	8.8	7.2	9.5	9.9
Imports	15.8	-2.7	3.4	-3.0	-9.7	3.2	-1.4	-2.1	13.2
Prices									
Headline inflation	2.1	2.9	4.3	5.0	2.7	2.3	2.7	2.4	1.7
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	7.0	6.9	6.8

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	07/20	08/20	09/20
Retail sales (year-on-year change)	1.6	2.4	2.1	-1.2	-6.9	...	-0.1	3.7	...
Industrial production (year-on-year change)	0.7	-1.3	-2.1	-5.8	-20.3	...	-7.1	-7.2	...
Consumer confidence	-4.9	-7.1	-7.6	-8.8	-18.5	-14.5	-15.0	-14.7	-13.9
Economic sentiment	111.5	103.1	100.6	100.0	69.4	86.9	82.4	87.5	90.9
Manufacturing PMI	55.0	47.4	46.4	47.2	40.1	52.4	51.8	51.7	53.7
Services PMI	54.5	52.7	52.3	43.8	30.3	51.1	54.7	50.5	48.0
Labour market									
Employment (people) (year-on-year change)	1.6	1.2	1.0	0.4	-2.9	...	-	...	-
Unemployment rate (% labour force)	8.2	7.6	7.4	7.3	7.6	8.2	8.1	8.3	8.3
Germany (% labour force)	3.4	3.1	3.2	3.6	4.2	4.5	4.5	4.5	4.5
France (% labour force)	9.0	8.5	8.2	7.8	7.1	7.5	7.1	7.5	7.9
Italy (% labour force)	10.6	9.9	9.5	9.1	8.5	9.7	9.8	9.7	9.6
Real GDP (year-on-year change)	...	...	1.0	-3.3	-14.8	-4.3	-	-	-
Germany (year-on-year change)	1.3	0.6	0.4	-2.1	-11.2	-4.2	-	-	-
France (year-on-year change)	1.8	1.5	0.7	-5.8	-18.9	-4.3	-	-	-
Italy (year-on-year change)	0.8	0.3	0.1	-5.6	-17.9	-4.7	-	-	-

Prices

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	07/20	08/20	09/20
General	1.8	1.2	1.0	1.1	0.2	0.0	0.4	-0.2	-0.3
Core	1.0	1.1	1.2	1.1	0.9	0.6	1.2	0.4	0.2

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	07/20	08/20	09/20
Current balance	3.0	2.4	2.4	2.1	2.3	...	2.2	1.8	...
Germany	7.4	7.1	7.1	7.1	6.7	...	6.9	6.2	...
France	-0.6	-0.7	-0.7	-0.8	-1.3	...	-1.7	-1.6	...
Italy	2.5	3.0	3.0	3.2	2.9	...	4.2	3.9	...
Nominal effective exchange rate¹ (value)	95.1	92.4	91.4	91.2	93.4	95.6	94.9	96.1	95.8

Credit and deposits of non-financial sectors

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	07/20	08/20	09/20
Private sector financing									
Credit to non-financial firms ²	3.9	3.8	3.5	3.9	7.0	7.1	7.1	7.1	7.1
Credit to households ^{2,3}	3.0	3.4	3.5	3.6	3.0	3.0	3.0	3.0	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	1.2
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	1.4
Deposits									
On demand deposits	7.9	8.0	8.8	9.3	12.9	14.0	14.1	13.7	14.3
Other short-term deposits	-1.5	0.3	0.3	-0.2	0.4	1.0	1.4	0.4	1.4
Marketable instruments	-4.2	-1.9	-3.3	3.8	7.2	10.7	11.4	8.2	12.5
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	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.

Strong recovery in Q3 dampened by the second wave of COVID-19

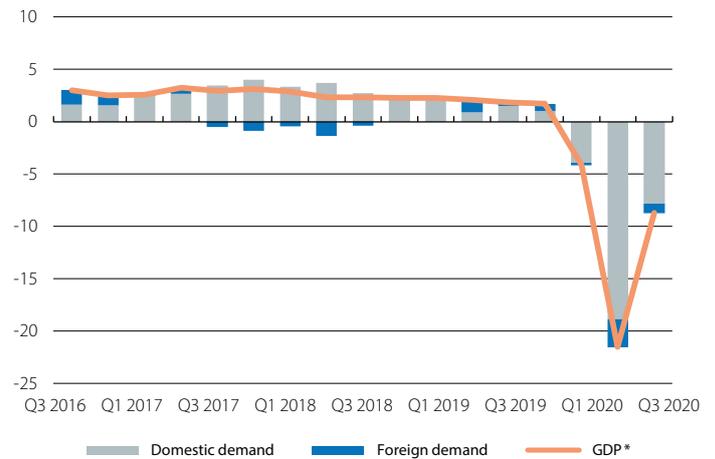
The economy experienced a strong rebound in Q3 following the lockdown. After falling by 17.8% in Q2, GDP advanced by a significant 16.7% quarter-on-quarter in Q3, exceeding most analysts' expectations. Although GDP is still 8.7% below the level of the same quarter last year, this figure confirms that the economy experienced a significant revival after emerging from the lockdown that prevailed in Q2: in Q3, the economy managed to recover 58% of the level of production that had been lost between Q4 2019 and Q2 2020. The rebound was particularly strong in private consumption (20.7% quarter-on-quarter) and exports (+34.3%, driven by exports of goods). However, this recovery has some weaker flanks: some of the sectors that remain the most affected include retail, transportation and hospitality (-22.0% year-on-year) and construction (-11.0% year-on-year). Manufacturing, meanwhile, exhibited a strong recovery (the year-on-year decline moderated from -27.3% in Q2 to -4.0% in Q3).

The second wave of the pandemic indicates a difficult Q4. In recent weeks, there has been a very marked increase in the number of confirmed COVID-19 cases in Spain (around 26,000 at the end of October, some three times more than a month ago). This increase in infections has been accompanied by an increase in pressure on hospitals which has forced the authorities to impose new measures to contain the virus and to restrict mobility (a nationwide curfew, capacity restrictions, the closure of catering establishments in various autonomous communities and perimeter closures in most territories). These measures are less restrictive than those in place in March and April, but they will certainly have a negative impact on the economy in Q4. The second wave of the virus could thus pour cold water on the momentum shown by the economy in Q3. Indeed, although most of the new restrictions only entered into force at the end of the month, we have already seen a declining trend in the mobility indices during the course of October.

Consumption and the service sector, the likely victims in Q4. The PMI for the service sector showed signs of weakness in both September (42.4 points, yielding 5.3 points compared to August) and October (41.4). These are the lowest figures since May and suggest a contraction in economic activity in the sector. As for consumption, the total expenditure carried out using Spanish cards on CaixaBank POS terminals and cash withdrawals shows a decrease of 5% year-on-year during October, a 2-pp deterioration compared to the figure for September (see our tracker at www.caixabankresearch.com for real-time monitoring).

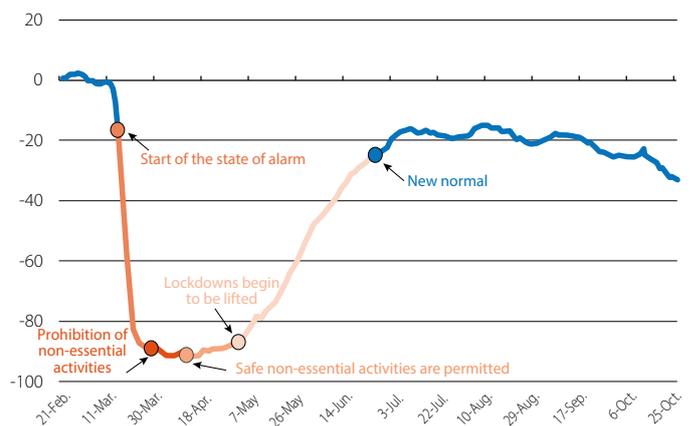
Notable recovery in the labour market in Q3. According to data from the LFS, employment increased by 570,000 people in Q3 2020 (3.1% quarter-on-quarter), driven by a significant rebound in the level of actual employment. Specifically, the number of people in employment who are not either affected by a temporary furlough (ERTE) scheme, registered as having temporarily ceased their occupational activity or inactive for some other reason (remember that, statistically, those affected by an ERTE scheme are still considered to be in employment) grew by 12.1% quarter-on-quarter (-6.9% year-on-year).

Spain: GDP
Contribution to year-on-year growth (pps)



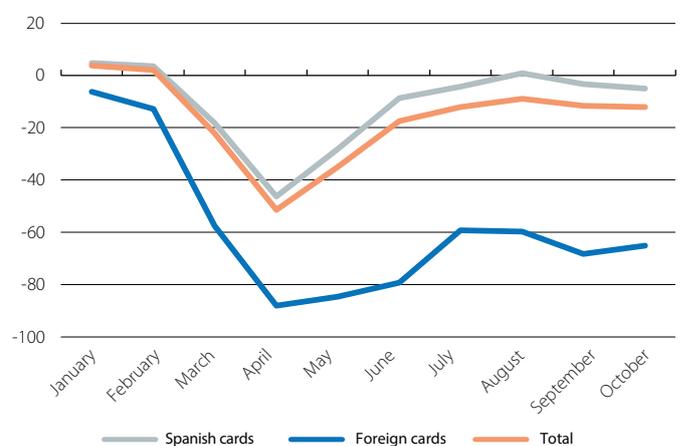
Note: * Year-on-year change (%).
Source: CaixaBank Research, based on data from the National Statistics Institute.

Spain: mobility of the population in retail
Change relative to the baseline level* (%)



Notes: 7-day 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.

Spain: activity with cards on POS terminals and cash withdrawals at CaixaBank cash points
Year-on-year change (%)



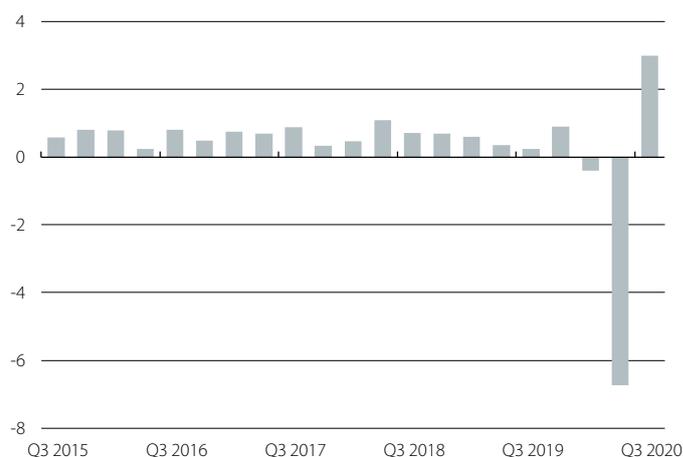
Source: CaixaBank Research, based on internal data.

In addition, the number of actual hours of work performed increased by 15.1%, in line with the rebound in GDP. While the increase in the number of people in unemployment (+355,000) was much more pronounced than in Q2 (+55,000 people), this is largely due to the reactivation of individuals who, after losing their jobs, were classified as inactive in Q2. Thus, the unemployment rate stood at 16.2% in Q3 2020 (+0.9 pps compared to Q2 2020). The labour market has followed an encouraging path in Q3, but the new restrictions will inevitably take their toll. Indeed, in October, social security affiliation already reflected a certain stagnation in the recovery. Specifically, the number of affiliates increased by +114,000, but total affiliation was -2.3% below its level of October 2019, a figure very similar to the previous month. On the other hand, the number of people affected by temporary furlough (ERTE) schemes continued to decline. At the end of October, there were some 600,000 beneficiaries of such schemes, 130,000 less than in September (3.4 million in April).

The COVID-19 crisis takes a heavy toll on the public finances. The unprecedented state action aimed at helping individuals and businesses during this pandemic is having a major impact on the public accounts. In August, the general government deficit stood at 7.1% of GDP, with a 9.0% fall in revenues and an increase in expenditure of 11.5%. This deterioration is expected to continue, bringing the deficit for the year as a whole to around 13% of GDP (according to forecasts by CaixaBank Research). The government's 2021 Draft Budget Plan proposal which it sent to Brussels sets out a deficit target for next year of 7.7%, supported by projected GDP growth of 9.8%. The government proposes achieving this deficit through a considerable increase in both expenditure and revenues; the preliminary draft of the General State Budgets, which will be negotiated with the political parties in the next months, provides for a 17.5% increase in non-financial state expenditure, including the European funds, compared to 2020. On the revenue side, tax revenues are expected to rise (+13% versus 2020 and +4.3% versus 2019) due to the rebound in economic activity, the creation of new taxes (on financial transactions, digital services and new green taxes) and increases in others (personal income tax, a reduction in company exemptions, VAT on sugary drinks, etc.). Our forecasts foresee a slightly higher deficit in 2021 (9.5% of GDP) due to a more contained revenue projection and a somewhat less pronounced economic recovery in 2021.

Rebound in corporate debt, although it remains at acceptable levels. In Q2 2020, the debt of non-financial firms rose by 45 billion euros due to the increased liquidity requirements caused by the pandemic. It thus stood at 102.7% of GDP (+9.2 pps versus Q2), bringing it back to the levels of 2016. While a significant increase, the risks are contained thanks to the combination of the low cost of servicing the debt and abundant liquidity. Household debt, meanwhile, stood at 60.6% of GDP (60.4% in the euro area), up 4 pps from the previous quarter. This increase in the ratio, however, was mainly due to the fall in GDP. It should also be noted that the rise in NPLs remains contained, with a slight increase in August (4.75%, compared to 4.72% in July). Nevertheless, this monthly increase resulted from a decline in the balance of credit rather than an increase in the balance of non-performing loans.

Spain: employment *
Quarter-on-quarter change (%)



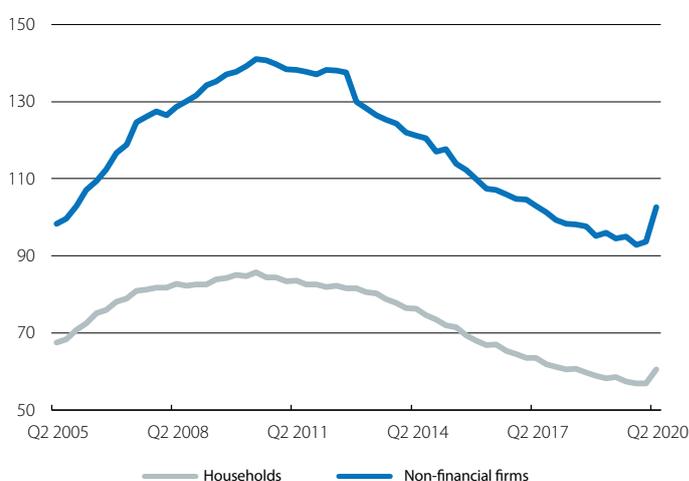
Note: * Seasonally adjusted series.
Source: CaixaBank Research, based on data from the National Statistics Institute (LFS).

Spain: government forecasts

	2019	2020	2021
Real GDP	2.0	-11.2	9.8
Revenues (% of GDP)	39.2	41.7	40.3
Expenditure (% of GDP)	42.1	53.0	48.0
General government deficit (% of GDP)	2.8	11.3	7.7
Public debt (% of GDP)	95.5	119	117

Notes: The revenues, expenditure and deficit figures are consolidated for all general government administrations. The revenues and expenditure figures exclude the NGEU funds.
Source: CaixaBank Research, based on data from Moncloa Palace and the National Statistics Institute.

Private sector debt
(% of GDP)



Source: CaixaBank Research, based on data from the Bank of Spain.

The growth of e-commerce during the pandemic: myth or reality?

- How have e-consumption habits evolved following the COVID-19 outbreak? We address this question using big data techniques and anonymised data from card payments carried out by CaixaBank’s 13.5 million customers.
- Our results confirm that the pandemic generated a significant, albeit short-lived, increase in the use of e-commerce. In this regard, at the end of September e-commerce no longer showed any deviation from its growth trend of previous years.

The social distancing measures and lockdowns imposed to combat the spread of COVID-19 have resulted in a multitude of changes in consumption habits. Among them, there is one that is particularly significant: the rise of e-commerce. This way of consuming, based on the purchase and sale of products over the Internet, has provided a lifeline for many businesses that saw their face-to-face sales fall due to the social distancing measures, as well as serving as an alternative means for many consumers to continue to make their usual purchases in complete safety.

In this context, two questions arise: on the one hand, quantifying the extent to which the use of the e-commerce channel grew following the COVID-19 outbreak and, on the other, understanding whether we are on the cusp of a structural change or it is merely a temporary phenomenon that will be diluted once we reach the post-pandemic scenario.

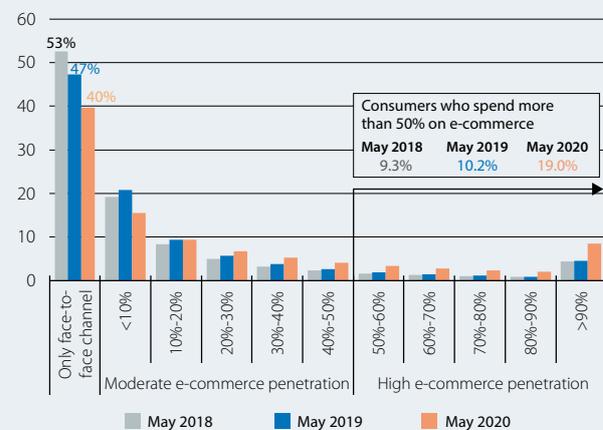
In order to analyse the magnitude and persistence of the impact of COVID-19 on e-commerce, we apply big data techniques to anonymised data from card payments carried out by CaixaBank’s 13.5 million customers. The wealth of this data allows us to calculate, for each card and month of the year, what proportion of its total expenditure corresponds to online purchases.^{1,2} Using this proportion, we will assign each card a degree of e-commerce penetration, ranging from zero penetration (0% of total expenditure corresponding to online purchases) to full penetration (100% of total expenditure corresponding to online purchases).

In order to understand how online consumption patterns have fluctuated since the pandemic began, we analyse the results between 2018 and 2020 for the months of May and September. In fact, May is the first full month after the outbreak of the pandemic with sufficient face-to-face

1. It is important to note that the total expenditure data include cash withdrawals at cash machines. Therefore, cash payments being replaced with card payments during the pandemic would not have any effect on our analysis.
 2. The proportion of e-commerce spending for each card is defined as the ratio between e-commerce payments, on the one hand, and the sum of face-to-face card payments, cash withdrawals and e-commerce payments on the other.

Spain: distribution of e-commerce penetration for CaixaBank cards in May (2018-2020)

(% of the total number of CaixaBank cards)



Notes: The horizontal axis represents the percentage of the total expenditure that corresponds to e-commerce and is divided into 10-pp-wide bands. The vertical axis represents the percentage of cards in each band. By construction, the sum of the grey (May 2018), blue (May 2019) and orange (May 2020) bars is 100% in all cases.
Source: CaixaBank Research, based on internal data.

consumption to perform the analysis (in March and April, the mobility restrictions made spending of any kind besides online shopping or the purchase of basic goods practically impossible).³ September, meanwhile, is the last month for which we have records at the time of writing this article.

According to our results, there was a sharp rise in the use of e-commerce in May. Specifically, the percentage of e-commerce spending rose from 13.8% in May 2019 to 19.8% in May 2020. There is a sharp drop in the fraction of cards consisting of exclusively face-to-face consumption, from 47% of the total in 2019 to 40% in 2020, as can be seen in the first chart. In contrast, the number of consumers whose card spending consisted of more than 50% e-commerce increased considerably, from 10.2% of the total in May 2019 to 19.0% just one year later.⁴

3. See the Focus «Analysing private consumption during the COVID-19 crisis» in the MR07/2020.

4. If we focus on the number of transactions rather than the amount spent, the results are rather similar, with an 8.7-pp increase (8.8% in May 2019 versus 17.5% in May 2020).

The above data indicate that the COVID-19 outbreak had a significant impact on the penetration of e-commerce at the beginning of the pandemic. However, this is somewhat to be expected given that Spain was still in a state of alarm in May and, while face-to-face shopping was allowed, capacity limits and rules on social distancing between customers posed an impediment to face-to-face consumption. It is therefore likely that some of the e-commerce purchases undertaken during this month were forced by the situation.

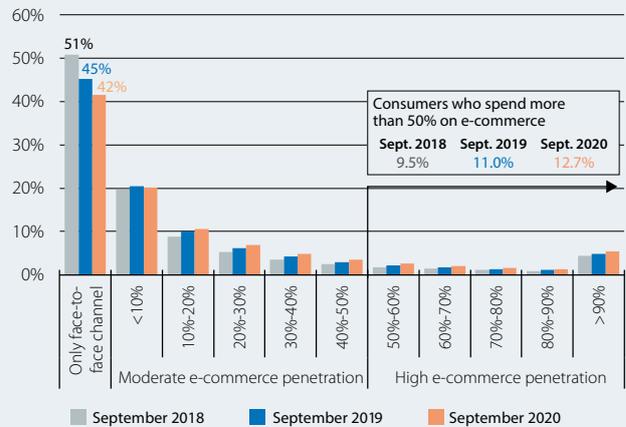
On this note, in order to determine whether there has been a permanent change in consumers' habits, we will now analyse the results for the month of September. As can be seen in the second chart, some of the changes observed in May have been undone.⁵ For instance, the proportion of consumers who made solely face-to-face purchases in 2020 was only 3 pps lower than in 2019, a smaller decline than that observed between 2018 and 2019 (6 pps). Those whose card spending consisted of more than 50% e-commerce, meanwhile, rose by 1.7 pps, a very similar increase to that registered between 2018 and 2019 (1.5 pps). In the light of these results, while it is true that the use of non-face-to-face channels is greater in September 2020 than in the previous year, this growth is in line with the growth of e-commerce that we have seen in previous years.

In short, the results show that the pandemic had a very significant impact on the penetration of e-commerce during the months marked by lower population mobility (first chart), but they do not suggest that the historical growth trend of e-commerce is accelerating (second chart). Nevertheless, these results must be interpreted with caution for various reasons. Firstly, the data we are analysing are aggregated, so we cannot observe the disparity that there is almost certain to be between different sectors (consumption of essential goods *versus* durable goods, etc.). Secondly, as a recent study reveals,⁶ only 6.5% of Spanish SMEs offer their goods or services via e-commerce, posing a major barrier for consumers who might want to buy from their usual shop online but can only currently do so in person. In this regard, if the pandemic leads to a process of greater digitalisation that allows many companies to sell through e-commerce, then this channel can be expected to take a new step forward and to narrow the gap with face-to-face shopping.

*Javier Ibáñez de Aldecoa Fuster and
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5. One possible explanation for this phenomenon is popular support for small retail establishments, which in most cases suffered greatly at the beginning of the pandemic due to a lack of an electronic sales channel.
6. The study in question was drawn up by the company BeeDIGITAL, based on a sample of over 1 million retail establishments.

Spain: distribution of e-commerce penetration for CaixaBank cards in September (2018-2020)
(% of the total number of CaixaBank cards)



Notes: The horizontal axis represents the percentage of the total expenditure that corresponds to e-commerce and is divided into 10-pp-wide bands. The vertical axis represents the percentage of cards in each band. By construction, the sum of the grey (September 2018), blue (September 2019) and orange (September 2020) bars is 100% in all cases.
Source: CaixaBank Research, based on internal data.

Next Generation EU: a golden opportunity for the Spanish economy

- The NGEU European Recovery Fund has a significant budget and could have a major macroeconomic impact on the Spanish economy.
- The overview of the Recovery Plan presented by Spain reflects the country's willingness to accelerate investment and outlines a number of relevant areas of action. The specific projects involved and the governance mechanisms for their selection and monitoring are not yet known.

Budget: dizzying figures

The Recovery, Transformation and Resilience Plan (RTRP) presented by the government to channel European funds from the Next Generation EU (NGEU) Recovery Fund has attracted much interest. The plan provided so far is an initial overview, although the final plan will need to be submitted to the European Commission by 30 April 2021 and should be approved within two to three months thereafter.¹ The overview sets out priorities such as infrastructure, sustainable construction and the refurbishment of housing, telecommunications, energy, and others (see the first chart with the main headings), which are well aligned with the objectives set by the European Commission (mainly green investment and digitalisation), although the projects and their associated milestones are not yet specified. In this article we attempt to make sense of this plan and assess the opportunities it could create for our economy.

The budget is certainly impressive: Spain could receive up to 140 billion euros between 2021 and 2026, between non-reimbursable transfers and loans. In fact, the government intends to request the sum of approximately 72 billion euros in 2021-2023, representing the entirety of the non-refundable transfers², and to leave the loans for later. These are very significant amounts: to put them in context, public investment in Spain in 2019 amounted to 25 billion.

The government expects to implement 26,634 million euros in 2021.³ Although the first payment from the European Commission (10% of the transfers, or some 5.9 billion euros) is not expected until mid-2021, the government plans to make a start before even receiving the funds in order to accelerate the investments.

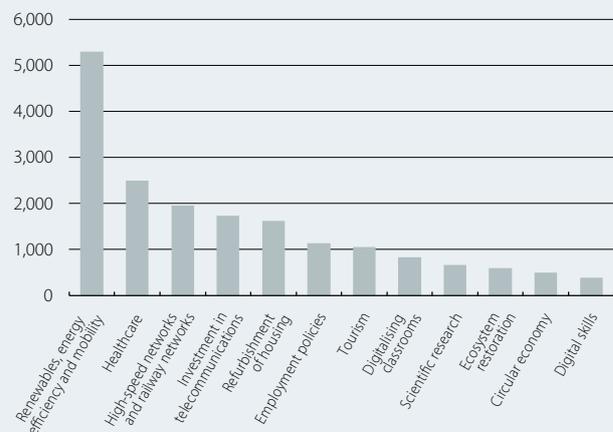
1. Once received, the Commission will have up to two months to assess the plan and recommend its approval to the European Council, which in turn will have a maximum of four weeks to approve it.

2. For 2021-2022, 43,480 million euros have already been committed from the Recovery Mechanism and a further 12,500 from REACT-EU, while the amount to be received in 2023 will depend on the drop in GDP in 2020 and 2021. Based on the Commission's forecasts, in 2023 some 15,688 million euros are expected to be received, bringing the total to 72,000 million over the three years.

3. Specifically, the 2021 General State Budgets include 26,634 million for the Recovery Plan: 2,436 million from REACT-EU and 24,198 million from the RRM. In addition, a further 8,000 million from REACT-EU will go to the autonomous regional budgets.

Spain: main NGEU expenditure headings budgeted for in 2021

(EUR millions)



Source: CaixaBank Research, based on data from the Draft 2021 Budgets.

Implementing projects for 26,634 million euros in 2021 is a highly ambitious goal: this is a very considerable amount which, prior to the implementation itself, would require a large number of projects to be selected and designed in record time. Furthermore, interim milestones, targets, costs and benefits will need to be established for each one (as the European Commission has requested be included in the final version of the plan).

Institutional mechanisms: how can Spain get the most out of NGEU?

NGEU represents an extraordinary opportunity to give the Spanish economy a new modernising boost, but effective institutional mechanisms will be essential in order to make the most of it. It will therefore be essential to select the right projects, even more so if the investments are made in advance, before the European Commission gives them the green light, since the disbursement of the funds will be conditional on the milestones laid down being achieved. To this end, it would be advisable to create a specific governance mechanism for assessing, selecting and monitoring the projects in question. At present, it is known that management of the funds will be led by an Inter-Ministerial

Commission chaired by the president of the Spanish government. However, the degree of involvement of experts and the private sector is not yet known (a series of high-level forums and councils will be established, although the details and how responsibilities will be shared out are not known). The government also estimates that around 50% of the investments could be implemented by the autonomous communities – with a leading role in areas such as housing, environmental investment and educational policies –, and this will require effective coordination mechanisms between administrations.

In order to implement the projects effectively, the Plan emphasises the willingness to bolster general government administrations. This is a key element given that, according to the latest IMF Fiscal Monitor, European countries with a more effective public sector are able to implement a larger proportion of the European funds that are allocated to them. Spain, which is classified as having intermediate public sector efficiency (see second chart), has room for improvement.

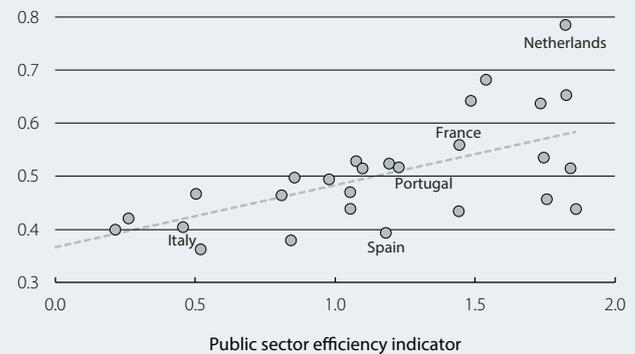
Spain's track record in the use of European funds is not good (34% of the structural funds allocated for 2014-2020 have been implemented), but there are two considerations worth taking into account. On the one hand, structural funds tended to be earmarked for very specific purposes, and this made it difficult for sufficient projects to be presented. NGEU, in contrast, gives national governments a degree of choice over what to invest in, provided that the policies align with the objectives set by the Commission – green transition, digital transition, etc. On the other hand, there is a willingness to invest in sectors with a pre-existing productive capacity.

The economic impact of these investments and the definitive green light of the European Council – a qualified majority is needed – as well as that of the European Commission will not only depend on whether the projects' interim objectives are met, but also on whether they are accompanied by the reforms needed to boost growth potential. The Commission's guidelines make it clear that each Member State has to link the investments of its Recovery Plan with the specific recommendations of the European Semester. In the case of Spain, two recommendations stand out: facilitating the transition to permanent labour contracts in order to reduce the duality of the country's labour market, and ensuring the sustainability of the pension system. In this regard, we will have to see how the investments of the Recovery Plan tie in with the pending reforms in these areas.

Final reflections: aggregate impact and an exciting challenge

NGEU could have a very positive impact by boosting confidence in the common European project among

Spain: public sector effectiveness and degree of project execution in Europe (Expenditure executed in 2014-2020 relative to the European structure funds assigned)



Source: CaixaBank Research, based on data from the IMF's Fiscal Monitor of October 2020.

economic players and providing more scope to carry out ambitious investment policies. The programme's macroeconomic impact for 2021 is difficult to gauge at this stage, particularly given the level of uncertainty over the amount of investments that will end up being implemented.⁴ Of course, the better the selection, monitoring and assessment of the projects, and the more the public investments go hand in hand with private investment and go to sectors that provide a significant boost to jobs, the greater the final impact will be. The empirical evidence on the magnitude of the fiscal multipliers of public investment places them at around 1 in the short term, an effect that can more than double from the second year.

One area in which the RTRP provides few clues is regarding which specific policies will be implemented to help the sectors hardest hit by the pandemic, such as tourism and hospitality, in order to make them more resilient and prepare them for a rapid recovery. Other countries, such as France, have proposed policies such as providing support for capital injections and direct transfers. It would therefore be feasible to include such policies within the final Recovery Plan.

In short, NGEU represents a golden opportunity to provide a new boost to the Spanish economy. In difficult times like these, it is a promising prospect. But in order to make the most of this opportunity, the expenditure will need to be planned thoroughly and the best tools will need to be made available.

Javier Garcia-Arenas

4. For illustrative purposes, assuming that investments of 13,317 million (half of the 26,634 million mentioned) are finally implemented, and taking into account that the multiplier of public investment in the short term is somewhere around 1 according to the economic literature, in 2021 the NGEU could boost GDP by slightly more than 1% (13,317 million euros would represent around 1.15% of GDP in 2021).

Activity and employment indicators

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2019	08/20	09/20	10/20
Industry									
Industrial production index	0.3	0.7	0.3	-6.4	-24.4	...	-5.7	...	...
Indicator of confidence in industry (value)	-0.1	-3.9	-5.2	-5.4	-27.8	-11.9	-11.8	-11.1	-10.8
Manufacturing PMI (value)	53.3	49.1	47.2	48.2	39.4	51.4	49.9	50.8	52.5
Construction									
Building permits (cumulative over 12 months)	25.7	17.2	8.0	0.0	-13.2	...	-20.1	...	...
House sales (cumulative over 12 months)	14.2	3.6	-2.0	-3.7	-12.3	...	-18.2	...	...
House prices	6.7	5.1	3.6	3.2	2.1	...	-	-	-
Services									
Foreign tourists (cumulative over 12 months)	4.0	1.4	1.2	-1.0	-22.8	...	-50.6	...	...
Services PMI (value)	54.8	53.9	53.6	42.5	28.4	47.3	47.7	42.4	...
Consumption									
Retail sales	0.7	2.3	2.3	-3.9	-18.4	-3.4	-2.9	-3.3	...
Car registrations	7.8	-3.6	5.1	-27.6	-68.6	-7.5	-10.1	-13.5	-21.0
Consumer confidence index (value)	-4.2	-6.3	-10.5	-10.3	-27.9	-26.9	-28.7	-26.3	-26.7
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	-2.7	-2.3	...
GDP	2.4	2.0	1.7	-4.2	-21.5	-8.7	-	-	-

Prices

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2019	08/20	09/20	10/20
General	1.7	0.7	0.4	0.6	-0.7	-0.5	-0.5	-0.4	-0.9
Core	0.9	0.9	1.0	1.1	1.1	0.5	0.4	0.4	...

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 2019	08/20	09/20	10/20
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	2.9	1.8	1.8	1.0	-7.2	...	-8.4	...	...
Imports (year-on-year change, cumulative over 12 months)	5.6	1.0	1.0	-1.0	-9.3	...	-11.8	...	...
Current balance	23.2	26.6	26.6	27.1	17.6	...	12.9	...	...
Goods and services	32.8	37.5	37.5	38.0	27.7	...	22.8	...	...
Primary and secondary income	-9.5	-10.9	-10.9	-10.9	-10.1	...	-9.9	...	...
Net lending (+) / borrowing (-) capacity	29.0	30.8	30.8	31.3	21.5	...	16.9	...	...

Credit and deposits in non-financial sectors³

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2019	08/20	09/20	10/20
Deposits									
Household and company deposits	3.2	5.4	5.4	4.4	8.0	9.0	8.9	8.9	...
Sight and savings	10.9	10.7	10.3	8.9	13.0	13.8	13.6	13.8	...
Term and notice	-19.9	-13.4	-13.9	-16.4	-16.1	-16.8	-16.3	-17.4	...
General government deposits	15.4	8.8	-2.1	-6.2	-6.6	5.1	5.0	4.6	...
TOTAL	3.9	5.6	4.8	3.8	7.1	8.7	8.6	8.6	...
Outstanding balance of credit									
Private sector	-2.4	-1.5	-1.5	-1.0	1.5	2.0	2.0	2.2	...
Non-financial firms	-5.5	-3.4	-3.0	-1.7	6.1	7.2	7.2	7.7	...
Households - housing	-1.1	-1.3	-1.5	-1.7	-2.1	-1.9	-1.9	-1.8	...
Households - other purposes	2.8	3.2	2.2	2.5	0.6	0.3	0.2	0.3	...
General government	-10.6	-6.0	-1.2	1.7	0.1	1.1	2.2	0.7	...
TOTAL	-2.9	-1.7	-1.5	-0.9	1.5	1.9	2.0	2.1	...
NPL ratio (%)⁴	5.8	4.8	4.8	4.8	4.7	...	4.7	...	...

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.

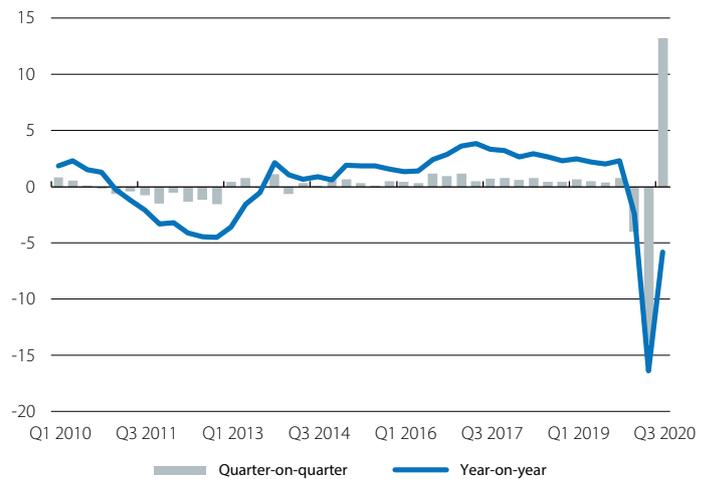
After a strong recovery, the Portuguese economy faces a difficult end to the year

The economy enjoyed a significant revival in Q3 2020, but the second wave of infections dampens the recovery once again. GDP recovered considerably in Q3 2020, with a rebound of 13.2% quarter-on-quarter (-5.8% year-on-year), leaving the economy around 6% below pre-pandemic levels. By component, the recovery in economic activity was largely driven by domestic demand, and by private consumption in particular, although external demand also improved thanks to a stronger recovery in exports of goods than in imports (and in spite of the weakness of tourism and the consequent decline in service exports). While this revival in economic activity was expected, as a natural reflection of the lifting of the lockdown in spring, the strength of the rebound was greater than expected. However, in the fourth quarter of the year, the new outbreak of COVID-19 infections will hurt the recovery. Indeed, the first indicators for October are already showing a cooling of economic activity. For instance, car sales fell to a daily average of 305 units (-29% compared to September) and average daily electricity consumption fell by 1%. In addition, uncertainty over how the pandemic and economic activity will pan out in the closing months of the year remains very high.

The labour market showed signs of revival prior to the start of autumn. According to preliminary estimates, in September the unemployment rate decreased for the first time since the spring, standing at 7.7% (-0.4 pps compared to August but +1.2 pps above the figure for September 2019). Employment growth also accelerated (+0.8% month-on-month), although employment remains around 2% below pre-pandemic levels. However, other data paint a more mixed picture. On the one hand, the number of unemployed registered in job centres (which follows a different system for accounting for unemployment) increased slightly (0.2% quarter-on-quarter) and continued the upward trend initiated in March, reaching over 410,000 (30% more than in February). On the other hand, the number of workers under temporary furlough schemes (but with no change in their social security category) had increased above 8,600 in September, 7,000 more than in February. Looking ahead, the coming months will largely be determined by how the pandemic develops, and unemployment is likely to rise once again. Furthermore, this trend could be accentuated once the support measures for businesses and the barriers to redundancies implemented in the context of the COVID-19 pandemic are removed.

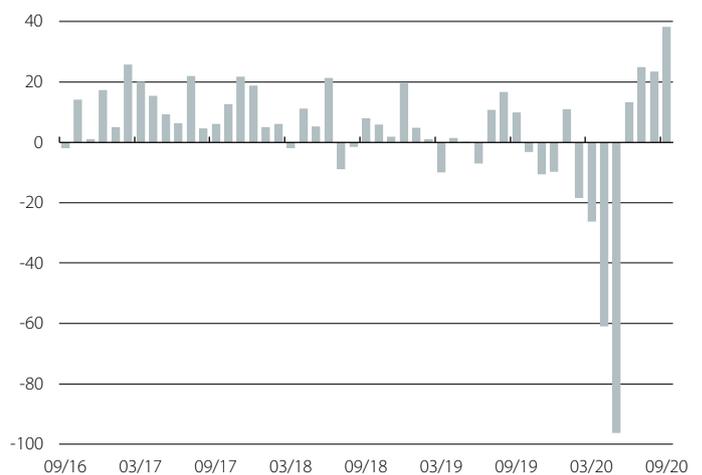
Tourism continues to suffer. In September, overnight stays at accommodation establishments in Portugal fell by 53.4% year-on-year, according to preliminary data. This decline is especially pronounced in the case of overnight stays of foreigners (-71.9% year-on-year, down to 1.5 million), with

Portugal: GDP
Change (%)



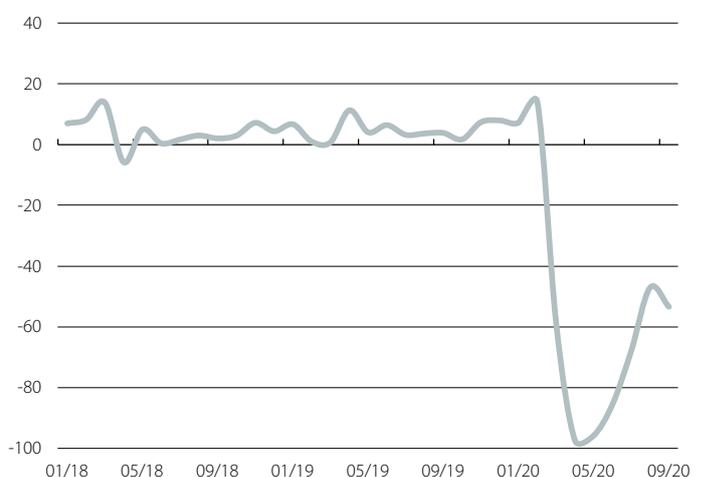
Source: CaixaBank Research, based on data from the National Statistics Institute of Portugal.

Portugal: population in employment
Monthly change (thousands of people)



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

Portugal: overnight stays in tourist accommodation
Year-on-year change (%)



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

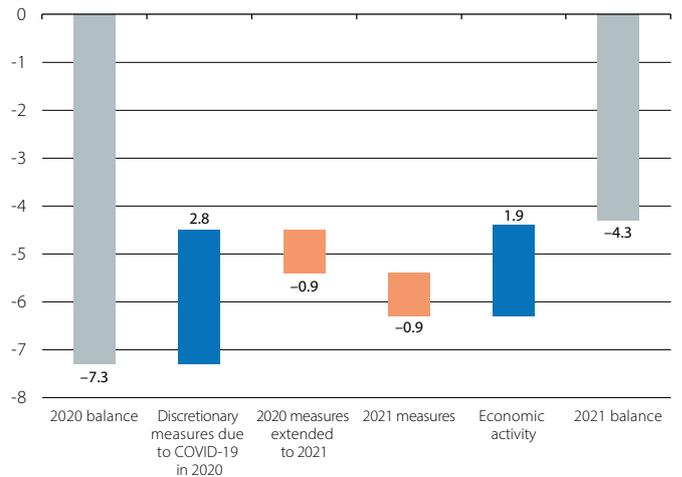
more pronounced declines in the case of tourism from the US (-95.5%), Canada (-94.7%) and China (-94.5%). Given the importance of tourism to Portugal's economy (in 2019, the total consumption of tourists accounted for almost 15% of GDP), the sector's difficulties will continue to hold back the revival of the Portuguese economy.

The public accounts will continue to feel the impact of the pandemic in 2021. The government expects to end 2020 with a budget deficit of 7.3% of GDP, and the draft State Budget for 2021 foresees a deficit of 4.3% next year. In this budget proposal, the government projects a GDP rebound of 5.4% in 2021, which it estimates will contribute to reducing the deficit by 1.9 pps of GDP. On the other hand, the main budgetary measures for 2021 remain heavily influenced by the need to combat the pandemic and support the economy. For instance, they include extraordinary support for workers' incomes and a reduction in VAT on electricity. According to the government's proposals, the new extraordinary measures proposed in response to the pandemic that are due to be launched in 2021, combined with those already implemented in 2020 that will remain in force in 2021, will together raise the deficit by 1.8 pps (0.9 and 0.9 pps, respectively). The government also anticipates that the public debt ratio will go from 134.8% of GDP in 2020 (a historic high) to 130.9% in 2021, a reduction that would largely be explained by the growth in economic activity. In the context of the COVID-19 pandemic, it is important to emphasise that the scenario set out by the government is subject to a high degree of uncertainty. This uncertainty is not only related to the execution of the budget up until the end of 2020, but also to the risks associated with the economic recovery in 2021, the evolution of the pandemic and the potential execution of guarantees related to credit lines granted to companies.

First signs of a reduction in real estate prices. Data from Confidencial Imobiliário indicate a 2.1% month-on-month decline in prices in September, which would be the most significant decline since May 2011 (-2.2%). Compared to the same period last year, price growth would still be positive (+7.9% year-on-year) but much more moderate than in previous months. All this confirms the prospect of a slowdown in price growth (see the Focus «[The Portuguese real estate market, wounded by the virus](http://www.caixabankresearch.com)» at www.caixabankresearch.com).

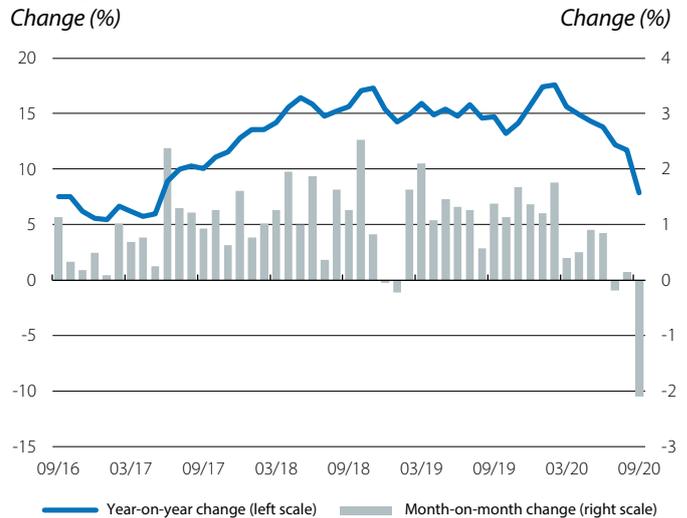
Mixed credit dynamics. In August, new lending fell in all segments except for lending for housing. In particular, new lending for the non-financial private sector fell by 17.7% year-on-year. Despite this, the balance of loans increased by 1.6% year-on-year due to the effect of credit moratoriums and the deferral of sales of doubtful loans. In fact, credit moratoriums had been granted on nearly 730,000 contracts at the end of August, largely consisting of housing credit contracts and other mortgage loans (around 43% of the total). As for the outlook for Q4, the surveys anticipate lower demand for credit among firms, a greater appetite for consumer credit and stabilisation in the case of housing credit.

Portugal: government balance
(% of GDP)



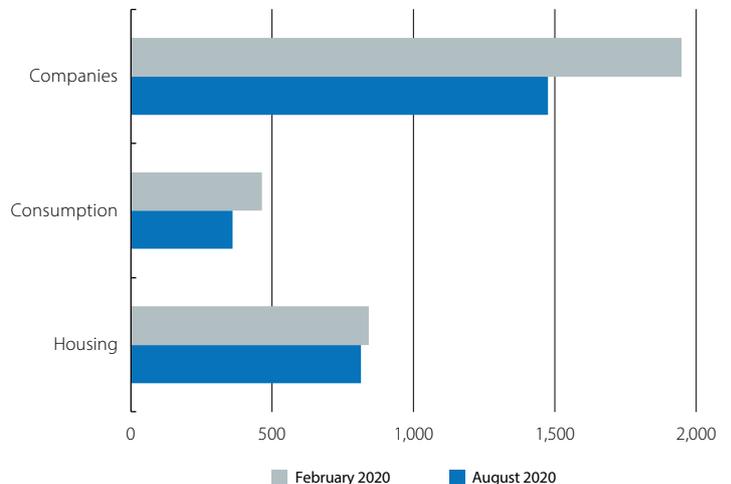
Source: CaixaBank Research, based on the draft 2021 State Budgets.

Portugal: home price index



Source: CaixaBank Research, based on data from Confidencial Imobiliário.

Portugal: new lending
(EUR millions)



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

Activity and employment indicators

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	08/20	09/20	10/20
Coincident economic activity index	3.1	0.9	-1.3	-4.5	-9.0	...	-11.0	-10.7	...
Industry									
Industrial production index	0.1	-2.2	0.4	-1.4	-23.5	...	3.1	...	...
Confidence indicator in industry (<i>value</i>)	0.8	-3.2	-4.3	-4.6	-24.8	-19.1	-17.3	-14.3	-14.3
Construction									
Building permits (<i>cumulative over 12 months</i>)	20.3	5.9	5.9	1.8	-1.5	...	...	...	...
House sales	16.8	1.7	6.1	-0.7	-21.6	...	...	...	...
House prices (<i>euro / m² - valuation</i>)	8.6	10.4	11.1	11.2	8.9	...	7.0	5.8	...
Services									
Foreign tourists (<i>cumulative over 12 months</i>)	4.8	7.8	7.8	3.2	-29.7	...	-48.7	...	...
Confidence indicator in services (<i>value</i>)	14.1	12.9	10.6	5.8	-36.9	-37.2	-37.1	-27.7	-20.0
Consumption									
Retail sales	4.2	4.4	3.7	3.0	-12.9	...	-4.3	0.3	...
Coincident indicator for private consumption	2.4	1.8	0.4	-4.0	-8.6	...	-9.7	-9.1	...
Consumer confidence index (<i>value</i>)	-4.6	-8.0	-7.1	-8.6	-27.7	-26.9	-26.0	-26.3	-25.5
Labour market									
Employment	2.3	1.0	0.5	-0.3	-3.8	...	-2.9	-2.3	...
Unemployment rate (<i>% labour force</i>)	7.0	6.5	6.7	6.7	5.6	...	8.1	7.7	...
GDP	2.9	2.2	2.3	-2.3	-16.3	-5.8	...	...	...

Prices

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

	2018	2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	08/20	09/20	10/20
General	1.0	0.3	0.3	0.4	-0.3	0.0	0.0	-0.1	-0.1
Core	0.7	0.5	0.4	0.2	-0.1	-0.1	-0.1	-0.2	-0.1

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	08/20	09/20	10/20
Trade of goods									
Exports (<i>year-on-year change, cumulative over 12 months</i>)	5.2	3.6	3.6	1.5	-6.7	...	-7.3	...	...
Imports (<i>year-on-year change, cumulative over 12 months</i>)	8.3	6.0	6.0	2.8	-7.6	...	-10.7	...	...
Current balance	0.8	-0.2	-0.2	-0.6	-0.9	...	-2.5	...	...
Goods and services	1.5	0.8	0.8	0.4	-1.1	...	-2.6	...	...
Primary and secondary income	-0.7	-1.0	-1.0	-1.0	0.2	...	0.1	...	...
Net lending (+) / borrowing (-) capacity	2.8	1.9	1.9	1.5	1.5	...	-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	08/20	09/20	10/20
Deposits¹									
Household and company deposits	4.7	5.2	5.2	6.4	9.0	...	8.6	...	...
Sight and savings	16.2	14.8	14.8	17.6	20.1	...	18.0	...	...
Term and notice	-3.3	-2.9	-2.9	-3.2	-1.0	...	-0.4	...	...
General government deposits	-32.3	5.6	5.6	-10.4	-15.7	...	-7.4	...	...
TOTAL	2.7	5.2	5.2	5.7	7.9	...	7.9	...	...
Outstanding balance of credit¹									
Private sector	-2.1	-0.1	-0.1	0.5	0.5	...	1.6	...	...
Non-financial firms	-4.5	-3.7	-3.7	-2.6	1.0	...	3.2	...	...
Households - housing	-1.7	-1.3	-1.3	-0.8	-0.3	...	0.2	...	...
Households - other purposes	4.2	16.5	16.5	15.7	2.2	...	2.5	...	...
General government	-12.9	-4.7	-4.7	-4.9	-9.7	...	-5.9	...	...
TOTAL	-2.6	-0.3	-0.3	0.2	0.1	...	1.3	...	...
NPL ratio (%)²	9.4	6.2	6.2	6.0	5.5	...	...	...	...

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.

The economic impact of the COVID-19 crisis on inequality: this time is different

Throughout history, pandemics have been one of the phenomena to have had the greatest impact on income and wealth distribution in societies. So much so that most have led to a sharp rise in inequality.¹ The employment destruction associated with the economic crises generated by pandemics is often concentrated among the most disadvantaged groups, thus increasing income inequality. However, the social protection systems of the past were a far cry from the mechanisms provided by the modern welfare state. This is surely one of the major differences between the current pandemic and those of the past: the decisive response we are witnessing from public policy.² But is it enough? Are all groups being offered protection? Is the right action being taken?

We would normally have to wait years to answer these questions, as it is extremely difficult to compile and process data on income distribution. In Spain, for example, in June of this year the 2018 wage structure survey was finally published, and other developed countries take a similar amount of time to publish such information. In the current situation, this time lag raises concerns over how the economic crisis will affect the most vulnerable groups. It also makes the public sector's task more difficult, because without the data to hand it is harder to assess the effectiveness of the various aid programmes that have been implemented.

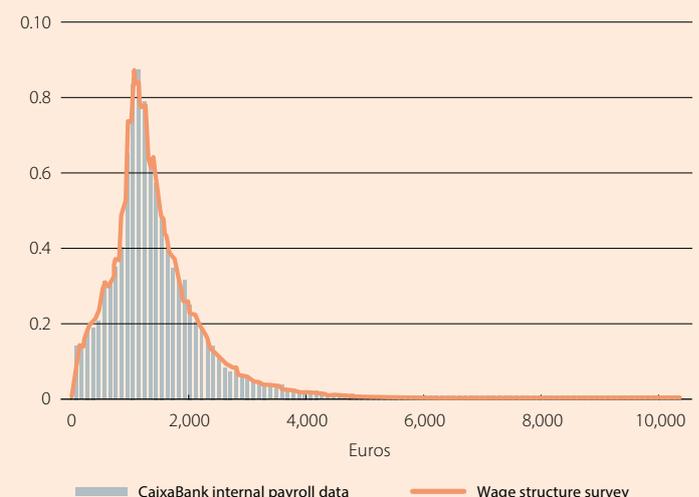
In this context, a team of researchers from Pompeu Fabra University, the Institute of Political Economy and Governance (IPEG) and CaixaBank Research has embarked on a globally pioneering project to track the evolution of inequality, as well as the role of the welfare state, in real time. To accomplish this, we analyse the data from wages deposited in CaixaBank, duly anonymised and applying big data techniques to manage the large volume of available information (we analyse the evolution of around 3 million payrolls each month). In addition, we include in our analysis individuals who receive some form of public transfer related to their participation in the labour market (such as unemployment benefits, or temporary furlough benefits under Spain's ERTE schemes). This information is essential in order to assess the impact of the economic crisis and the effect of public transfers. We can also perform the analysis both for the entire population and for different groups, disaggregating the data by age, gender or other characteristics such as geography. This allows us to assess what situation the various groups are in and the effectiveness of public policies for each of them.

This is not the first study to use big data techniques to track the economic effects of the pandemic in real time. One of the most ambitious projects at the international level is *Opportunity Insights*, led by Raj Chetty from Harvard University, which has developed several indicators that allow the US economy to be monitored in real time. For example, they have indicators that analyse the evolution of consumption according to the characteristics of each geographical area (such as the income level of the residents) or the evolution of employment according to workers' income level. This information is highly valuable for assessing the impact of the crisis both at the aggregate level and on the various groups.

Our project is also based on a large database, which is representative of the population as a whole, and this allows us to assess the impact of the crisis on the various groups, as well as the impact of public transfers. To confirm the representativeness of CaixaBank's internal data, we compared the distribution of these wage payments with

Spain: distribution of net monthly wages

Frequency (%)



Source: CaixaBank Research, based on internal CaixaBank data and data from the wage structure survey (National Statistics Institute).

1. See G. Alfani (2020). «Pandemics and inequality: A historical overview». VOX EU column. At <https://voxeu.org/article/pandemics-and-inequality-historical-overview>. And L. Wade (2020). «An unequal blow». Science, vol. 368 (6492), pages 700-703.

2. There is also no comparison in terms of the quality of the healthcare response, which improves treatments and reduces the mortality rate.

data from the Wage Structure Survey. As can be seen in the chart, the two distributions are very similar – a relationship we corroborated by comparing the quartile ratios of each distribution. Apart from the distribution of wage incomes, the characteristics of the people who have their wages deposited into CaixaBank are also very similar to those of the population as a whole. This can be seen in the second table, in which we compare the relative weight of different groups in the CaixaBank data with those from the wage structure survey and the labour force survey.

Having data that are representative of the whole population allows us to construct inequality indicators, such as the Gini index or Lorenz curves, both for the population as a whole

Spain: comparison of the distribution of the different databases by age and gender

Percentage (%)

	CaixaBank (2020)	Wage Structure Survey (2014)	Labour force survey (Q4 2019)
Gender			
Male	54.0	52.0	52.0
Female	46.0	48.0	48.0
Age			
15-19	1.0	–	0.8
20-29	18.0	12.0	14.5
30-39	25.0	31.0	24.6
40-49	28.0	30.0	30.5
50-59	21.0	21.0	23.3
60+	7.0	5.0	6.0
Sample size	3,028,204	209,473	≈200,000

Note: The table shows the distribution of individuals by age and gender from three different samples: CaixaBank internal data, the wage structure survey (WSS) and the labour force survey (LFS).

Source: CaixaBank Research, based on internal CaixaBank data and data from the wage structure survey (National Statistics Institute).

Spain: quantile ratios of the distribution of net wages

Ratio

	CaixaBank (2020)	Wage Structure Survey (2014)
P90/P10	4.24	4.12
P90/P50	1.88	1.87
P10/P50	0.44	0.45
P75/P25	1.85	1.83

Note: The table shows the quantile ratios of the distribution of net wages separately for the internal CaixaBank sample and for the wage structure survey (WSS). To facilitate the comparison between samples, we adjust the wage distribution of the WSS by the average wage increase between 2014 and 2019.

Source: CaixaBank Research, based on internal CaixaBank data and data from the wage structure survey (National Statistics Institute).

and for the various subgroups, and to analyse how they evolve over time. All this information is made available to the public on a website, CaixaBank Research's Inequality Tracker: www.inequality-tracker.caixabankresearch.com, where the impact of the COVID-19 crisis on inequality can be viewed month by month. In addition to several interactive charts for analysing the impact of the crisis on income distribution, we also offer the possibility to download the data so that anyone wishing to analyse the underlying trends in further detail can do so.

The following articles present an initial assessment of the impact of the economic crisis on income distribution, both for the population as a whole and for different groups and at the regional level. As can be seen from this initial analysis, the crisis has had a profound impact, the role of public transfers is crucial for a large portion of the population, and there are several groups that are particularly suffering. When it comes to the information we have available to help us deal with the pandemic, this time really is different.

How the COVID-19 pandemic has affected income distribution

How is the economic crisis affecting the different strata of the population? Is it affecting us all equally? To what extent are the public sector support programmes cushioning the blow? In the current circumstances, marked by high uncertainty and an imperative need to get the right public policies implemented, it is very helpful to answer these questions clearly.

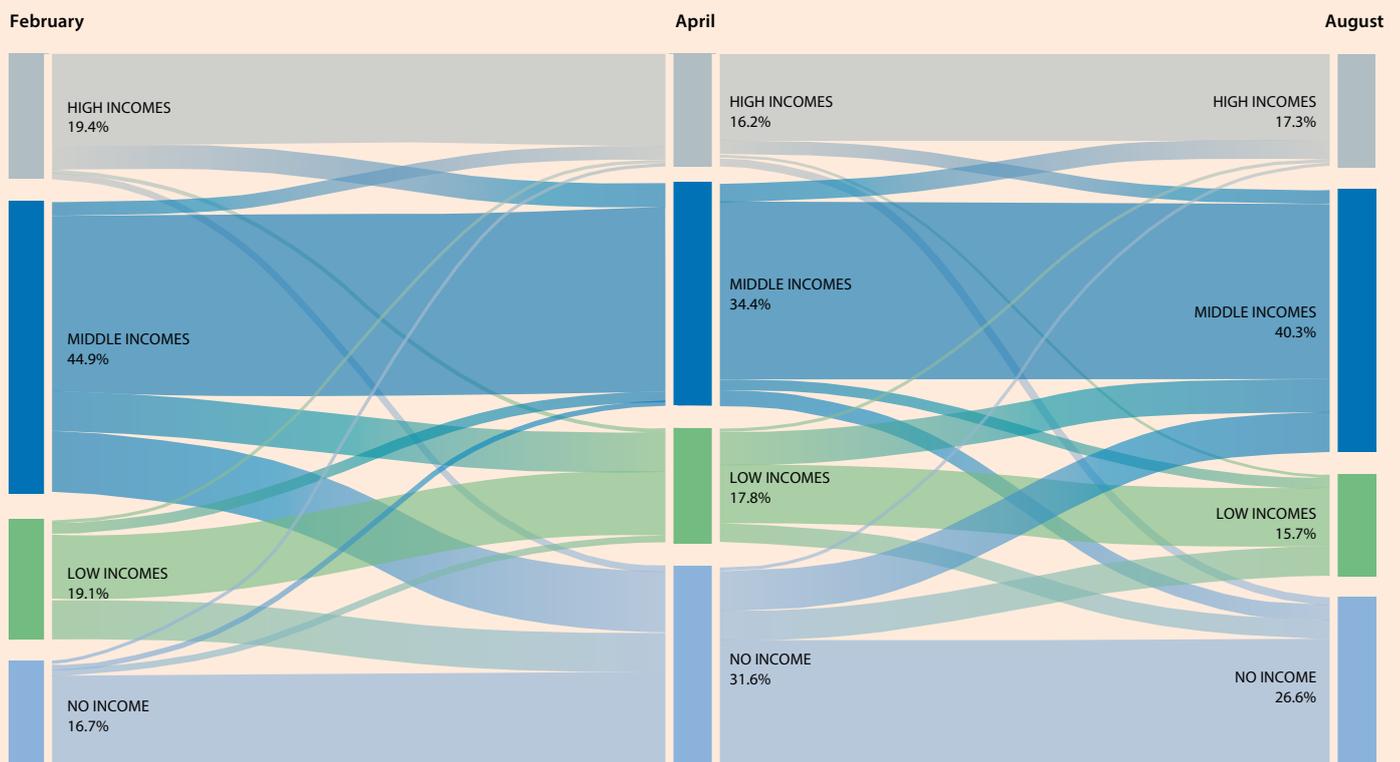
The analysis of CaixaBank's internal data offers us a very complete x-ray of the impact that the crisis generated by the pandemic is having on wage income distribution. Applying big data techniques to analyse over 3 million wage payments each month, duly anonymised, we can track the impact that the economic crisis is having on income distribution almost in real time, as well as the role that public sector transfers are playing.¹

The first message is loud and clear: the impact of the crisis is proving to be both profound and uneven. The Sankey diagrams below help us to visualise this impact. We divided the sample into four groups: people with no income, those earning less than 1,000 euros (low incomes), those with incomes between 1,000 and 2,000 euros (middle incomes), and those earning incomes in excess of 2,000 euros (high incomes). Thus, we can observe how the percentage of the total that the different groups represent over time has evolved, as well as how people move between the different groups. Specifically, we analysed the changes that occurred between February, prior to the outbreak of the crisis; April, when the impact of the restrictions on mobility was at its peak; and August, the latest data analysed. We present two different diagrams, showing the distribution of incomes before and after public sector transfers, which helps us to assess their effectiveness.

Between February and April, and before taking public sector transfers into account, we can see that the percentage of people with no income increased by 15 pps and that there was a sharp reduction in the percentage of people in the other population groups.²

Distribution of wage incomes before public sector transfers

(% of the population in each group)

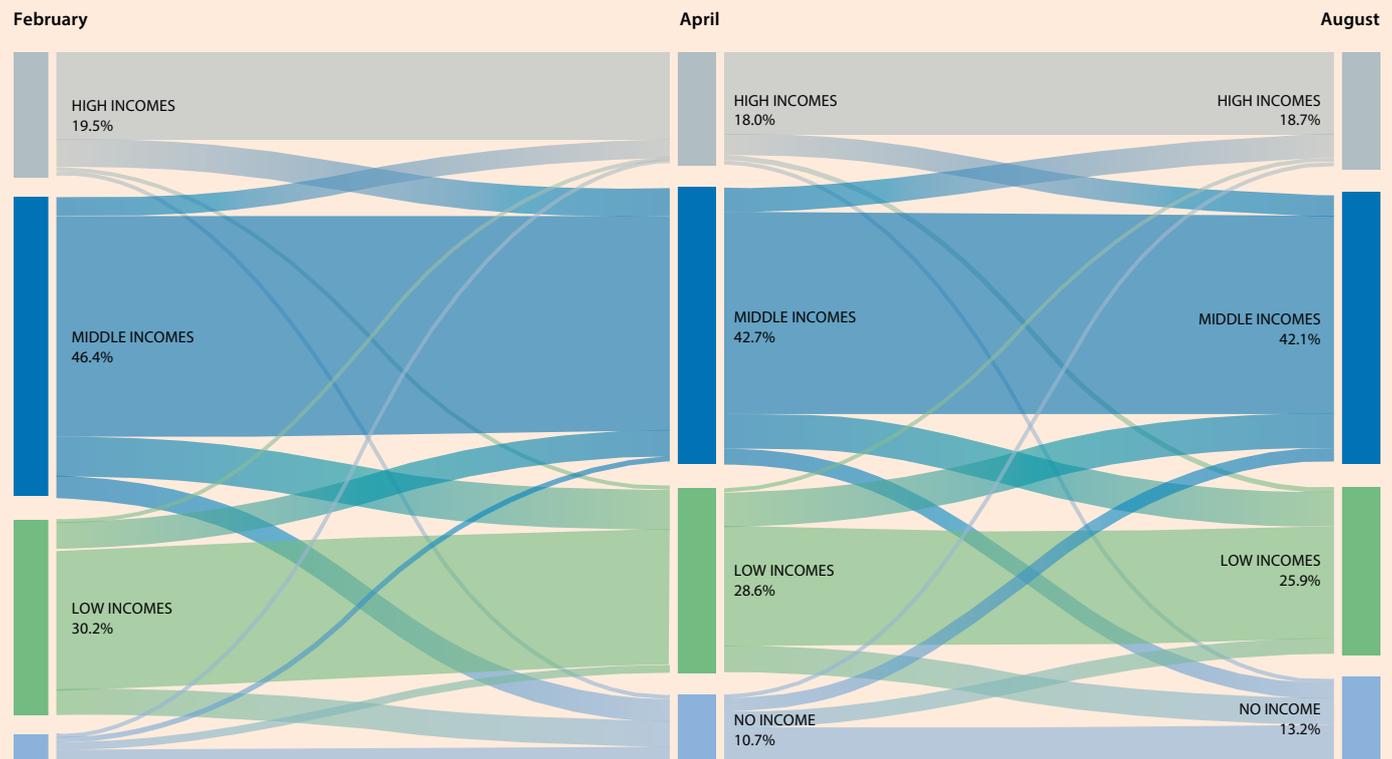


Notes: The vertical bars show the distribution of incomes by group at three points in time, while the horizontal lines show the flows between groups over time. The «low incomes» group refers to wages or transfers below 1,000 euros/month; «middle incomes», between 1,000 and 2,000 euros/month, and «high incomes», more than 2,000 euros/month.

Source: CaixaBank Research, based on internal CaixaBank data.

1. For further details on the construction of the sample and the analysis performed, see «Real Time Inequality and the Welfare State in motion: evidence from Covid-19 crisis in Spain». CEPR Working Paper 15118. https://cepr.org/active/publications/discussion_papers/dp.php?dpno=15118.

2. As a point of reference, between February and April, social security affiliates who lost their jobs, plus affiliates who were temporarily laid off under Spain's ERTE schemes, accounted for 16.1% of all affiliates.

Distribution of wage incomes after public sector transfers*(% of the population in each group)*

Notes: The vertical bars show the distribution of incomes by group at three points in time, while the horizontal lines show the flows between groups over time. The «low incomes» group refers to wages or transfers below 1,000 euros/month; «middle incomes», between 1,000 and 2,000 euros/month, and «high incomes», more than 2,000 euros/month.

Source: CaixaBank Research, based on internal CaixaBank data.

In particular, one-third of those on low incomes were left without any income at all. Among those on middle incomes, one-third also suffered a reduction in their incomes: 13% shifted to the low-income group and 20% were left with no income. Finally, among those with higher incomes, a significant proportion (30%) also saw their incomes decline, although in this case the bulk (20%) shifted to the middle-income group, while the number of transitions to the low-income and no-income groups was lower.

During May, and even more so starting from June, the lifting of the lockdowns led to a significant revival of economic activity. This was also reflected in the income distribution: the proportion of people with no income declined considerably, while the groups with incomes, especially those with high and middle incomes, once again gained relative weight.

The trends described so far relate to the evolution of income distribution before taking into account the role of public sector transfers. When we incorporate these transfers into the analysis, we see how important a role they are playing to cushion the impact of the crisis. Indeed, the percentage of people with no income increased by 7 points between February and April, compared to the 15 points we observed when ignoring public transfers. In other words, public sector transfers provided coverage to around half of the people who ceased receiving employment income between February and April. These transfers had a particular incidence among people who had a middle income before the pandemic but then lost their jobs, with a coverage of 66%, while in the case of those on low incomes prior to the pandemic, the coverage was 27%.

Another way to assess the impact of the economic crisis and the role of public sector transfers is to analyse how the total wage income is distributed among different population groups at different points in time, before and after taking into account the role of the public sector. We present this information in the infographic, which sets out what proportion of the total income is received by the 50% of people on the lowest incomes; the proportion of income received by those with incomes that lie between the 50th and 90th percentiles, and the proportion received by the 10% of the population with the highest incomes.³

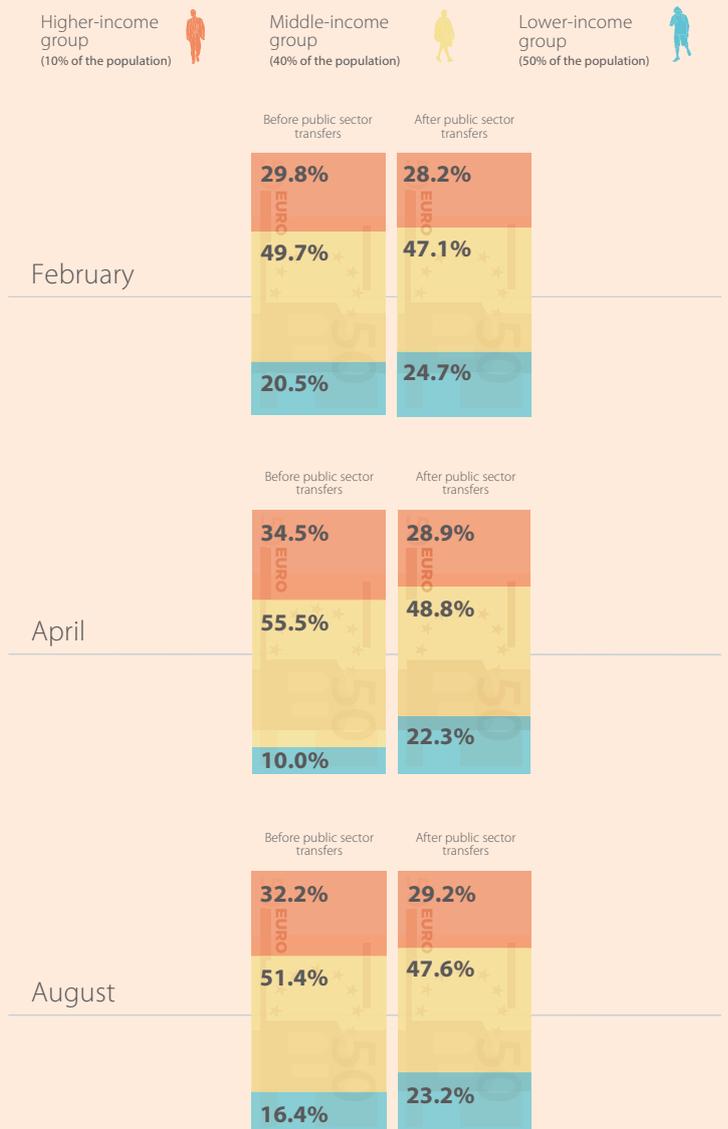
3. For a more complete analysis of income distribution among the entire population, the article *Real-Time Inequality and the Welfare State in Motion: Evidence from COVID-19 in Spain* provides information on the evolution of the Lorenz curves.

As can be seen, in February, before taking public sector transfers into account, the 50% of the population with the lowest incomes received 21% of the total wage income, while the 10% of the population with the highest incomes received 30% of the total. This distribution changed very significantly after the outbreak of the pandemic. In April, the proportion of the total incomes received by the 50% of the population on the lowest incomes would have dropped to 10% had it not been for public sector transfers, while that of the other two population groups would have increased by around 5 pps each. With the revival of economic activity, it can be seen how the population group that benefited the most was the lowest income group, which by July had already recovered more than half of the lost ground.

Analysing the impact of the crisis from this angle helps us to show the severity of the crisis, especially for certain groups of the population, as well as underscoring the important role which the public sector is playing in mitigating its impact. When we analyse how the distribution of the total income has evolved by incorporating transfers from the public sector, the reduction in the proportion of the income received by the 50% of the population with the lowest incomes is still clear, but much lower: it goes from 25% in February to 22% in April and then to 23% in August. Furthermore, the fraction of the total income received by the other two population groups also remains more stable over time.

Finally, we analysed the impact that the crisis is having on income inequality using the Gini index.⁴ Given the dynamics observed in income distribution, it comes as no surprise that this index follows a very different trend before and after incorporating public sector transfers. Before public sector transfers, the Gini index experienced a very sharp increase between February and April, of 11 points,⁵ before moderating in the following months as economic activity recovered (in August it remained 5 points above pre-crisis levels). In contrast, when we consider public sector transfers, the Gini index remains more stable over time, although the increase it experiences is nonetheless notable, amounting to 2 points between February and August.

Distribution of wage incomes by population group
 (% of total incomes received by each group)



Note: The bar charts show how wage incomes are distributed, before and after public sector transfers, among three population groups: the 50% of the population with the lowest incomes, 40% with middle income, and the 10% with the highest incomes. For example, the 50% with the lowest incomes received 20.5% of the total of all wage incomes in February 2020, before receiving public sector transfers, and 24.7% after their inclusion.
Source: CaixaBank Research, based on internal CaixaBank data.

4. In CaixaBank Research’s Inequality Tracker, available at www.inequality-tracker.caixabankresearch.com, you will find other metrics that also capture the evolution of inequality, such as the ratios between different income percentiles.

5. Figure corrected for seasonal effects. As a point of reference, the difference between the Gini index for the US and for Sweden was 11 points prior to the pandemic.

Which groups are suffering the most as a result of the COVID-19 economic crisis?

The economic crisis is not affecting all groups alike. As we have seen in the previous article, people who had lower incomes before the crisis have generally been more disadvantaged. In addition, the impact of the crisis may be different depending on other socio-economic characteristics such as age, gender, or place of origin or residence. CaixaBank's internal data allow us to assess in detail whether any of these groups are particularly suffering as a result of the crisis generated by the COVID-19 pandemic and to what extent public sector transfers are proving effective in protecting them.

Age is undoubtedly one of the dimensions in which the differences between the various population groups are most accentuated. As can be seen in the Sankey diagrams below, young people between the ages of 16 and 29 had a clearly lower income level from the outset than that of older people, and they are also experiencing the biggest deterioration: between February and April, before taking public sector transfers into account, the relative weight of the group of young people with no income increased by 24 pps, compared to the 15-pp increase we saw in the population as a whole. In addition, young people who had lower incomes before the pandemic are among the groups who are suffering the most from the crisis. Specifically, 42% of young people who had middle incomes before the pandemic ended up with a low income or no income at all, while of those who had a low income, 44% ended up with none. When we analyse these trends for the population as a whole, while the impact is still very significant, it is 10 pps lower than it is among the young.¹

Among older people in the 50-64 age bracket, the impact was less pronounced, albeit nonetheless notable. Specifically, the number of older people with no income increased by 9 pps, while the percentage of older people who had a low income before the pandemic and who were left without any income in April (before taking public transfers into account) was 23%. This is 10 pps lower than for the population as a whole and 22 pps lower than the figure for young people. At the other end of the income distribution, in contrast, the number of people with high incomes remained more stable over time, both among older people and among young people.

The diagrams also show how public sector transfers cushioned the impact of the crisis on both groups. The level of coverage they offer to young and older people is similar, around 50% in both cases. Specifically, when we consider incomes including public sector transfers, the increase in the number of people with no income is halved (11.8 pps in the case of young people and 4.8 pps among older people). Finally, it can also be seen how the economic revival that took place from May helped to undo some of the initial impact, especially among the young, although their economic situation has by no means returned to pre-crisis levels.²

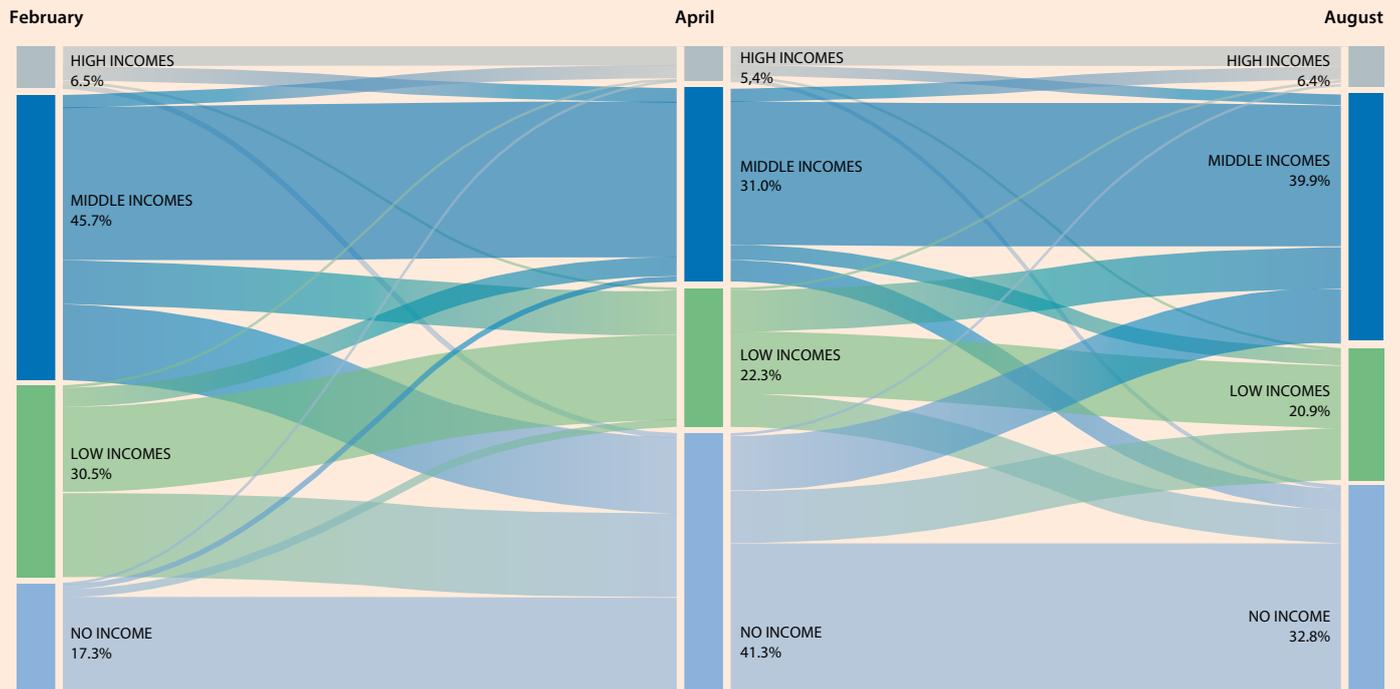
The trends in the Gini index by age group also reflect the fact that the crisis is having a different impact between different groups. Among the young, the Gini index before public sector transfers rose by 19 points between February and April, while in August it was still 8 points above its pre-crisis level. In contrast, among older people the increase was clearly lower, and in August it was «only» 3 points above the level of February. When we look at the Gini index after public sector transfers, although these differences between young and older people are less pronounced, they nevertheless persist: among the young, in August the index stood 6 points above the pre-crisis level, while among older people it increased by 1 point.

The crisis is also having a very different impact depending on people's place of origin, being more pronounced among those born outside Spain. As in the case of young people, immigrants present an income distribution that is skewed towards lower incomes, which are suffering the most during the crisis. Excluding public sector transfers, between April and February 46% of those born outside Spain and who, before the pandemic, had middle incomes suffered a shift down to low incomes or ended up with no income at all. As for those with low incomes, 36% ended up with no income. Thus, the number of people with no income who were born outside Spain increased by 21 pps between February and April. In August, an increase of 14 pps from pre-pandemic levels still persisted. It is worth noting that, if we take into account the role of the public sector, the increase in the number of people who ended up with no income is significantly lower, although it is still very high (an increase of 10.2 pps between February and April). Therefore, the implicit level of coverage is very similar to that of the population as a whole. As was the case with young people, the Gini index also shows a more pronounced impact of the crisis for this group, with an 8-point increase in August compared to pre-crisis levels before taking public transfers into account, and a 4-point increase after including them.

1. The differential impact of the crisis by age can also be seen in unemployment. The youth unemployment rate (among 16-29 year olds) increased to 30.0% in Q2 2020 (+6.2 pps compared to Q4 2019), whereas for the population as a whole it reached 15.3% (+1.5 pps compared to Q4 2019).

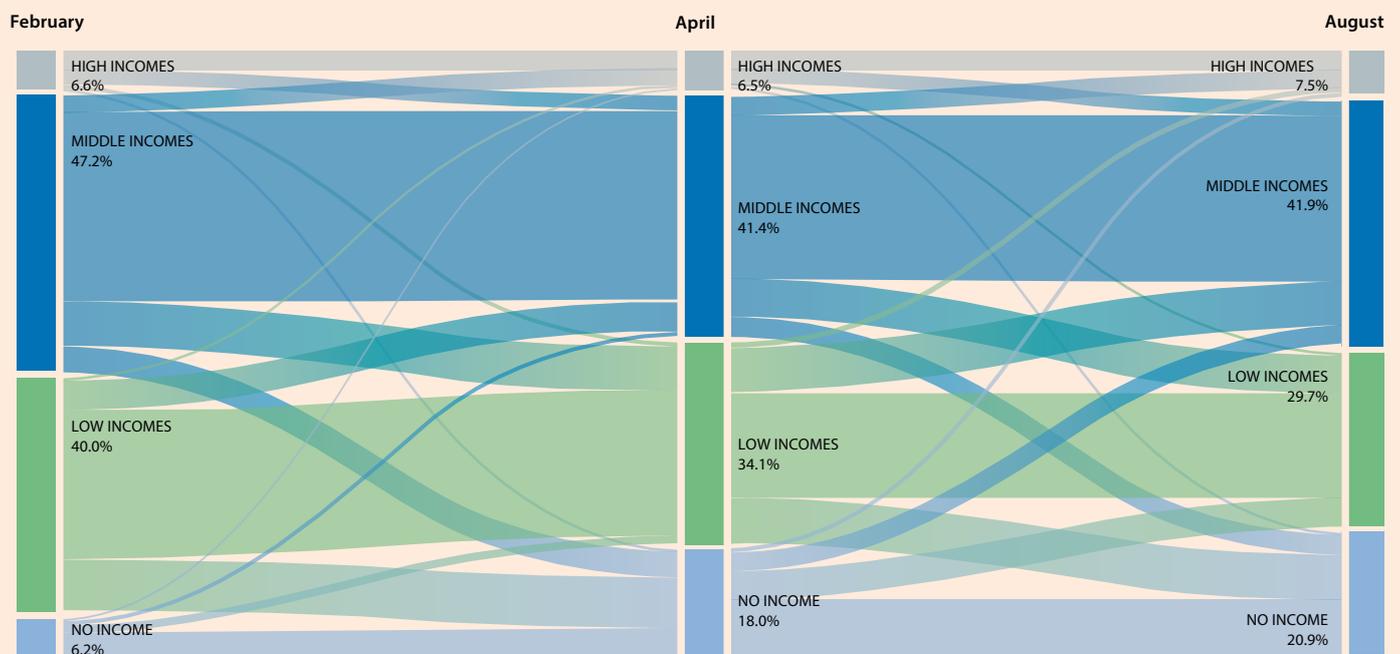
2. For instance, the proportion of people with no income (before taking public transfers into account) has declined. It should be noted that the Sankey diagrams are not corrected for seasonal variations and in August there is a seasonal increase in the number of people with no income, which is more pronounced in the case of young people.

Distribution of wage incomes among young people (aged 16-29) before public sector transfers
(% of the population in each group)



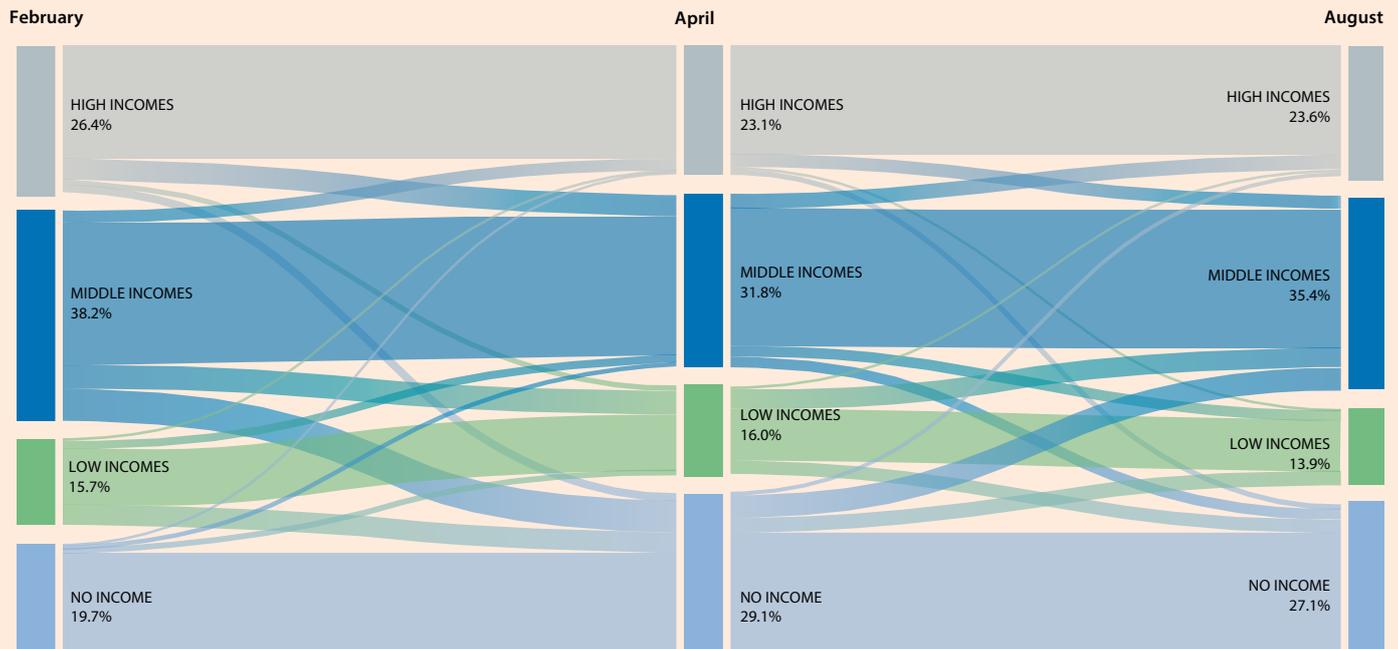
Notes: The vertical bars show the distribution of incomes by group at three points in time, while the horizontal lines show the flows between groups over time. The «low incomes» group refers to wages or transfers below 1,000 euros/month; «middle incomes», between 1,000 and 2,000 euros/month, and «high incomes», more than 2,000 euros/month.
Source: CaixaBank Research, based on internal CaixaBank data.

Distribution of wage incomes among young people (aged 16-29) after public sector transfers
(% of the population in each group)



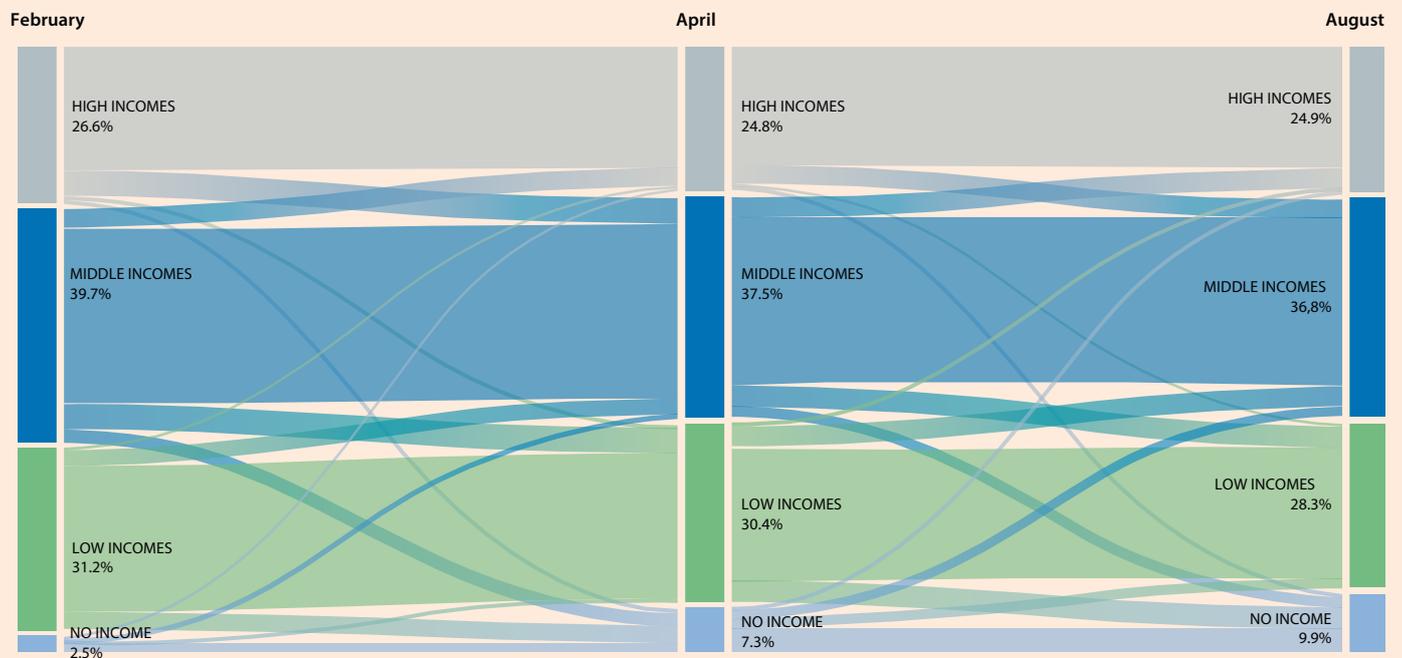
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Source: CaixaBank Research, based on internal CaixaBank data.

Distribution of wage incomes among older people (aged 50-64) before public sector transfers
(% of the population in each group)



Notes: The vertical bars show the distribution of incomes by group at three points in time, while the horizontal lines show the flows between groups over time. The «low incomes» group refers to wages or transfers below 1,000 euros/month; «middle incomes», between 1,000 and 2,000 euros/month, and «high incomes», more than 2,000 euros/month.
Source: CaixaBank Research, based on internal CaixaBank data.

Distribution of wage incomes among older people (aged 50-64) after public sector transfers
(% of the population in each group)



Notes: The vertical bars show the distribution of incomes by group at three points in time, while the horizontal lines show the flows between groups over time. The «low incomes» group refers to wages or transfers below 1,000 euros/month; «middle incomes», between 1,000 and 2,000 euros/month, and «high incomes», more than 2,000 euros/month.
Source: CaixaBank Research, based on internal CaixaBank data.

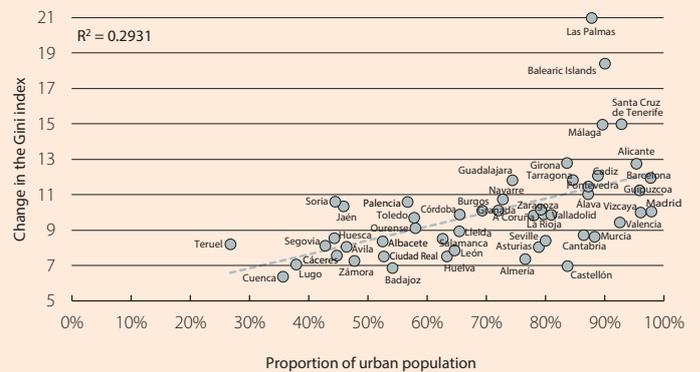
When we analyse the impact of the crisis according to gender, we see some differences between women and men, although they are much smaller than those discussed earlier in relation to age or country of birth. As an example, before public sector transfers, the proportion of women with no income increased by 15.7 pps between February and April, while for men the increase was of 14.2 pps (7.4 pps and 6.5 pps when public transfers are taken into account, respectively). The increase in the Gini index is also similar in the two groups. Between February and April, and before taking public sector transfers into account, the index increased by 12 points for women and by 11 for men, while in August the increase versus pre-pandemic levels was of 5 points in both cases (2 points for women and 3 for men when including public transfers).

Analysing the impact of the crisis by place of residence also reveals interesting differences. If we divide the territory according to population density, we see that the crisis is having a somewhat more pronounced impact in urban areas than in rural areas.³ For instance, in urban areas the proportion of people who were left with no income was 16 pps between February and April, while in rural areas it was 12 pps. The increase in the Gini index was also different depending on the area. As can be seen in the chart, the increase in inequality between February and April was clearly greater in provinces with a higher proportion of urban population. Nevertheless, it should be noted that regional differences almost disappear when we take public sector transfers into account: there is no longer any relationship between the percentage of population in urban or rural areas and the final change in the Gini index.

Analysing the regional impact of the pandemic reveals a similar pattern, with some autonomous communities, such as the Balearic Islands and Canary Islands, being much more heavily affected than others before taking public sector transfers into account. However, once we incorporate public transfers into the analysis, the differences are significantly reduced.

Increase in inequality by province according to the proportion of urban population

Gini index before public transfers (change between February and April)



Note: The change in the Gini index between February and April is corrected for seasonal variations. Source: CaixaBank Research, based on internal CaixaBank data.

3. We take Act 45/2007 on the sustainable development of the rural environment as a benchmark, defining a municipality as rural if its population is less than 30,000 inhabitants and its population density is less than 100 inhabitants per km². All other municipalities are defined as urban.

Effects of the crisis and inequality at the provincial level

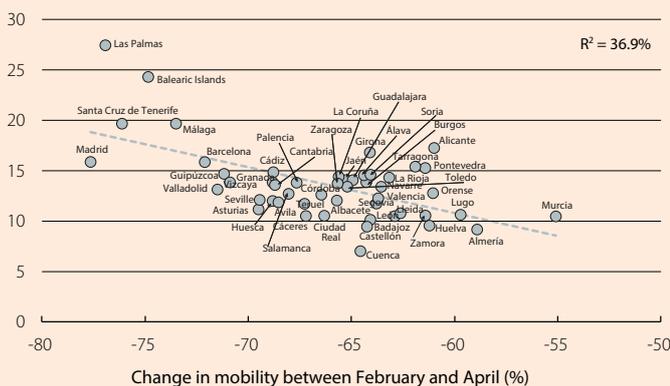
The economic impact of the pandemic has been pronounced and widespread, but it has not affected all regions equally. In some areas of Spain, the fall in economic activity has been particularly sharp, while in others it has been somewhat more contained. Below, we show the differences in the impact that the crisis has had at the provincial level by analysing the evolution of mobility and the Business Lockdown Index (BLI) developed by CaixaBank. Furthermore, we consider to what extent the evolution of these indicators is related to the rise in inequality and the number of people with low incomes in each area. We also analyse whether there is any relationship between the impact of the crisis and the evolution of household consumption over the past few months. Beyond observing differences and similarities between regions, the analysis gives us an idea of the impact that different levels of lockdown have had on the most vulnerable groups, as well as the role that the public sector is playing in cushioning the blow. This information is particularly relevant in the current context in which the second wave of the pandemic has forced us to take further action and once again impose restrictions on mobility.

Mobility indicators, which are available in almost real time, have proved very useful for approximating the impact of the COVID-19 pandemic on the levels of economic activity.¹ In the case of Spain, these indicators show how mobility fell by around 65% during the months with the strictest restrictions compared to pre-pandemic levels², as well as highlighting significant differences between provinces. In April, which is when mobility fell the most, in the quintile of provinces with the lowest falls in mobility it declined by 60% on average. At the other extreme, in the quintile of provinces with the most pronounced reductions, the decline in mobility was of 73%.

Just as monitoring changes in mobility has proven useful for assessing the economic impact of the crisis, it is also useful for analysing this impact on lower-income population groups specifically, as well as on inequality in general. The relationship between the fall in mobility and the rise in the number of people with low incomes is evident in the first set of charts, which shows the change in the number of people with incomes below the public income index wage (IPREM)³ between February and April, before and after public sector transfers. When we ignore public sector transfers, we see a greater increase in the number of people with incomes below the IPREM in provinces that registered a greater decline in mobility. Specifically, in the quintile of provinces with the lowest fall in mobility, the population with incomes below the IPREM increased by 12%, while in the upper quintile this figure reached 17% on average.

Spain: fall in mobility and increase in the number of people with incomes below the IPREM by province

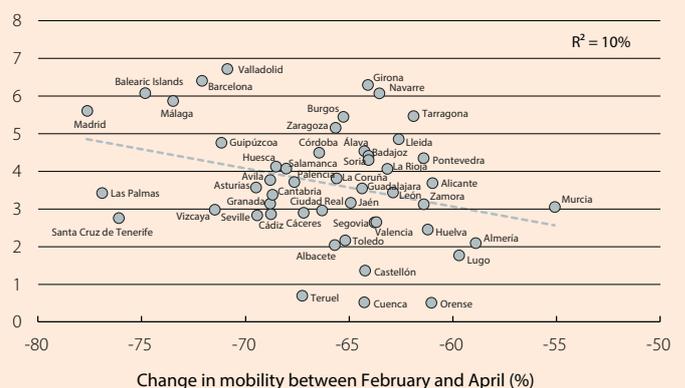
Change in the number of people with incomes below the IPREM between February and April **before** public sector transfers (%)



Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations. Mobility refers to provincial mobility (inter and intra) at airports and ports, and on roads and railways.
Source: CaixaBank Research.

Spain: fall in mobility and increase in the number of people with incomes below the IPREM by provinces

Change in the number of people with incomes below the IPREM between February and April **after** public sector transfers (%)

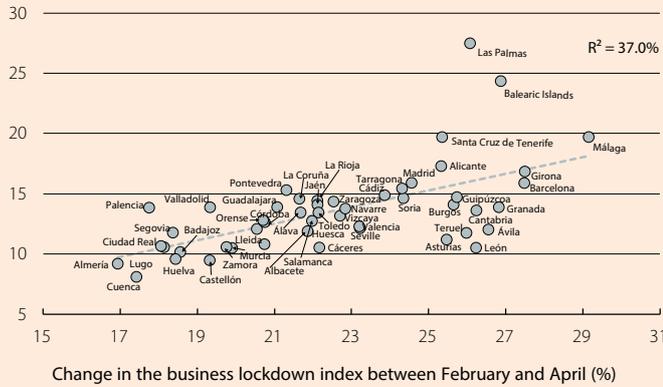


Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations. Mobility refers to provincial mobility (inter and intra) at airports and ports, and on roads and railways.
Source: CaixaBank Research.

1. For more information on the use of mobility as an indicator of the economic impact of the pandemic, see the Focus «[Rebound in mobility and economic activity](#)» in the MR09/2020 or «[The COVID-19 dilemma: mobility and economy](#)» in the MR06/2020.
2. We use data from the Ministry of Mobility, Transport and Urban Agenda, specifically data on urban and interurban mobility.
3. The public income index wage (known as the IPREM) is the reference index used in Spain for the allocation of aid and subsidies on the basis of income. In 2020, it amounts to 537,84 euros per month.

Spain: business lockdown and increase in the number of people with incomes below the IPREM by province

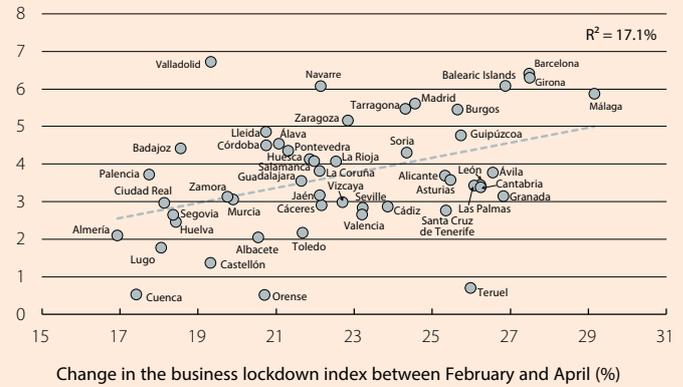
Change in the number of people with incomes below the IPREM between February and April **before** public sector transfers (%)



Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations.
Source: CaixaBank Research.

Spain: business lockdown and increase in the number of people with incomes below the IPREM by province

Change in the number of people with incomes below the IPREM between February and April **after** public sector transfers (%)



Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations.
Source: CaixaBank Research.

The relationship between the decline in mobility and the increase in the number of people with incomes below the IPREM persists during the months that marked the peak of the pandemic, and it is diluted as the economy recovers. This pattern is also apparent in other variables, such as the increase in the number of people with no income or the increase in income inequality (measured using the Gini index for each province). Specifically, in April the increase in the number of people with no income was 5.0 pps higher in the provinces that suffered a greater fall in mobility than in those where the fall in mobility was less pronounced. As for the Gini index, it increased by an average of 3.9 points more in the quintile of provinces with the greatest falls in mobility compared to the quintile with the smallest falls.

The role of the public sector has been crucial in addressing these differences between provinces. As can be seen in the first set of charts, when we take public transfers into consideration, the disparity between regions is significantly reduced. While there is still a certain negative relationship between the fall in mobility and the increase in the number of people with incomes below the IPREM, this latter figure is now only 1 pp higher in the provinces where the fall in mobility was greater.

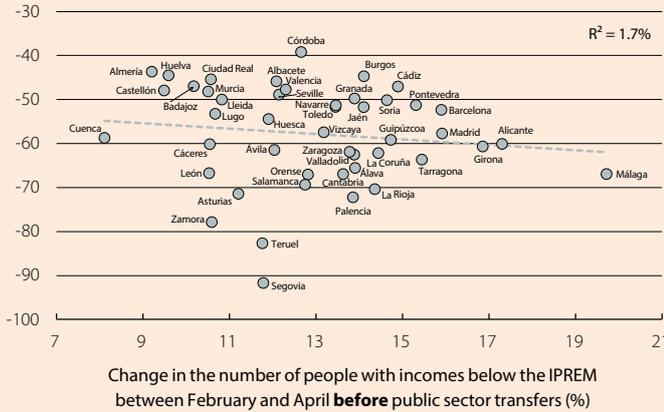
During the last half of October, when some restrictive measures had already been taken to curb the new wave of infections, mobility declined once again. In the province of Barcelona, for example, the decline in mobility compared to the pre-pandemic level amounted to 34%, while in the province of Madrid the decline was as high as 42%. In the coming weeks we will be able to assess whether the measures currently being implemented to curb mobility and the spread of the virus succeed in doing so with a smaller impact on lower incomes and inequality.

Another indicator that analyses the impact of the crisis generated by the pandemic, in this case its impact on businesses, is the Business Lockdown Indicator (BLI) developed by CaixaBank. It also shows a close relationship with the increase in the population with lower incomes. In particular, the BLI measures the change in the banking transactions of small and medium-sized enterprises as a result of the COVID-19 crisis, taking into account a wide range of indicators (both income-related indicators, such as sales registered on POS terminals; and those on the expenditure side, such as payrolls, direct debit charges, customer defaults, and other variables).⁴ The analysis provided by the BLI has been aggregated at the provincial level in order to monitor the impact of the crisis on all the businesses of each region. As can be seen in the second set of charts, the areas where the BLI shows a greater increase during the month of April are also those that experience a greater increase in the number of people with incomes below the IPREM. This same pattern is also observed when we analyse the relationship between the BLI and the change in the number of people with no income, or the change in the Gini index. In this case, as was the case with mobility, when we take public sector transfers into consideration, the relationship between the increase in the BLI and the change in the various income distribution indicators becomes more tenuous.

4. This indicator analyses changes in each company's bank transactions. An increase in the BLI indicates that the company's economic and financial situation has deteriorated compared to February (and vice versa).

Spain: increase in the number of people with incomes below the IPREM and fall in consumption by province

Change in consumption (%)

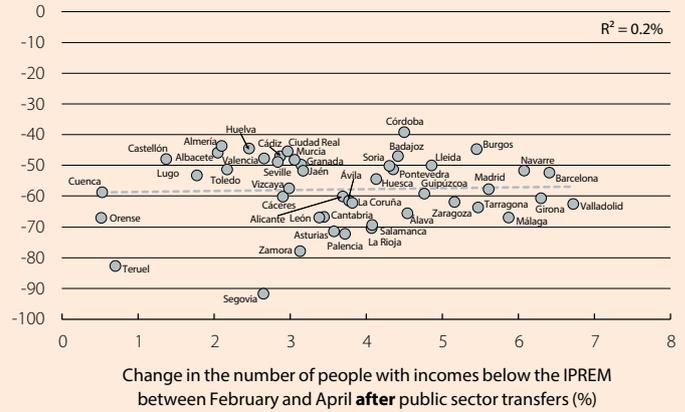


Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations.

Source: CaixaBank Research.

Spain: increase in the number of people with incomes below the IPREM and fall in consumption by province

Change in consumption (%)



Note: The change in the number of people with incomes below the IPREM is corrected for seasonal variations.

Source: CaixaBank Research.

Finally, we have analysed whether there is any relationship between the magnitude of the shock of the pandemic on income and the change in consumption at the provincial level.⁵ *A priori*, one would expect the regions hardest hit by the crisis to have also experienced a greater fall in consumption. However, public sector transfers may have significantly mitigated the impact of the shock on aggregate consumption. Also, other factors may have influenced consumption trends over the last few months. For instance, the lockdown itself made it practically impossible to spend in various sectors (culture, leisure, catering, etc.), while the high degree of uncertainty resulting from the pandemic may have accentuated consumer caution. This is precisely what the third set of charts suggests, since there is no discernible relationship between the change in consumption and the increase in the number of people with incomes below the IPREM, either before or after taking public sector transfers into account.⁶ We also do not observe any direct relationship between the change in mobility or the BLI and consumption by province. In any case, while there is no clear pattern in the trends in consumption by province at the aggregate level, we do see notable differences in the trends in consumption between different groups. For instance, those who had low incomes before the pandemic and ended up with no income in April reduced their consumption much more sharply than those who also lost their jobs but received public sector transfers. Specifically, the fall in consumption was of 44% for the first group and of 35% for the second group. This example demonstrates the need for a more detailed analysis in order to understand the trends in consumption, one of the objectives we have set ourselves for the coming months.

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5. To measure consumption at the provincial level, we use expenditure registered on CaixaBank POS terminals, expenditure in online purchases and cash withdrawals carried out at CaixaBank ATMs.

6. Similarly, when analysing the impact of the COVID-19 pandemic on consumption, Montalvo and Reynal-Querol (2020) do not identify any difference in the recovery rate of consumption when differentiating by income tranche. J.G. Montalvo and M. Reynal-Querol (2020). «Distributional effects of COVID-19 on spending: A first look at the evidence from Spain» n° 1740.

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