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MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK JUNE 2020



ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS

INTERNATIONAL ECONOMY The COVID-19 dilemma: mobility and economy

PORTUGUESE ECONOMY

SPANISH ECONOMY The COVID-19 outbreak boosts remote working

DOSSIER: THE NEW GREEN EUROPE

How is the EU positioning itself to combat climate change?

The European Green Deal, between the desirable and the feasible

The EU's climate transition: a question of justice

The necessary move towards a green financial sector





MONTHLY REPORT -ECONOMIC AND FINANCIAL MARKET OUTLOOK

June 2020

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Paula Carvalho Chief Economist

CaixaBank Research www.caixabankresearch.com research@caixabank.com

Enric Fernández Chief Economist Oriol Aspachs Director of Research Sandra Jódar Director of Banking Strategy Adrià Morron Salmeron Monthly Report coordinator Javier Garcia-Arenas Dossier coordinator

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The EU enters a new phase

As we are changing phases to lift the lockdown, the EU has also put a change of phase on the table, only in its case to escalate the process of building the European project. In fact, the recovery plan proposed by the European Commission, which it could be said lays the foundations for a fiscal union, is more than just a change of phase – it represents a true quantum leap, an exceptional moment in the history of the Union.

The shift in focus compared to the way in which the Great Recession and the sovereign debt crisis were managed is evident. Then, the EU offered aid in the form of loans from the European Stability Mechanism to the countries most affected. Even in April this year, this was its initial reaction, to offer more loans: 100 billion to help finance programmes to support temporary staff lay-offs and 240 billion to finance health expenditure. This was a welcome move, because it reduced the need to seek financing in the capital markets and offered interest rates close to 0%. But in the end it was still debt, and debt has a principal that has to be repaid.

Eventually, the EU recognised that support for Member States could not come in the form of «help to get into debt». Simply put, not all countries have the same capacity to take on debt and, therefore, to take the necessary fiscal measures to pay for the impact of the COVID-19 outbreak and prop up the recovery. If we fail to emerge from this crisis together, those that are left behind would hold back the rest, putting the European project itself at risk.

The Commission's proposal includes, as part of a 750 billion-euro package, 500 billion euros in the form of transfers. All this would be financed by the issuance of long-term debt by the EU – eurobonds that were taboo until only recently in countries like Germany. In fact, the amount of transfers being proposed is not so excessive: the half a trillion euros would be spread over four years, representing 0.9% of EU GDP per year. Furthermore, the transfers would be carried out in the context of various programmes that would benefit all EU countries, although the severity of the crisis will be one of the criteria taken into account for its distribution.

Thus, Portugal could receive between 1.5% and 2.0% of GDP per year in the form of transfers – a very substantial amount, but still only a fraction of the general government's funding needs over the coming years. Nevertheless, beyond the specific amounts, the most significant thing about the proposal is it implications for the creation of a pan-European macroeconomic stabilisation mechanism. It is an embryo of a fiscal union which, if necessary, could grow in scope. Also, although the proposal has been presented as a temporary tool, various elements give it a permanent vocation, such as the possibility to introduce its own taxes at the EU level. There is even talk of harmonising the corporate tax base and collecting a small tranche of that tax at the EU level in the case of large corporations.

Now comes the task of approving the proposal and implementing it as soon as possible, although this will not be easy. In addition to negotiating the proportion of the transfers, another sensitive issue will be determining what conditions are associated with the aid. It is reasonable for the EU to want to ensure that the funds are used appropriately and are accompanied by sensible policies that support the recovery. As for the resistance from the so-called frugal countries, the famous «UK rebate», which those countries also receive, could help to overcome it if that rebate serves to narrow the gap between what they will contribute to and receive from the EU budget. It is ironic that the EU may end up taking a leap forward like the one proposed by the Commission thanks to a contribution by the United Kingdom.

Chronology

MARCH 2020

- **3** The Fed cuts its reference rates by 50 bps, to the 1.00%-1.25% range.
- 11 The World Health Organization declares COVID-19 a pandemic.
- 12 The ECB increases asset purchases for 2020 by 120 billion euros, enhances the appeal of the TLTRO-III, introduces bridge liquidity operations (LTROs until June) and eases regulatory requirements.
- **14** The Spanish government declares the state of alarm.
- 15 The Fed cuts its reference rates by 100 bps, to the 0.00%-0.25% range, and launches a package of measures (purchases of treasuries and MBSs of 500 and 200 billion, a 150-bp cut in the discount window rate and the elimination of reserve requirements).
- 18 The ECB launches a programme of asset purchases to combat the COVID-19 crisis (PEPP), amounting to 750 billion euros. It is not subject to issuer/issue limits, and it allows temporary deviations from the capital key and assets with a wider range of maturities.

The Spanish government approves extraordinary urgent measures to deal with the impact of the COVID-19 pandemic.

23 The Fed announces that its treasury and MBS purchases will be unlimited and launches other purchase programmes (corporate debt, promissory notes, assets backed by consumer credit, etc.).

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.

APRIL 2020

- 9 The Eurogroup agrees on a 540 billion-euro rescue package in the form of loans to help combat the COVID-19 crisis.
- **12** OPEC and its allies reach a new agreement on crude oil production cuts until early 2022.
- 30 The ECB reinforces the abundance of liquidity with improvements in the TLTRO-III and the launch of additional injections to combat the pandemic (PELTRO).

FEBRUARY 2020

- **5** The US Senate acquits President Donald Trump of the charges for which he faced impeachment.
- 24 Italy detects an increase in coronavirus cases and a week of turmoil begins in the financial markets with sessions registering the biggest stock market losses in years.

Agenda

JUNE 2020

- **2** Spain: registration with Social Security and registered unemployment (May).
 - Portugal: employment and unemployment (April).
- 4 Governing Council of the European Central Bank meeting.
- 5 Portugal: new lending (April).
- **9** Portugal: international trade (April).
- 9-10 Federal Open Market Committee meeting.
- 12 Spain: Fitch rating.
- 16 Spain: quarterly labour cost survey (Q1).
- 17 Portugal: tourism activity (April).
- 18-19 European Council meeting.
- 22 Spain: loans, deposits and NPL ratio (Q1 and April).
- 24 Spain: balance of payments and NIIP (Q1).
- 29 Spain: CPI flash estimate (June). Portugal: business and consumer confidence indicator (June).

Euro area: economic sentiment index (June).

30 Spain: quarterly national accounts (Q1). Spain: household savings rate (Q1). Spain: state budget execution (May).

JULY 2020

- 1 Portugal: employment and unemployment (May).
- **2** Spain: registration with Social Security and registered unemployment (June).
- 9 Portugal: short-term investment statistics (H1).
- **10** Portugal: international trade (May).
- 15 Spain: financial accounts (Q1). Portugal: tourism activity (May).
- **16** Governing Council of the European Central Bank meeting.
- **17** Portugal: coincident economic activity indicator (June). Portugal: Moody's rating.
- 22 Spain: loans, deposits and NPL ratio (May).
- 28 Spain: labour force survey (Q2).
- 28-29 Federal Open Market Committee meeting.
- Spain: CPI flash estimate (July).
 Spain: state budget execution (June).
 Euro area: economic sentiment index (July).
 US: GDP (Q2).
- **31** Spain: GDP flash estimate (Q2). Euro area: GDP (Q2).

Let us hope we are wrong!

Prudence. We economists tend to be wrong at times like the present. At the beginning of a recession, we find it difficult to anticipate the change in trend and we are often too optimistic. In contrast, when the recovery begins to take shape, we tend to be overly pessimistic. The speed of events in recent months has been unprecedented and we already find ourselves at a new turning point. Although we are aware that we tend to project the future assigning too much importance to the latest developments, will we succumb to the same pitfall this time? Will it be spoilsports yet again?

The information we are receiving on the pace of economic activity perfectly illustrates the dilemma we find ourselves in. On the one hand, the traditional economic activity indicators, which are generally only available up to April, continue to indicate that the recession will be one of historic proportions in Q2. For instance, the economic activity indicators available for the US suggest that the decline in GDP in Q2 will be around 10%. In the case of the euro area, the drop in GDP is expected to be somewhat greater and the differences between countries are expected to be significant. The pandemic is not having the same impact across all European countries. Moreover, differences in economic structure are playing a very important role, since the lockdown measures are having a more profound effect on sectors that rely more heavily on mobility and social contact, such as tourism. Given these conditions, the Spanish economy is likely to end up registering one of the biggest setbacks, which could exceed 20% in quarter-on-quarter terms in Q2.

Yet the news is not all bad. Economic activity is rebounding as the lockdowns are lifted, even more than we expected a few weeks ago. This is reflected in the less conventional indicators, such as mobility data or card payments, which give us clues as to how economic activity is evolving almost in real time. For instance, according to records from CaixaBank POS terminals, Spanish card spending fell by around 50% year-on-year during the second half of March following the declaration of the state of alarm, and it maintained a similar rate of decline during April. However, there has been a marked change in trend since the lockdown measures began to be lifted. During the last week of May, the decline amounted to «only» 10% and, more encouraging still, the provinces in phase 2 of the lifting of the lockdown were already registering a positive growth rate of 4% (a figure that also reflects a greater propensity to pay by card rather than in

cash). Equally encouraging is the data on the number of inactive POS terminals, which increased by 60% after the state of alarm was declared. In contrast, in the last week of May «only» 15% remained inactive. Much of the productive fabric of the economy was hibernating, but it is waking up quickly.

Another positive development is the economic policy response we are seeing in the major developed countries, both in the fiscal sphere and in the monetary sphere. The magnitude of the economic recession required a rapid, decisive and effective response, and so far, this is what we are seeing. During May, one of the most encouraging developments was the economic recovery plan proposed by the European Commission, both because of the amount of resources it plans to mobilise and, above all, because of the strengthening of the European institutional architecture that it could lead to. Also noteworthy was the ECB's response to the ruling of the German Constitutional Court, which dispels doubts over its ability to act, at least in the short term.

Nevertheless, I do not think we can declare victory just yet. Until we have an effective vaccine against COVID-19, we will have to live with the virus and this will mean maintaining social distancing restrictions, which may have to be occasionally tightened if there are further outbreaks. Thus, the surge in economic activity that we will witness over the coming months will be significant, and also very encouraging, but we are unlikely to see a return to pre-pandemic levels in the short term. We will have to wait until an effective treatment is available, and the longer it takes, the greater the erosion of productive capacity will be.

There is much uncertainty as to when we will achieve this milestone, although it seems unlikely to happen before the second quarter of next year. We also do not know how we will react as a society to the new environment. In this context, many economies, including Spain, will struggle to avoid double-digit declines in GDP this year and to recover all of the lost ground next year. In the coming weeks we will publish a review of our macroeconomic scenario in which we will detail these forecasts. Let us hope we are wrong! Average for the last month in the period, unless otherwise specified



Financial markets

	Average 2000-2007	Average 2008-2016	2017	2018	2019	2020	202
INTEREST RATES							
Dollar							
Fed funds (upper limit)	3.43	0.48	1.50	2.50	1.75	0.25	0.25
3-month Libor	3.62	0.70	1.61	2.79	1.91	0.40	0.40
12-month Libor	3.86	1.20	2.05	3.08	1.97	1.00	1.05
2-year government bonds	3.70	0.73	1.84	2.68	1.63	0.50	0.60
10-year government bonds	4.70	2.61	2.41	2.83	1.86	1.00	1.20
Euro							
ECB depo	2.05	0.40	-0.40	-0.40	-0.50	-0.50	-0.50
ECB refi	3.05	1.00	0.00	0.00	0.00	0.00	0.00
Eonia	3.12	0.65	-0.34	-0.36	-0.46	-0.45	-0.45
1-month Euribor	3.18	0.79	-0.37	-0.37	-0.45	-0.43	-0.43
3-month Euribor	3.24	0.98	-0.33	-0.31	-0.40	-0.40	-0.40
6-month Euribor	3.29	1.14	-0.27	-0.24	-0.34	-0.33	-0.33
12-month Euribor	3.40	1.34	-0.19	-0.13	-0.26	-0.25	-0.25
Germany							
2-year government bonds	3.41	0.69	-0.69	-0.60	-0.63	-0.60	-0.50
10-year government bonds	4.30	1.98	0.35	0.25	-0.27	-0.30	-0.10
Spain							
3-year government bonds	3.62	2.30	-0.04	-0.02	-0.36	0.19	0.24
5-year government bonds	3.91	2.85	0.31	0.36	-0.09	0.41	0.42
10-year government bonds	4.42	3.82	1.46	1.42	0.44	0.90	0.70
Risk premium	11	184	110	117	71	120	80
Portugal							
3-year government bonds	3.68	4.42	-0.05	-0.18	-0.34	0.42	0.44
5-year government bonds	3.96	5.03	0.46	0.47	-0.12	0.72	0.64
10-year government bonds	4.49	5.60	1.84	1.72	0.40	1.00	0.80
Risk premium	19	362	149	147	67	130	90
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.31	1.18	1.14	1.11	1.15	1.18
EUR/JPY (yen per euro)	129.50	126.36	133.70	127.89	121.40	123.91	126.26
USD/JPY (yen per dollar)	115.34	97.50	113.02	112.38	109.25	107.75	107.00
EUR/GBP (pounds per euro)	0.66	0.83	0.88	0.90	0.85	0.92	0.88
USD/GBP (pounds per dollar)	0.59	0.63	0.75	0.79	0.76	0.80	0.75
OIL PRICE							
Brent (\$/barrel)	42.3	85.6	64.1	57.7	65.2	40.0	55.0
Brent (euros/barrel)	36.4	64.8	54.2	50.7	58.6	34.8	46.6

Forecasts

International economy

	Average 2000-2007	Average 2008-2016	2017	2018	2019	2020	2021
GDP GROWTH							
Global	4.5	3.4	3.9	3.6	2.9	-3.7	5.7
Developed countries	2.7	1.2	2.5	2.2	1.7	-6.2	5.3
United States	2.7	1.4	2.4	2.9	2.3	-6.1	5.1
Euro area	2.2	0.4	2.7	1.9	1.2	-6.7	6.6
Germany	1.6	1.1	2.8	1.6	0.6	-6.2	6.6
France	2.2	0.6	2.4	1.7	1.2	-6.8	6.9
Italy	1.5	-0.7	1.8	0.7	0.2	-8.0	5.9
Portugal	1.5	-0.3	3.5	2.6	2.2	-8.1	6.1
Spain	3.7	0.0	2.9	2.4	2.0	-7.2	6.9
Japan	1.5	0.4	2.2	0.3	0.7	-6.9	3.3
United Kingdom	2.9	1.1	1.9	1.3	1.4	-7.0	4.0
Emerging and developing countries	6.5	5.2	4.8	4.5	3.7	-2.1	6.0
China	10.5	8.4	6.9	6.6	6.1	1.0	9.3
India	9.7	6.9	6.6	6.8	5.3	-4.5	5.0
Indonesia	5.5	5.7	5.1	5.2	5.0	-1.0	4.0
Brazil	3.6	1.7	1.3	1.3	1.1	-4.5	1.9
Mexico	2.4	2.1	2.1	2.1	-0.1	-8.5	2.6
Chile	5.0	3.3	1.2	4.0	1.1	-5.3	3.5
Russia	7.2	0.9	1.8	2.5	1.3	-6.3	2.5
Turkey	5.4	4.8	7.5	2.8	0.9	-5.3	3.3
Poland	4.0	3.2	4.9	5.2	4.1	-4.6	4.2
South Africa	4.4	1.8	1.4	0.8	0.2	-5.4	0.4
INFLATION							
Global	4.2	3.8	3.2	3.6	3.6	2.8	3.5
Developed countries	2.1	1.5	1.7	2.0	1.4	0.6	1.9
United States	2.8	1.6	2.1	2.4	1.8	0.6	2.5
Euro area	2.1	1.4	1.5	1.8	1.2	0.9	1.8
Germany	1.7	1.3	1.7	1.9	1.4	1.0	1.9
France	1.8	1.2	1.2	2.1	1.3	1.1	1.9
Italy	1.9	1.5	1.3	1.2	0.6	0.5	1.6
Portugal	3.0	1.2	1.4	1.0	0.3	-0.4	1.4
Spain	3.2	1.3	2.0	1.7	0.7	0.0	1.4
Japan	-0.3	0.3	0.5	1.0	0.5	-0.4	0.5
United Kingdom	1.9	2.3	2.7	2.5	1.8	1.4	2.2
Emerging countries	6.7	5.8	4.3	4.8	5.0	4.2	4.6
China	1.7	2.6	1.6	2.1	2.9	2.4	2.6
India	4.5	8.5	3.3	3.9	3.7	2.9	4.3
Indonesia	8.4	5.7	3.8	3.3	2.8	2.0	4.4
Brazil	7.3	6.4	3.5	3.7	3.7	3.0	3.5
Mexico	5.2	3.9	6.0	4.9	3.6	2.0	2.5
Chile	3.1	3.5	2.2	2.7	2.3	2.9	3.1
Russia	14.2	9.3	3.7	2.9	4.5	2.6	3.3
Turkey	27.2	8.1	11.1	16.2	15.5	8.5	9.8
Poland	3.5	2.1	1.6	1.2	2.1	2.8	2.7
South Africa	5.3	6.2	5.3	4.6	4.1	3.9	4.2

Forecasts

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



Spanish economy

	Average 2000-2007	Average 2008-2016	2017	2018	2019	2020	2021
Macroeconomic aggregates							
Household consumption	3.6	-0.6	3.0	1.8	1.1	-9.9	6.9
Government consumption	5.0	0.9	1.0	1.9	2.3	6.4	4.5
Gross fixed capital formation	5.6	-3.8	5.9	5.3	1.8	-12.6	10.8
Capital goods	5.0	-1.5	8.5	5.7	2.7	-10.6	11.4
Construction	5.7	-6.5	5.9	6.6	0.9	-16.9	10.3
Domestic demand (vs. GDP Δ)	4.5	-1.2	3.0	2.6	1.5	-6.9	6.8
Exports of goods and services	4.8	2.8	5.6	2.2	2.6	-14.9	5.5
Imports of goods and services	7.0	-1.0	6.6	3.3	1.2	-15.0	5.7
Gross domestic product	3.7	0.0	2.9	2.4	2.0	-7.2	6.9
Other variables							
Employment	3.2	-1.5	2.8	2.5	2.3	-5.1	5.1
Unemployment rate (% of labour force)	10.5	20.8	17.2	15.3	14.1	19.3	15.9
Consumer price index	3.2	1.3	2.0	1.7	0.7	0.0	1.4
Unit labour costs	3.0	0.1	0.7	1.2	2.3	4.7	0.9
Current account balance (% GDP)	-5.9	-1.1	2.7	1.9	2.0	1.6	2.1
External funding capacity/needs (% GDP)	-5.2	-0.7	2.9	2.4	2.4	1.8	2.3
Fiscal balance (% GDP) ¹	0.4	-7.1	-3.0	-2.5	-2.8	-9.8	-6.0

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

Forecasts

Portuguese economy

	Average 2000-2007	Average 2008-2016	2017	2018	2019	2020	2021
Macroeconomic aggregates							
Household consumption	1.7	-0.2	2.1	2.9	2.2	-5.6	6.5
Government consumption	2.3	-0.7	0.2	0.9	1.1	3.3	1.0
Gross fixed capital formation	-0.3	-3.5	11.5	5.8	6.3	-26.2	-0.1
Capital goods	1.2	-0.1	12.5	7.5	2.7	_	-
Construction	-1.5	-6.2	12.2	4.6	9.0	_	_
Domestic demand (vs. GDP Δ)	1.3	-1.0	3.3	3.1	2.8	-7.9	4.7
Exports of goods and services	5.2	3.5	8.4	4.5	3.7	-25.4	40.5
Imports of goods and services	3.6	1.6	8.1	5.8	5.3	-24.7	35.2
Gross domestic product	1.5	-0.3	3.5	2.6	2.2	-8.1	6.1
Other variables							
Employment	0.4	-1.1	3.3	2.3	1.0	-7.3	5.0
Unemployment rate (% of labour force)	6.1	12.2	8.9	7.0	6.5	12.7	8.6
Consumer price index	3.0	1.2	1.4	1.0	0.3	-0.4	1.4
Current account balance (% GDP)	-9.2	-4.1	1.2	0.4	-0.1	-0.7	-0.2
External funding capacity/needs (% GDP)	-7.7	-2.7	2.1	1.4	0.9	0.3	0.8
Fiscal balance (% GDP)	-4.6	-6.4	-3.0	-0.4	0.2	-9.0	-2.4

Forecasts

The lifting of lockdowns boosts sentiment in the financial markets

The financial markets capture the beginning of the recovery. In May, investor sentiment continued the incipient improvement that had begun in April and the appetite for risky assets increased. Some of the main catalysts that favoured investor optimism included the containment of the number of deaths caused by the pandemic, advances made in potential treatments for COVID-19 and the lifting of the restrictions on activity in the major international economies. In this regard, the economic reconstruction programme proposed by the European Commission to support the recovery of economic activity in the region also benefited investor sentiment (see the International Economy section for further details). Meanwhile, the major central banks continued to act as guarantors of financial market liquidity, in an economic environment which they anticipate will remain demanding over the coming quarters, and they pledged to take further measures if necessary.

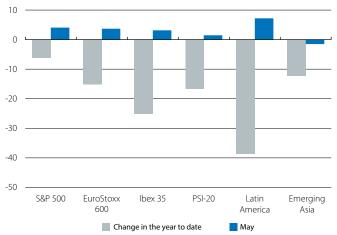
The stock markets slowly recover. The main stock market indices performed well and extended the gains registered in April, albeit in an environment of greater volatility and with more contained advances. In the case of the developed economies, for most of the month the US indices registered greater gains than their European counterparts, continuing the trend seen since the beginning of the health crisis. However, with the recovery programme proposed by the European Commission, in the second half of May this situation turned a corner and the European indices performed in line with the S&P 500. In the emerging bloc, the performance was also disparate between economies. The decline registered in the MSCI Latin America index since the beginning of the year is three times greater than that of its Emerging Asia counterpart. The reasons for this uneven performance lie in the economic vulnerability that several Latin American countries (such as Brazil, Mexico and Argentina) were already experiencing prior to the current crisis, which would have been exacerbated by the pandemic as a result of lower commodity prices and the depreciation of their currencies. Another sign of this weakness came when part of Argentina's sovereign debt defaulted on maturity, with the country requesting a 10-day margin to renegotiate terms.

The oil market stabilises. Following the turbulence in the crude oil market during April, when imbalances between supply and demand led to the price of a barrel of WTI oil (the US benchmark price) temporarily trading at negative prices, in May things returned to a certain normality. In addition to the incipient rise in the demand for fuels (resulting from the gradual reopening of activity in most countries) and the improvement in investor sentiment, the production cuts agreed by OPEC and its allies also came into force (amounting

Implicit volatility in the financial markets Index (100 = January 2017)

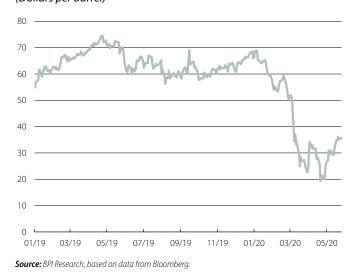


Evolution of the main stock market indices Change (%)



Note: For Latin America and Emeraina Asia, the MSCI indices have been taken Source: BPI Research, based on data from Bloomberg.

Brent oil price (Dollars per barrel)





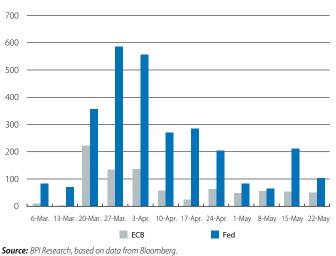
to 9.7 million barrels a day in May and June). Moreover, Saudi Arabia, Kuwait and the United Arab Emirates announced further production cuts in addition to those agreed with the other members of the cartel. Furthermore, in the US, several shale extraction wells halted their activity in order to ease the tensions arising from the oversupply that occurred in the previous month. The market response was strong and the price of a barrel of Brent oil rose to over 35 dollars.

The central banks commit to bolstering their measures.

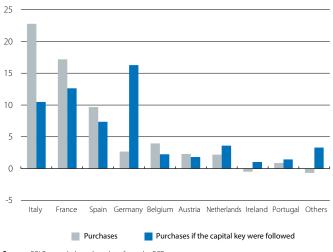
In May, the Fed and the ECB continued to increase their balance sheets as a result of the asset purchases under their respective monetary stimulus programmes aimed at combating the crisis. The effectiveness of their measures was made clear by the reduction of tensions in the money and credit markets, but both institutions also insisted that they are prepared to employ more tools if necessary. Another event that drew attention during the month was the ruling by the German Constitutional Court, which questioned aspects of the ECB's monetary policy. Specifically, the Court considered that the programme of public debt purchases in the secondary market, which the ECB has been implementing since 2015 (the so-called PSPP), fails to respect the principle of proportionality (in particular, the Court considered that an analysis has not been performed of the programme's costs and benefits in terms of the inflation mandate and the economic impacts of the measures). Thus, the Court determined that if this analysis fails to materialise within the next three months, the Bundesbank will have to cease participating in the programme. The ECB, meanwhile, indicated that it is subject to the jurisdiction of the European courts and that these courts had already ruled, in a previous judgement, in favour of the legality of the PSPP and its consistency with the ECB's mandate. In the short term, the ruling is not expected to affect the ECB's capacity to implement stimulus packages (moreover, the ruling does not refer to the PEPP, the major stimulus programme that the ECB has launched to address the COVID-19 crisis). Nevertheless, the conflict highlights the risk of tensions arising between the various jurisdictional levels within the EU.

The risk premiums of the euro area periphery narrow. The greater appetite for risky assets also extended to the public debt market, where the spotlight was on the sovereign yield curves of the countries of the euro area periphery. The ECB's purchases of debt from these countries (in the secondary market) and the economic reconstruction programme proposed by the European Commission, which was announced towards the end of the month, reduced the risk premiums of Spain, Portugal and Italy by between 30 and 45 bps. Thus, at the end of the month, their spreads relative to the German *bund* were only slightly higher than those prior to the pandemic. Sovereign yields in Germany and the US, meanwhile, remained low.

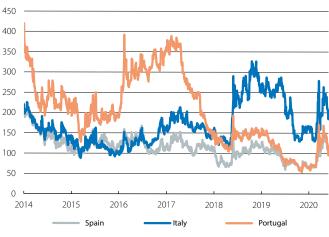
Central bank balance sheets: weekly increase (EUR and USD billions)



ECB: net asset purchases (PSPP) in March (EUR billions)



Source: BPI Research, based on data from the ECB.



Euro area: risk premiums of 10-year public debt (bps)

Source: BPI Research, based on data from Bloomberg.

Interest rates (%)

	31-May	30-Apr.	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	-0.31	-0.27	-3	7.6	1.5
1-year Euribor	-0.09	-0.12	3	16.4	8.3
1-year government bonds (Germany)	-0.57	-0.54	-3	6.6	4.6
2-year government bonds (Germany)	-0.66	-0.76	10	-5.8	0.0
10-year government bonds (Germany)	-0.45	-0.59	14	-26.2	-24.5
10-year government bonds (Spain)	0.56	0.72	-16	9.4	-15.3
10-year government bonds (Portugal)	0.50	0.82	-31	6.2	-30.6
US					
Fed funds	0.25	0.25	0	-150.0	-225.0
3-month Libor	0.34	0.56	-21	-156.4	-215.9
12-month Libor	0.67	0.86	-19	-132.3	-183.7
1-year government bonds	0.16	0.14	2	-140.9	-204.3
2-year government bonds	0.16	0.20	-4	-140.9	-176.2
10-year government bonds	0.65	0.64	1	-126.5	-147.2

Spreads corporate bonds (bps)

	31-May	30-Apr.	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	72	80	-8	28.1	0.9
Itraxx Financials Senior	85	101	-16	33.8	-6.4
Itraxx Subordinated Financials	181	218	-37	67.3	-6.4

Exchange rates

	31-May	30-Apr.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.110	1.096	1.3	-1.0	-0.6
EUR/JPY (yen per euro)	119.770	117.420	2.0	-1.6	-1.0
EUR/GBP (pounds per euro)	0.899	0.870	3.4	6.3	1.7
USD/JPY (yen per dollar)	107.830	107.180	0.6	-0.7	-0.4

Commodities

	31-May	30-Apr.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	367.1	353.2	3.9	-8.6	-11.7
Brent (\$/barrel)	35.3	25.3	39.8	-46.5	-45.2
Gold (\$/ounce)	1,730.3	1,686.5	2.6	14.0	32.5

Equity

	31-May	30-Apr.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	3,044.3	2,912.4	4.5	-5.8	10.6
Eurostoxx 50 (euro area)	3,050.2	2,927.9	4.2	-18.6	-7.0
lbex 35 (Spain)	7,096.5	6,922.3	2.5	-25.7	-21.2
PSI 20 (Portugal)	4,330.7	4,284.2	1.1	-16.9	-14.1
Nikkei 225 (Japan)	21,877.9	20,193.7	8.3	-7.5	6.2
MSCI Emerging	930.4	924.9	0.6	-16.5	-6.8

Incipient recovery, with the permission of COVID-19

Very gradual recovery as the lockdowns begin to be lifted. In recent months, it has become apparent that the COVID-19 outbreak will have a very significant impact on economic activity. Moreover, all the indicators suggest that the macroeconomic figures for the second quarter as a whole will be far worse than in Q1, and somewhat worse than initially predicted. For instance, in April the Composite Purchasing Managers' Index (PMI) for the global economy plunged to 26.5 points, its lowest value since the series began to be published. In May, the slowdown in infections brought about a gradual lifting of the lockdowns in major advanced economies, which naturally led to an incipient improvement in the economic indicators, although they remain low and reveal weak economic activity. Insofar as the epidemic remains under control and evolves positively, the lifting of the lockdown and social distancing measures will bring about a recovery in the economic indicators over the coming months. Nevertheless, the normalisation of the economy will be subject to the COVID-19 epidemic being contained and to medical progress curbing its spread. These are two conditions without which global economic activity is unlikely to fully return to normal.

Europe gives new impetus to its economic policies. Faced with the unprecedented impact of the pandemic on the economy, economic policy is generally responding rapidly and with ambitious measures. That said, there are significant differences between regions and countries, with advanced countries, given their greater capacity to take on debt, deploying a more decisive battery of measures than emerging countries. There is also significant disparity among advanced countries, which is largely explained by differences in their capacity to implement a fiscal stimulus (greater margin in the US and in the economies of the core of the euro area than in Europe's periphery). However, in May, European institutions took an important step forward in implementing a common European response to the economic impact of the COVID-19 epidemic. In particular, a few days after France and Germany expressed their support for a possible 500 billion euro package to be distributed among EU countries in the form of non-reimbursable transfers (thereby not increasing states' public debt ratios), the European Commission proposed a Recovery Plan that would include a fund of some 750 billion euros (5.4% of EU GDP), most of which (approximately 500 billion euros) would be disbursed in the form of transfers. with the rest taking the form of loans. In addition, the funds would be obtained through the issuance of truly European debt by the European Commission, which would be supported by an increase in the capital ceiling of the EU budget (from 1.2% of GDP to 2.0%), which would also include the creation of new taxes at the European level. The funds would be evenly distributed over a four-year period (between

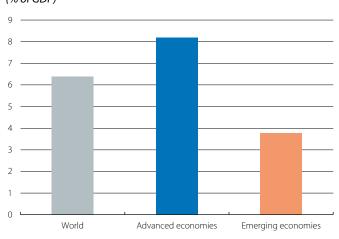
Composite PMI

Level

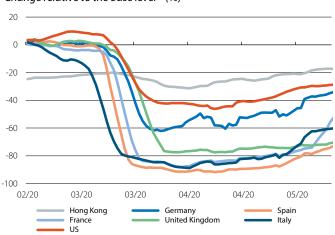


Note: The data for May for the euro area and the US correspond to the Flash PMI. Source: BPI Research, based on data from IHS Markit.

Fiscal measures (% of GDP)



Note: Estimates by Goldman Sachs for direct spending, liquidity and tax deferral measures, etc. Source: Goldman Sachs.



Population mobility in retail establishments Change relative to the base level * (%)

Notes: 7-day average data. (*) The base level corresponds to the average mobility recorded on the same day of the week between 3 January and 6 February. Source: BPI Research. based on the Gooale Mobility Report.

2021 and 2024) and the allocation between countries would take into account the severity of the impact of the coronavirus. Although there are still no official figures on the potential distribution by country, we estimate that Spain could benefit from an annual sum of between 1.5% and 2.0% of its GDP (see further details in the Brief Note of 29 May 2020 entitled «Propuesta de Plan de Recuperación»). This proposal, however, will have to be approved at the European Council (in June or July) and then ratified by the European Parliament and by all Member States.

The US and China revive geopolitical tensions. While on the trade front a new tariff hike seems unlikely – given that, in early May, the two countries were quick to declare that the established agreements were being complied with – the rhetoric between the two economies has once again toughened (in recent months, the US president has repeatedly blamed China for the spread of COVID-19) and new fronts of tension have opened. In particular, the US has pointed out that it could exclude Chinese companies from American stock exchanges. In addition, following the adoption of the Hong Kong Security Law by the Chinese government, the US secretary of state, Mike Pompeo, announced that Hong Kong could no longer be regarded as an autonomous territory of China (which would result in the loss of certain trade and financial benefits enjoyed by the region).

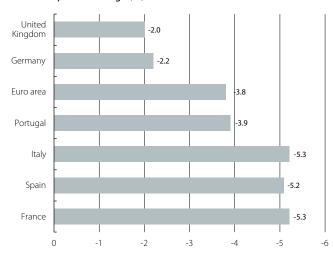
ADVANCED ECONOMIES

Unprecedented declines in economic activity are expected in the major advanced economies in Q2. Following GDP

figures for Q1 2020 that have already begun to capture the impact of the pandemic (the US economy contracted by 1.2% quarter-on-quarter, Japan by 0.9%, the UK by 2.0%, Germany by 2.2%, and France, Spain and Italy by around 5.0%), the intensification of restrictions on mobility during April and their extension throughout much of May in most European countries and in the US will lead to unprecedented contractions (in many cases, on a scale unseen since World War II) in the economic activity of these countries in Q2 (see the Focus «The COVID-19 dilemma: mobility and economy» in this same *Monthly Report* for an analysis of the impact of the lockdown measures on GDP in Q2). For instance, in the US the New York Fed's high-frequency economic activity index points towards declines in GDP of more than 10% (in year-on-year terms).

The indicators suggest that the bulk of the weakness was concentrated in April, while in May incipient signs of recovery appeared thanks to the gradual lifting of the lockdown. The information available in real time is scarce and the more conventional indicators available as of the close of this report (such as industrial production, retail sales and the unemployment rate) still relate to March. Nonetheless, highfrequency indicators such as electricity consumption, card payments and indices related to the mobility of people (based

Europe: Q1 2020 GDP Quarter-on-quarter change (%)



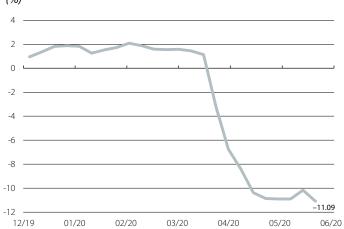
Source: BPI Research, based on data from Eurostat and national statistics offices.

Japan: GDP Change (%)



Source: BPI Research, based on data from the Cabinet Office of Japan.

US: weekly economic activity index * (%)



Note: * Index built using 10 daily and weekly indicators. It is scaled to coincide with year-on-year GDP growth. It is not an official forecast index of the New York Fed. Source: BPI Research, based on data from the New York Fed. on mobile phone geolocation data) suggest, on the one hand, that production remained markedly weak in April and, on the other, that a gradual restoration of economic activity in the major advanced economies began in May. The recovery is, however, very gradual.

COVID-19 weakens inflation, especially due to the fall in energy prices (caused, in turn, by the collapse in global demand) and those of the services hardest hit by the lockdown measures (notably leisure and tourism). Thus, in April, US inflation stood at 0.3%, 1.2 pps below the figure for March, while inflation in the euro area stood at 0.1% in May, -0,2 pps compared to April and -0.6 pps compared to March.

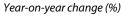
EMERGING ECONOMIES

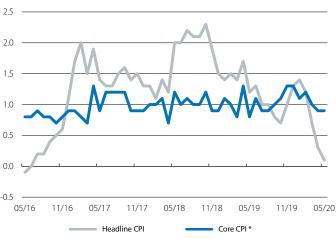
Gradual and patchy recovery in China. The economic activity indicators for April and May show a disparate recovery by sector in the Chinese economy. Whilst the manufacturing and construction sectors have already recovered their normal levels of production, activity in the services sector is still affected by the maintenance of various social distancing measures and by weaknesses in household consumption, which is making it recover at a slower pace (see the analysis in the Focus «Gradual recovery in China: cautious optimism with some restrictions» in this same Monthly Report). In this context, the Chinese cabinet decided, for the first time, not to set a GDP growth target for 2020. However, the government did announce an increase in the public deficit target for this year, up to at least 3.6% of GDP (higher than the 2.8% in 2019). Although this increase may seem modest, it should be borne in mind that the government is also implementing a significant increase in the spending and investment of public enterprises and local entities that do not fall within the scope of the government's budget (this spending could amount to around 3% of GDP). With this package of measures, the fiscal stimulus will help to facilitate the recovery of the Chinese economy in the second half of 2020.

In other major emerging countries, the impact of the pandemic in Q1 was uneven. In India, Turkey and Russia, the impact of the COVID-19 outbreak was yet to leave a significant mark on the economic figures in the first quarter of the year, while in Brazil the impact was much more apparent. Specifically, India's economy grew by 3.1% year-on-year in Q1, versus 4.1% year-on-year in Q4 2019. In Turkey, year-on-year growth stood at 4.5%, lower than the

6.0% registered at the end of 2019 but still buoyant. In Russia, meanwhile, GDP rose by 1.6% year-on-year in Q1 (2.1% in the previous quarter). In contrast, Brazil's GDP fell by 0.3% year-on-year, dented by the lockdown measures decreed in the various states from 13 March (in Q4 2019, the economy had grown by 1.7%). We expect, however, the declines in economic activity for Q2 to be much more significant in all these economies.

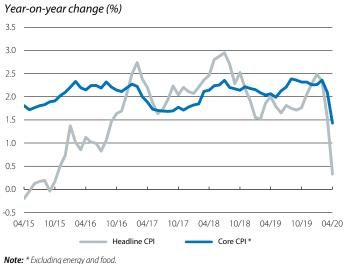
Euro area: harmonised ICP





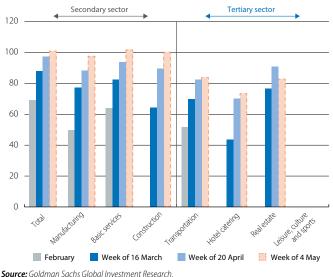
Note: * Excluding energy, food, alcohol and tobacco. **Source:** BPI Research, based on data from Eurostat.

US: CPI



Source: BPI Research, based on data from the Bureau of Labor Statistics

China: recovery of economic activity Percentage of the level of 2019 (%)



Gradual recovery in China: cautious optimism with some restrictions

- The Chinese economy has accelerated its recovery in the last month and some sectors have already recovered almost complete normality.
- It is, however, a patchy recovery: economic activity in some service sectors, such as hospitality, leisure and catering, remains well below pre-crisis levels, hampered by the weakness of face-to-face consumption.
- Overall, the improvement invites cautious optimism, in the knowledge that COVID-19 casts a long shadow and that it will take time for aggregate activity to fully return to normal.

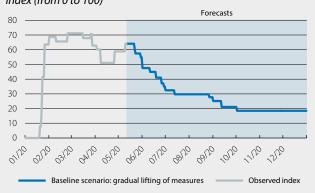
There is much discussion about the speed of the Asian giant's recovery following the blow that COVID-19 dealt to its economy in Q1 (9.8% quarter-on-quarter decline). It is fast or slow? Gauging the speed of the recovery in China and its characteristics, with all its nuances, is particularly important given that it was the first country to be affected by COVID-19 and also the first to contain the epidemic by the end of Q1 after imposing a strict lockdown. China is thus «one quarter ahead» and is in a good position to offer us clues about how advanced economies will perform over the coming months.

As shown in the first chart, the social distancing measures imposed by China, synthesized in the stringency index created by the University of Oxford, were guite severe and still remain at intermediate levels. The approach has been highly cautious. Indeed, at the end of April mobility was restricted once again in some regions, while in May citizens in some regions were ordered to stay in their homes. However, if there are no further outbreaks, we can expect the social distancing measures to be eased by the end of the year (bringing them from their current level of slightly above 60 out of 100 to around 20 points). The relaxation of these measures could thus provide a significant boost to the economy in the second half of the year, once the «new normal» has been achieved (in the second half of the year, we expect a recovery in GDP growth that could put average growth at around 1.0% in 2020).

A gradual and patchy recovery

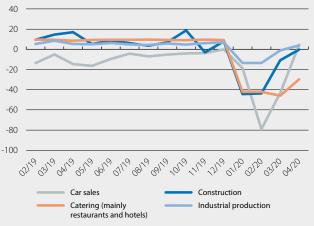
China's recovery can be divided into two phases: a very slow phase in March and the first half of April, and a second phase that has been more encouraging, albeit heterogeneous by sector. Since then, in some sectors – such as construction, manufacturing and the automotive industry – economic activity has almost completely returned to normal relative to pre-COVID-19 levels. However, in some service sectors – such as hospitality, leisure and catering – activity remains well below normal (according to a survey by Gavekal Dragonomics, by the end of April, 64% of Chinese people had eaten out at a restaurant, 53% had been to a shopping centre and only 15% had returned to the gym).

China: social distancing with the evolution of the COVID-19 outbreak Index (from 0 to 100)



Note: This index ranges from 0 (no social distancing measures) to 100 (maximum severity), whereby an aggregate of various social distancing measures is taken and its average is normalised in this range. Source: BPI Research, based on data from the University of Oxford.

China: economic activity by sector Year-on-year change (%)

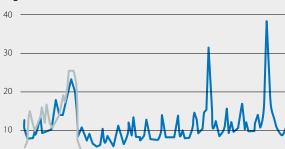


Source: BPI Research, based on data from the National Bureau of Statistics and the China Academy Index.

The fact is that the weakness of consumption, together with the maintenance of social distancing measures (restrictions on the capacity of public events and limitations on leisure activities), will have a lasting effect that will make it difficult for many tertiary sector activities to regain their buoyancy in what remains of 2020. This will make it difficult for aggregate demand to recover to pre-crisis levels and will continue to hamper a full recovery. There is certainly no lack of reasons for the weaker consumption: from the detrimental impact of the COVID-19 epidemic on the labour market (only 25% of workers reported having maintained their wages unchanged in March), to a change in people's consumption habits related to a certain «fear factor», to a higher savings rate as people become more cautious. The Chinese authorities are aware of these issues and. from 7 May, hotels, restaurants and shops are allowed to open and operate as normal, while leisure spaces (cinemas, parks, museums and gyms) can also reopen, albeit with capacity restrictions. These measures are aimed at consolidating the incipient improvement in consumption.

Changes in consumption habits have already begun to emerge and some of them may have come to stay, leading to a significant sectoral reconfiguration in the Chinese economy. In particular, we note that in March and April online sales have remained at the same level as in 2019 on average, while in-person retail sales have been 30% to 36% below normal. In other words, the resilience of online commerce – which has gone from representing 12% of total commerce at the beginning of 2016 to the current level of 30% – has been fundamental in avoiding an even harsher economic collapse. The same can be said of the consumption of essential goods, which in April stood at more than 400% above the average for 2019, while at the other end of the spectrum hotel and restaurant catering remained 50% below normal.

Despite the difficulties and the lasting effects of COVID-19 discussed above, it is undeniable that the rebound in several economic sectors in April, after economic activity shifted up a gear in the second half of the month, offers some hope and allows us to speak of



01/01/09/01/17/01/25/02/02/02/18/02/26/03/05/03/13/03/29/04/06/04/14/04/22/04/30

Mobility: departures from Beijing Migration index

Migration index in 2020

China: a patchy recovery

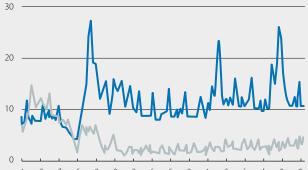
Change in sales compared to the average for 2019 (%) *



Note: * To calculate average online and in-person retail sales for 2019, we have excluded the months corresponding to the Chinese New Year and the celebration of Singles Day to avoid seasonality problems. Source: BPI Research.

«cautious optimism» at this time. A somewhat more positive reading is also obtained when we look at China's mobility data collected by Baidu (the so-called «Chinese Google»). In Beijing, for example, mobility – measured by the number of people leaving the city – rose significantly at the end of April. However, the flow of people entering Beijing remained abnormally low, which may be related to the spread of teleworking and the devastating effects of the virus on the labour market (it is estimated that one-fifth of Chinese workers who left their workplace to celebrate the Chinese New Year at the end of January had not yet returned to their workplaces by the end of April). Another positive element is related to the modest number of companies that have failed: the data show no significant increase in bankruptcies compared to the first half of 2019. This may be a positive consequence of the Chinese authorities' measures to boost liquidity in the markets and among firms (fewer restrictions since February on the issuance of new corporate bonds to refinance debt and liquidity injections into the financial markets).

Mobility: arrivals into Beijing Migration index



01/01/09/01/17/01/25/02/02/10/02/18/02/26/03/05/03/13/03/29/04/06/04/14/04/22/04/36

Migration index in 2019 (corresponding to the lunar calendar)

Note: Each unit of the index corresponds to approximately 50,000 people. Thus, a value of 30 would represent 1.5 million people. The index has ceased to be published since the beginning of May. Source: Baidu Qianxi.

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What assessment can we make of the situation? One of cautious optimism

The ideal outcome when an economist performs an analysis such as this one is to be able to provide a clear response in an unequivocal direction. In the case of China's recovery, this task is complicated by the significant disparity depending on the sector in question, and this makes it difficult to determine just how much things have really improved.

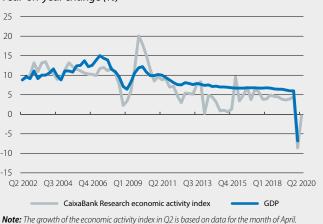
To help us clarify this issue, we have analysed the evolution of our economic activity indicator, which estimates the state of the Chinese economy using indicators that are directly related to the country's economic activity, such as electricity consumption or car sales.¹ The results support a scenario of cautious optimism: the economic activity index fell by only 0.3% year-on-year in April, after plummeting 8.5% in Q1 (GDP fell by 6.8% year-on-year), which is a more encouraging development than expected (it would correspond to a quarterly rebound of slightly over 8%, well above most forecasts).

While we have more reason to be cautiously optimistic today than we did a month ago, we must remember that there are also reasons to be particularly cautious and not to rejoice just yet. Indeed, uncertainty is so high that, for the first time, the Chinese government has not set a growth target for 2020. On the one hand, our economic activity index does not accurately capture the performance of the foreign sector, and in all likelihood the weakness of global demand will result in a collapse in Chinese exports in Q2, offsetting the boost from domestic demand. In particular, according to the Asian trade scenarios developed by the World Trade Organization, Chinese exports could contract by between 30% and 50% year-on-year in the first half of 2020, which would have a profound impact on quarter-on-quarter GDP growth in Q2.²

On the other hand, the current situation is extremely fragile and unstable, so any further outbreaks could force a retreat in the lifting of restrictions (cinemas and theatres opened at the end of March, only to close again just five days later). For instance, an article analysing Chinese household consumption on the basis of credit card transactions³ shows how the incipient rebound in consumption in late March came to a grinding halt in the first half of April due to fears of a

3. See H. Chen, W. Qian and Q. Wen (2020). «The impact of the COVID-19 pandemic on consumption: Learning from high frequency transaction data». Available in SSRN paper 3568574.





Source: BPI Research.

second wave, following the emergence of new local outbreaks of SARS-CoV-2.

In short, China has experienced a sharp acceleration in the pace of its recovery over the past month, making gloomy readings of the situation inaccurate – and the fiscal stimulus in the second half of 2020 will also help.⁴ Nevertheless, the weakness of the services sector (which accounts for 52% of GDP), the maintenance of social distancing measures and the lasting effects of the virus on consumption and on the labour market will prolong the time required for economic activity to fully return to normal. All in all, we can ingest a certain dose of optimism... *ma non troppo*.

4. Within the framework of the National People's Assembly, the cabinet has announced an increase in the public deficit target for this year up to at least 3.6% of GDP (higher than the 2.8% in 2019). While this increase may not seem particularly significant, it should be borne in mind that the government is also implementing a major rise in spending and investment among public enterprises and local entities that do not fall within the perimeter of the government's budget (this spending could reach around 3% of GDP).

^{1.} We presented our indicator for the first time in the Focus «China's economic growth under the microscope: past, present and future» in the MR02/2018.

^{2.} Given that exports account for 17% of GDP, the negative effect would amount to between 5 and 13 pps.

The COVID-19 dilemma: mobility and economy

- The differences between countries in the severity and duration of the lockdown measures at the beginning of the year have been reflected in the declines in GDP in Q1.
- In Q2, the epicentre of the pandemic (and the lockdown) has moved from China to Europe and America, which will result in unprecedented declines in economic activity in the major advanced economies.

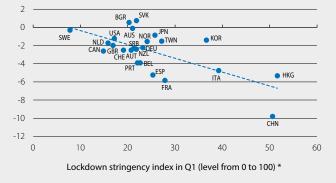
The struggle to contain the pandemic has forced most governments to impose lockdown measures for the population. The objective was (and remains) to minimise the human cost of COVID-19, to prevent hospitals from being overrun and to buy time in order to learn more about and thus combat the virus. However, restrictions on mobility come with a significant economic cost. At a time when many countries are beginning to gradually lift the lockdown measures, and with the first estimates of GDP for Q1 2020, we can begin to glimpse the impact of the social distancing measures on the economy in this second quarter of 2020.

What Q1 taught us

China went into lockdown in January and the measures were maintained throughout February and March. Most European and American countries, meanwhile, began to impose restrictions on mobility at the end of Q1, but these restrictions remained in place and even intensified during April and May. Indeed, whereas in Q1 the epicentre of the pandemic was in China, it shifted to Europe in April and then to the American continent in May (see first chart).

The differences between countries in the severity and duration of the lockdown measures imposed during the first three months of the year have been reflected in significant diversity in the declines in GDP that their economies suffered in Q1. This relationship between

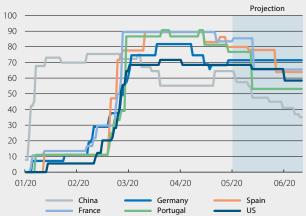
Lockdown stringency and economic activity Quarter-on-quarter GDP growth in Q1 (%)



Note: * The lockdown stringency index measures the severity of numerous social distancing policies decreed by the various countries. It can range from 0 (no measures) to 100 (maximum severity in all measures). This is the Stringency Index developed by the University of Oxford. We calculate the average of the index in Q1 2020 (in Q4 2019 it stood at 0 for most countries; in China and Hong Kong it was positive, but still very low).

Source: BPI Research, based on data from the University of Oxford (Stringency Index) and the various national statistics institutes.

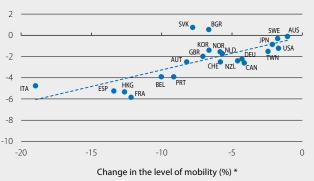
Lockdown stringency Level (from 0 to 100) *



Note: * This is the Stringency Index developed by the University of Oxford, which measures the severity of numerous social distancing policies decreed by the various countries. It can range from 0 (no measures) to 100 (maximum severity in all measures). Source: BPI Research, based on data from the Oxford COVID-19 Government Response Tracker. Blavatnik School of Government

lockdown and economic activity can be clearly observed in the following two charts. Countries with stricter lockdown measures imposed during the first few months of the year – and thus with lower levels of mobility for their citizens – have also suffered the greatest declines in economic activity. For instance, in China, a country with severe lockdown measures in place throughout Q1, GDP contracted by –9.8% (in quarter-on-quarter terms); in Italy and Spain, where the lockdown policies came later

Mobility and economic activity Quarter-on-quarter GDP growth in Q1 (%)



Note: * The change in the level of mobility is based on Google's mobility reports, which measure how the number of visits to places such as supermarkets, parks, places of work, etc. have changed. We compute the final value as the average of the change for all places for which Google provides data during Q1 2020.

Source: BPI Research, based on data from Google (Local Mobility) and the various national statistics institutes.

Lockdown, the de-escalation and the economic impact in Q2

The greater incidence of lockdown and social distancing measures during Q2 in Europe and the US will undoubtedly deal an unparalleled blow to these regions' economies. However, differences both in the severity of the lockdown measures and in the de-escalation plans of the different countries will again lead to significant differences in economic activity. Let us consider these differences by taking advantage of the statistical relationship between the two variables.

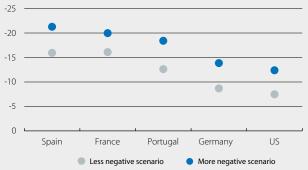
Firstly, we conducted an analysis that relates the strictness of the lockdown in place during the first three months of the year, measured using the University of Oxford's lockdown stringency index, with the impact on economic activity in major economies.² We then take this relationship established between lockdown stringency and economic activity and extrapolate it to Q2, based on the severity of the lockdown measures in place during April and May and those projected for June according to the de-escalation plans announced by the various governments.

As the last chart shows, this exercise indicates that the declines in economic activity caused by the lockdown and social distancing measures will intensify in Q2 in the major advanced economies. This is a logical result in that more weeks of the second quarter have been affected by these measures. Nevertheless, it is interesting to note how the magnitude of the lockdown's impact on economic activity varies by country. In particular, in Spain and France the severity of the lockdown would point towards a drop in economic activity of around 2 0% quarter-on-quarter, since the lockdown and social distancing measures have been more severe than in most advanced economies and they are being lifted more gradually. At an intermediate level we would find

1. These are the first GDP estimates for Q1. Given the exceptional nature of the pandemic, they will likely be subject to more revisions than usual. 2. More specifically, we estimate the following equation: $GDP growth_{i,t} = \delta_0 + \delta_1 \Delta Lockdown stringency index_{i,t} + \delta_i + \delta_t + \varepsilon_{i,t'}$ where $\delta_i \ \delta_t$ are fixed country and month effects, respectively, and Δ represents the change in time. To perform this estimate, we used panel data from 11 countries for January, February and March. Note that we use monthon-month figures for GDP growth, calculated using the quarter-onquarter growth for Q1 and economic activity indicators for the same quarter. The fixed effects may already be controlled by elements such as the potential for the adoption of remote working in the various countries. For a detailed analysis of the relationship between economic activity and remote working in the context of the COVID-19 outbreak, see the Focus «The COVID-19 outbreak boosts remote working» in this same *Monthly Report*.

Impact of social distancing measures on economic activity in Q2

Contribution to quarter-on-quarter growth in Q2 (pps)



Note: Estimates obtained from the result of the regression detailed in note 2 of the text and the de-escalation plan announced by each country. The more and less negative scenarios are obtained from the estimate's 95% confidence interval. **Source:** BPI Research, based on data from the University of Oxford and Refinitiv.

Portugal, with a decline in economic activity that is still substantial but somewhat less pronounced (of the order of 15%). Finally, the economic impact in Germany and the US is estimated to be lower (around 10%), with measures that have been more lax and less widespread.

The indices that capture the strictness of the social distancing measures implemented to curb the spread of COVID-19 provide us with a notion of how severe the declines in economic activity in Q2 could be in the major advanced countries. However, the uncertainty surrounding the available economic activity data and the difficulty in estimating sudden and profound economic movements compel us to take the results obtained with caution. Moreover, the decline that finally materialises will depend on many other factors, such as the success with which the various economies have embraced remote working practices and the magnitude of the economic policy responses to cushion the impact of the shock.

UNITED STATES

2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
2.9	2.3	2.3	2.1	2.3	0.3	_	_	_
4.7	4.0	3.9	4.3	4.0	3.0	4.4	0.8	-16.0
130.1	128.3	128.3	132.1	127.0	127.3	132.6	118.8	85.7
3.9	0.9	1.2	0.2	-0.7	-2.0	-0.3	-4.9	-15.0
58.9	51.2	52.4	49.4	48.1	50.0	50.1	49.1	41.5
1,248	1,295	1,257	1,288	1,433	1,487	1,567	1,276	891
211	217	216	217	219	222	222	223	
3.9	3.7	3.6	3.6	3.5	3.8	3.5	4.4	14.7
60.4	60.8	60.6	60.9	61.0	60.8	61.1	60.0	51.3
-2.4	-2.9	-3.1	-3.1	-2.9	-2.7	-2.8	-2.7	
2.4	1.8	1.8	1.8	2.0	2.1	2.3	1.5	0.3
2.1	2.2	2.1	2.3	2.3	2.2	2.4	2.1	1.4
	2.9 4.7 130.1 3.9 58.9 1,248 211 3.9 60.4 -2.4 2.4	2.9 2.3 4.7 4.0 130.1 128.3 3.9 0.9 58.9 51.2 1,248 1,295 211 217 3.9 3.7 60.4 60.8 -2.4 -2.9 2.4 1.8	2.9 2.3 2.3 4.7 4.0 3.9 130.1 128.3 128.3 3.9 0.9 1.2 58.9 51.2 52.4 1,248 1,295 1,257 211 217 216 3.9 3.7 3.6 60.4 60.8 60.6 -2.4 -2.9 -3.1 2.4 1.8 1.8	2.9 2.3 2.3 2.1 4.7 4.0 3.9 4.3 130.1 128.3 128.3 132.1 3.9 0.9 1.2 0.2 58.9 51.2 52.4 49.4 1,248 1,295 1,257 1,288 211 217 216 217 3.9 3.7 3.6 3.6 60.4 60.8 60.6 60.9 -2.4 -2.9 -3.1 -3.1 2.4 1.8 1.8 1.8	2.9 2.3 2.3 2.1 2.3 4.7 4.0 3.9 4.3 4.0 130.1 128.3 128.3 132.1 127.0 3.9 0.9 1.2 0.2 -0.7 58.9 51.2 52.4 49.4 48.1 1,248 1,295 1,257 1,288 1,433 211 217 216 217 219 3.9 3.7 3.6 3.6 3.5 60.4 60.8 60.6 60.9 61.0 -2.4 -2.9 -3.1 -3.1 -2.9 2.4 1.8 1.8 1.8 2.0	2.9 2.3 2.3 2.1 2.3 0.3 4.7 4.0 3.9 4.3 4.0 3.0 130.1 128.3 128.3 132.1 127.0 127.3 3.9 0.9 1.2 0.2 -0.7 -2.0 58.9 51.2 52.4 49.4 48.1 50.0 1,248 1,295 1,257 1,288 1,433 1,487 211 217 216 217 219 222 3.9 3.7 3.6 3.6 3.5 3.8 60.4 60.8 60.6 60.9 61.0 60.8 -2.4 -2.9 -3.1 -3.1 -2.9 -2.7 2.4 1.8 1.8 1.8 2.0 2.1	2.9 2.3 2.3 2.1 2.3 0.3 - 4.7 4.0 3.9 4.3 4.0 3.0 4.4 130.1 128.3 128.3 132.1 127.0 127.3 132.6 3.9 0.9 1.2 0.2 -0.7 -2.0 -0.3 58.9 51.2 52.4 49.4 48.1 50.0 50.1 1,248 1,295 1,257 1,288 1,433 1,487 1,567 211 217 216 217 219 222 222 3.9 3.7 3.6 3.6 3.5 3.8 3.5 60.4 60.8 60.6 60.9 61.0 60.8 61.1 -2.4 -2.9 -3.1 -3.1 -2.9 -2.7 -2.8 24 1.8 1.8 1.8 2.0 2.1 2.3	2.9 2.3 2.3 2.1 2.3 0.3 - - 4.7 4.0 3.9 4.3 4.0 3.0 4.4 0.8 130.1 128.3 128.3 132.1 127.0 127.3 132.6 118.8 3.9 0.9 1.2 0.2 -0.7 -2.0 -0.3 -4.9 58.9 51.2 52.4 49.4 48.1 50.0 50.1 49.1 1,248 1,295 1,257 1,288 1,433 1,487 1,567 1,276 211 217 216 217 219 222 222 223 3.9 3.7 3.6 3.6 3.5 3.8 3.5 4.4 60.4 60.8 60.6 60.9 61.0 60.8 61.1 60.0 -2.4 -2.9 -3.1 -3.1 -2.9 -2.7 -2.8 -2.7 2.4 1.8 1.8 1.8 2.0 2.1 2.3 1.5

JAPAN

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Activity									
Real GDP	0.3	0.7	0.9	1.8	-0.7	-2.2	_	_	_
Consumer confidence (value)	43.6	38.9	39.4	37.1	38.1	36.0	38.3	30.9	21.6
Industrial production	1.0	-2.7	-1.5	-1.9	-6.7	-4.3	-3.7	-6.8	-15.2
Business activity index (Tankan) (value)	20.8	6.0	7.0	5.0	0.0	-8.0	-8.0	_	_
Unemployment rate (% lab. force)	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.6
Trade balance ¹ (% GDP)	-0.1	-0.3	-0.5	-0.4	-0.3	-0.2	-0.2	-0.2	-0.5
Prices									
Headline inflation	1.0	0.5	0.8	0.3	0.5	0.5	0.5	0.4	0.1
Core inflation	0.3	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.2

CHINA

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Activity									
Real GDP	6.7	6.1	6.2	6.0	6.0	-6.8	-	-	-
Retail sales	9.0	9.0	8.5	7.6	7.7	-18.2	-20.5	-15.8	-7.5
Industrial production	6.2	5.7	5.6	5.0	5.9	-7.3	-13.5	-1.1	3.9
PMI manufacturing (value)	50.9	49.7	49.6	49.7	49.9	45.9	35.7	52.0	50.8
Foreign sector									
Trade balance ^{1,2}	352	421	393	427	421	361	373	361	394
Exports	9.9	0.5	-1.0	-0.3	1.9	-13.4	116.1	-6.6	3.5
Imports	15.8	-2.7	-3.6	-6.2	3.4	-2.9	126.4	-0.9	-14.2
Prices									
Headline inflation	2.1	2.9	2.6	2.9	4.3	5.0	5.2	4.3	3.3
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	6.8	7.0	7.0	7.0	7.0	7.0	7.1

Notes: 1. Cumulative figure over last 12 months. 2. Billion dollars. 3. End of period.

Source: BPI 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	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Retail sales (year-on-year change)	1.6	2.3	2.1	2.7	2.0	-1.5	2.5	-9.2	
Industrial production (year-on-year change)	0.8	-1.3	-1.3	-1.6	-2.1	-5.7	-2.2	-12.9	
Consumer confidence	-4.9	-7.1	-7.0	-6.8	-7.6	-8.8	-6.6	-11.6	-22.0
Economic sentiment	111.5	103.1	103.8	102.0	100.6	100.1	103.4	94.2	64.9
Manufacturing PMI	55.0	47.4	47.7	46.4	46.4	47.2	49.2	44.5	33.4
Services PMI	54.5	52.7	53.1	52.8	52.3	43.8	52.6	26.4	12.0
Labour market									
Employment (people) (year-on-year change)	1.5	1.2	1.3	1.1	1.1			_	_
Unemployment rate (% labour force)	8.2	7.6	7.6	7.5	7.4	7.2	7.2	7.1	7.3
Germany (% labour force)	3.4	3.2	3.1	3.1	3.2	3.4	3.4	3.5	3.5
France (% labour force)	9.0	8.5	8.5	8.5	8.2	7.7	7.6	7.6	8.7
Italy (% labour force)	10.6	9.9	10.0	9.7	9.5	8.8	9.1	8.0	6.3
Real GDP (year-on-year change)	1.9	1.2	1.2	1.3	1.0	-3.2	-3.2	_	_
Germany (year-on-year change)	1.6	0.6	0.3	0.7	0.4	-2.3	-2.3	_	_
France (year-on-year change)	1.8	1.5	1.8	1.6	0.9	-5.0	-5.0	_	_
Italy (year-on-year change)	0.7	0.3	0.4	0.5	0.1	-5.4	-5.4	-	_

Prices

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
General	1.8	1.2	1.4	1.0	1.0	1.1	1.2	0.8	0.3
Core	1.0	1.0	1.1	0.9	1.2	1.1	1.2	1.0	0.9

Foreign sector

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Current balance	3.2	2.8	2.6	2.8	2.8	3.0	2.9	3.0	
Germany	7.4	7.1	6.7	6.9	7.1	7.1	7.3	7.1	
France	-0.6	-0.7	-0.7	-0.8	-0.7	-0.6	-0.6	-0.6	
Italy	2.5	3.0	2.6	2.6	3.0	3.3	3.1	3.3	
Nominal effective exchange rate ¹ (value)	98.9	97.3	97.3	97.7	96.9				

Credit and deposits of non-financial sectors

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Private sector financing									
Credit to non-financial firms ²	3.9	3.8	4.0	3.9	3.5	3.9	3.0	5.5	6.6
Credit to households ^{2,3}	3.0	3.4	3.3	3.4	3.5	3.6	3.7	3.4	3.0
Interest rate on loans to non-financial firms ⁴ (%)	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.1	
Interest rate on loans to households for house purchases ⁵ (%)	1.6	1.5	1.6	1.5	1.4	1.4	1.4	1.4	
Deposits									
On demand deposits	7.9	8.0	7.6	8.6	8.8	9.3	8.6	10.9	12.5
Other short-term deposits	-1.5	0.3	0.4	0.7	0.3	-0.2	-0.4	0.0	-0.3
Marketable instruments	-4.2	-1.9	-3.0	0.1	-3.3	3.9	2.5	10.1	6.7
Interest rate on deposits up to 1 year from households (%)	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	

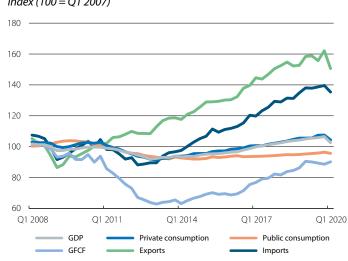
Notes: 1. Weighted by flow of foreign trade. Higher figures indicate the currency has appreciated. 2. Data adjusted for sales and securitization. 3. Including NPISH. 4. Loans of more than one million euros with a floating rate and an initial rate fixation period of up to one year. 5. Loans with a floating rate and an initial rate fixation period of up to one year. Source: BPI Research, based on data from the Eurostat, European Central Bank, European Commission, national statistics institutes and Markit.

COVID-19 takes a heavy toll in the first quarter of the year.

GDP fell by 2.3% year-on-year in Q1 (-3.8% quarter-onguarter) as a result of the social distancing measures, representing a greater guarter-on-guarter contraction than those registered during the financial crisis. Economic activity was particularly hard hit in the last 20 days of March, when the state of alarm began in Portugal and the lockdown measures were at their peak. From the aggregate data for Q1 it can be inferred that the fall in economic activity in those weeks amounted to around 25%. In the breakdown by component for the guarter as a whole, a significant impact is evident in both domestic and foreign demand. In particular, household consumption fell by 1.0% year-on-year (-3.0% quarter-onguarter) and investment (gross capital formation) fell by 2.5% (gross fixed capital formation fell by 0.3% year-on-year), while public consumption rose by 0.5%. Overall, domestic demand subtracted 1.1 pps from year-on-year GDP growth and -2.0 pps from quarter-on-quarter growth. Foreign demand, meanwhile, also fell sharply, with exports of goods and services shrinking more than imports (7.1% guarter-onguarter and 4.9% year-on-year, compared to 3.1% guarteron-quarter and 2.0% year-on-year, respectively).

Greater declines are expected in Q2 2020, but an incipient recovery occurred in May. The latest indicators show a sharp decline in economic activity in April caused by the extension of the lockdown throughout the month, which also means that more weeks will have been affected by the restrictions on mobility in the second quarter than in Q1. Specifically, the Bank of Portugal's coincident indicators for aggregate economic activity and for consumption (which have a close correlation with GDP and consumption) fell to -1.7% and -2.7% in April, respectively, accentuating the -0.9% and -1.5% declines already registered in March. Indicators such as electricity and fuel consumption are also indicative of the extent of the paralysis in activity in April. Electricity consumption on working days fell by 13.8%, diesel consumption fell by 46.9% and that of petrol, by 58.4%. Data on credit and debit card payments also reflect a drop in consumption, as they fell by around 38% in April. As for May, the available indicators are still limited, but they suggest a slight improvement in economic activity (e.g. car sales and mobility indicators). In the same vein, the credit and debit card purchasing index recovered to 75 points (59 at the end of April and 44 at the end of March). However, electricity consumption continues to show a weak recovery, as the average daily consumption in the first 20 days after the lockdown was eased was 1.8% lower than in the previous 20 days, despite the percentage of companies in operation

Portugal: components of GDP Index (100 = Q1 2007)



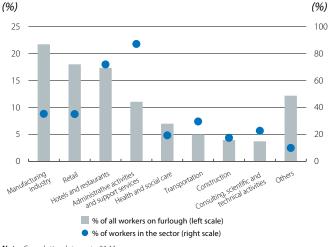
Source: BPI Research, based on data from the National Statistics Institute of Portugal.

Portugal: credit and debit card payments Index (100 = 1 January to 1 March)



Source: BPI Research, based on data from the government of Portugal and internal estimates.





Note: Cumulative data up to 21 May.

Source: BPI Research, based on data from the National Statistics Institute of Portugal and GEP. increasing to 90% from the 84% registered in the second half of April.

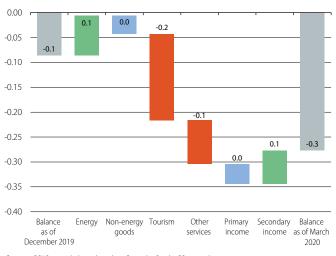
The contraction of the economy will be felt in the labour market. The first signs of the impact of COVID-19 on the labour market were already apparent at the end of Q1: there was a reduction in employment of 0.3% year-on-year (the first since Q3 2013), as well as a significant increase in the inactive population (some unemployed people were reclassified as inactive due to their inability to actively seek work because of the restrictions imposed to curb the pandemic). Yet the latest data confirm that the impact will be greater in Q2. For instance, the number of people receiving unemployment benefits increased by more than 17% year-on-year in April, reaching 197,949 people. At the same time, the number of the number of registered unemployed in job centres rose by 30.1% yearon-year in May (based on the latest data up to 26 May), while collective redundancies have affected more than 2,500 people since the state of emergency was declared (just under 1% of the unemployed population). Finally, as of 27 May, 1,332,114 people were on furlough, a situation mainly affecting workers in the manufacturing, retail, accommodation and catering industries (which account for more than 57% of all furloughed workers).

The current account balance deteriorated in Q1. The current account balance worsened by 595 million euros over the past 12 months and reached -0.3% of GDP in March, which represents a 2-decimal-point decline compared to December 2019. This deterioration is largely due to the reduction in the tourism balance and the decline in the sector's revenues in March. With this deterioration, the economy's external lending capacity declined to +0.7% of GDP.

Almost total shutdown of tourism activity in April. Only 68,000 guests were registered in tourist accommodation establishments in the month of April, a year-on-year decline of 97.1% (–62.3% in March). In the context of the state of emergency, 80.6% of tourist accommodation establishments would have closed or registered no movement of guests. In addition, 74.4% of establishments reported the cancellation of bookings for June, with this figure standing at 63.6% for July and 57.5% for August.

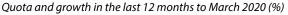
The fiscal budget balance deteriorated due to the impact of the pandemic. In April, the fiscal balance stood at –2.5% of GDP (year-to-date), worse than the –1.9% registered in the same period of 2019. The impact of the COVID-19 outbreak on the public accounts was particularly visible in the deferral of revenues (320 million euros) and in the significant increase in some expenditure items, such as current transfers and the acquisition of goods and services. Overall, it is estimated that COVID-19-related expenditure already implemented up to April amounted to 345 million euros (0.2% of GDP). Over the coming months, the impact of the expenditure related to economic support measures will become more visible as the aid measures are implemented and, potentially, expanded.

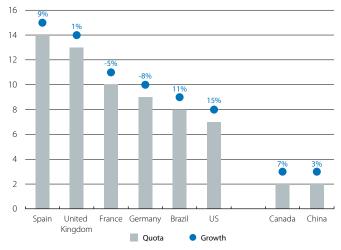
Portugal: current account balance Contribution (pps of GDP)



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

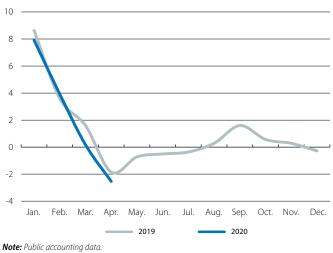
Portugal: non-resident tourism





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

Portugal: general government balance (% of GDP)



Source: Pablic accounting data. Source: BPI Research, based on data from the DGO.

Activity and employment indicators

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Coincident economic activity index	2.7	1.8	2.1	1.6	1.1	-0.2	-0.9	-1.7	
Industry									
Industrial production index	0.1	-2.4	-2.2	-4.1	0.5	-1.3	-7.2		
Confidence indicator in industry (value)	0.8	-3.2	-3.3	-3.7	-4.3	-4.6	-6.1	-15.9	-26.8
Construction									
Building permits (cumulative over 12 months)	19.1	7.9	16.6	13.6	7.9	2.3	2.3		
House sales	16.8	1.7	-6.6	-0.2	6.1				
House prices (euro / m ² - valuation)	8.6	10.4	10.2	11.0	11.1	11.2	10.3	9.5	
Services									
Foreign tourists (cumulative over 12 months)	4.8	7.1	5.3	6.0	7.1	2.8	2.8		
Confidence indicator in services (value)	14.1	12.9	14.2	11.5	10.6	5.8	2.7	-18.2	-39.6
Consumption									
Retail sales	4.2	4.4	5.7	4.3	3.7	3.0	-4.7	-22.1	
Coincident indicator for private consumption	2.5	2.6	2.7	3.0	2.3	-0.3	-1.5	-2.7	
Consumer confidence index (value)	-4.6	-8.0	-8.9	-7.6	-7.1	-8.6	-9.9	-21.0	-29.1
Labour market									
Employment	2.3	1.0	0.9	0.9	0.5	-0.3			
Unemployment rate (% labour force)	7.0	6.5	6.3	6.1	6.7	6.7			
GDP	2.6	2.2	2.1	1.9	2.2	-2.3			

Prices

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
General	1.0	0.3	0.5	-0.2	0.3	0.4	0.0	-0.2	-0.7
Core	0.7	0.5	0.6	0.1	0.4	0.2	0.0	-0.2	-0.4

Foreign sector

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	5.2	3.5	3.3	2.1	3.5	1.5	1.5		
Imports (year-on-year change, cumulative over 12 months)	8.3	6.4	8.3	7.8	6.4	2.6	2.6		
Current balance	0.8	-0.2	-0.2	-0.6	-0.2	-0.6	-0.6		
Goods and services	1.5	0.8	0.5	0.2	0.8	0.4	0.4		
Primary and secondary income	-0.7	-1.0	-0.8	-0.8	-1.0	-1.0	-1.0		
Net lending (+) / borrowing (–) capacity	2.8	1.9	1.7	1.4	1.9	1.5	1.5	•••	

Credit and deposits in non-financial sectors

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Deposits ¹									
Household and company deposits	3.8	5.0	4.5	5.3	5.2	5.7	6.4		
Sight and savings	14.3	14.4	13.3	15.1	14.9	16.5	17.6		
Term and notice	-3.0	-2.4	-2.3	-2.5	-2.8	-3.4	-3.2		
General government deposits	-1.9	-13.6	-11.9	-17.1	-13.7	-7.6	-9.3		
TOTAL	3.5	4.0	3.6	4.1	4.2	5.1	5.7		
Outstanding balance of credit ¹									
Private sector	-1.5	-1.2	-1.3	-0.7	-0.6	-0.2	0.1		
Non-financial firms	-4.0	-4.2	-4.1	-3.3	-3.3	-3.5	-2.6		
Households - housing	-0.8	-0.1	0.0	0.0	-0.2	0.1	0.2		
Households - other purposes	4.2	4.1	2.7	4.2	6.3	8.5	7.8		
General government	2.4	-8.5	-8.2	-6.4	-7.1	-5.0	-4.9		
TOTAL	-1.4	-1.5	-1.6	-1.0	-0.9	-0.4	-0.1		
NPL ratio (%) ²	9.4	6.1	8.3	7.7	6.1				

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

Economic activity begins to gradually reactivate as the lockdown is lifted

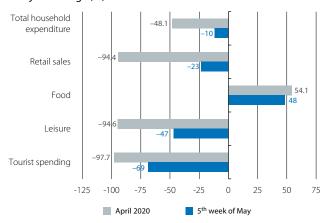
The COVID-19 outbreak will provoke a new and

unprecedented fall in GDP in Q2. After plummeting by 5.2% quarter-on-quarter (-4.1% year-on-year) in the first quarter of the year (the biggest guarter-on-guarter decline since the National Statistics Institute's historical series began in 1995), all the indicators suggest that economic activity will suffer a significantly higher decline in Q2, since more weeks have been affected by the restrictions associated with the state of alarm. However, in May, the initial phases of the lifting of the lockdown brought about a progressive reactivation of economic activity. According to internal CaixaBank data, spending with Spanish cards gradually recovered over the past month. Whilst spending fell by 28% in the third week of the month compared to the same week last year, in the last week of May this figure had improved to -10% (in April, when the lockdown measures were much more stringent, the average decline for the whole of the month was around -50%). Looking ahead to the coming months, the uncertainty surrounding the forecast scenario remains exceptionally high, but all the indicators suggest that the decline in economic activity for 2020 as a whole will end up clearly exceeding 10%.

Economic activity registered a sharp decline in April. This is evident in various indicators, such as retail sales, which fell by 32% year-on-year in April. This is 17.4 points below the figure for March and represents the biggest drop since the beginning of the historical series (January 2000). On the other hand, the National Statistics Institute reported that a high proportion of companies were closed to the public (around 46%), although, in contrast, the sales of companies that operate primarily by mail or online increased by 53% year-on-year. The economic sentiment indicators also reflected a collapse in activity. Specifically, the manufacturing PMI fell to levels not seen since 2008 (30.8 points in April), while the counterpart indicator for the service sector reached an all-time low of 7.1 points. Finally, industrial production fell by 12.2% year-on-year in March, a decline not seen since September 2009.

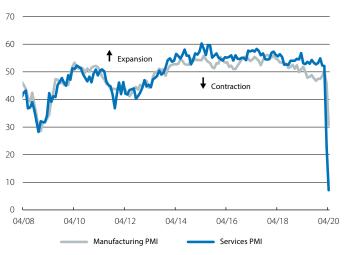
The lifting of the lockdown partially dampens the impact of COVID-19 on the labour market. While in April the number of people registered with Social Security saw a record decline (-691,054 workers in seasonally adjusted terms, the biggest drop since the start of the series in 2001), between 30 April and 29 May registration increased by 188,000 workers to reach 18.6 million people. With this slight rebound, the reduction of registered workers since 12 March moderated to 760,000 people. As for the unemployment figures, following a rise in April of 282,891 people, in May the number of people unemployed saw a more moderate increase (+27,000 people), bringing the total to 3.86 million. In addition to this figure are those employees affected by temporary staff lay-offs (ERTEs), who continue to be registered with S.S. and are not counted as unemployed, amounting to 3 million people. On this point, the government approved the extension of ERTEs caused by force majeure until

Spain: evolution of card spending Year-on-year change (%)

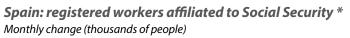


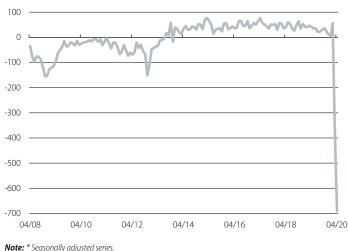
Note: «Total household expenditure» excludes cash withdrawals. «Food» includes household expenditure in supermarkets, large food shops and pharmacies. «Leisure» includes household expenditure on catering, transport, leisure and accommodation. **Source:** BPI Research, based on internal data.

Spain: economic activity indicators Level



Source: BPI Research, based on data from Markit.





Source: BPI Research, based on data from the Ministry of Employment and Social Security.

30 June and opened the door to the possibility of additional extensions if the restrictions on economic activity persist.

General government debt reached 1.22 trillion euros in

March 2020, which represents an increase of 22.5 billion in the last month (+2.3% year-on-year). This brought the level of public debt as a percentage of GDP to 99.0% in Q1 2020, +3.5 pps compared to the end of 2019. This upward trend will be accentuated in 2020 by the impact of the COVID-19 outbreak on the economy. With regard to the latest measures approved by the government, of particular note is the creation of a minimum income benefit (known as IMV) with the aim of redistributing income to eliminate extreme poverty. This benefit will be linked to incentives for participation in the labour force and social inclusion and it will supplement existing household income up to a guaranteed income threshold, which depends on the composition of the household and ranges from a minimum of 5,533 euros per year for a single-parent household to a maximum of 12,184 euros. The government estimates that some 850,000 households (2.3 million people) could benefit from this measure.

Inflation fell 3 decimal points in May due to the drop in the

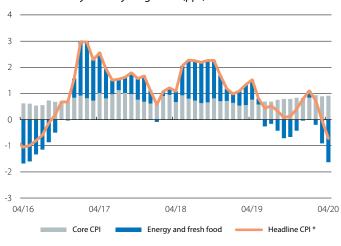
oil price. In the absence of the breakdown by component, headline inflation stood at –1.0% year-on-year and has accumulated a decline of 1.7 pps since February, the month prior to the lockdown. This decrease is explained by the reduction in fuel prices, which in April had already amassed a 16.2% year-on-year decline due to the average oil price in euros since March being –50% below the average level for 2019. Thus, the decline in electricity prices is offsetting the rise in unprocessed food prices registered since the start of the lockdown. Core inflation, meanwhile, has remained stable in recent months (1.1% in April), although inflation in many services is expected to decline during the course of 2020.

The foreign sector compensates for the losses in tourism with the low oil price. The current account balance stood at 2.1% of GDP in March 2020 (12-month cumulative balance), an improvement of 0.4 pps of GDP compared to the figure for March 2019. In the balance of services, the stagnation of tourism (exports for the month of March fell by 63.3% yearon-year and imports, by 44.2%) caused the sector to subtract -0.3 pps of GDP from the current account balance over the 12-month period. This was offset by the lower energy deficit, which contributed +0.4 pps. Non-energy goods also contributed with a 0.2 pp improvement in the balance, although this reflects a fall in both exports and imports, while non-tourism services and income contributed +0.1 pp.

The price of housing falls. Appraisal prices declines 0.8% quarter-on-quarter in Q1 2020 (+0.9% in Q4 2019). In year-on-year terms, the rate remained in positive territory (+0.3%), albeit markedly below the previous quarter (+2.1%). The real estate market has been heavily affected by the coronavirus crisis, both on the demand side (sales registered a 19% year-on-year fall in March) and on the supply side (as suggested by the collapse in cement consumption in March of 28% year-on-year). However, the situation that the sector was in before the pandemic hit was much more favourable than prior to the previous recession, which provides some confidence over its capacity to recover.

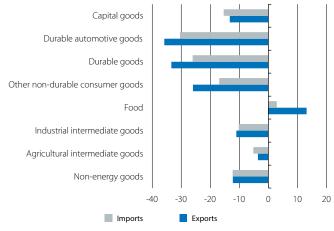
Spain: CPI

Contribution to year-on-year growth (pps)



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

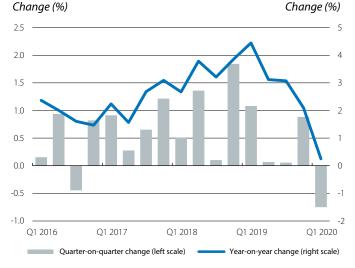
Spain: trade in non-energy goods in March Year-on-year change (%)



Note: Year-on-year change (%).

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

Spain: housing prices (appraisals)



Source: BPI Research, based on data from the Ministry of Public Works

The COVID-19 outbreak boosts remote working

- Remote working has revealed itself as an effective mechanism for maintaining employment from home and ensuring the continuity of economic activity in the context of the COVID-19 outbreak.
- According to our estimates, 32.6% of all employees in Spain could potentially perform their work remotely.
- The COVID-19 outbreak will penalise each economic sector to a greater or lesser extent depending on its ability to implement remote working.

The health crisis brought about by COVID-19 has forced large parts of society to quickly and unexpectedly adapt to remote working, a relatively minority practice in Spain prior to the outbreak of the pandemic. In 2019, only 8.3% of those in employment in Spain opted to work from home, be it regularly or occasionally. This figure is well below the EU average (16.1%) and the euro area's leading economies in terms of remote working, such as the Netherlands (37.1%) and Luxembourg (33.1%).¹ How should we interpret these differences? Does Spain simply lack the potential to telework or, on the contrary, does the country have the potential but fails to exploit it?

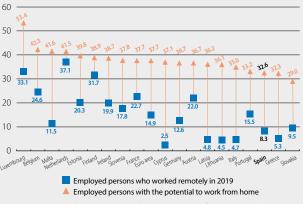
Is Spain prepared to telework?

The ease with which a worker can perform his or her duties from home depends on the requirements of his or her occupation. For example, a university professor can easily continue to teach his or her classes from home via video conferencing, whereas a waiter does not have the option of serving tables through digital platforms. In general, therefore, we must look at the tasks associated with each profession in order to assess whether it allows for the use of remote working. Dingel and Neiman (2020) propose a methodology according to which the potential to work from home in a given profession is determined by the type of activities performed and the context they are performed in.² Specifically, they deem an occupation as feasible to be performed remotely if none of the associated tasks are classified as challenging to be reproduced from home.³

Dingel and Neiman estimate that 37% of employees in the US can perform their work from home. Based on their classifications and data from the labour force survey (LFS), we can reproduce their estimates for Spain.⁴ According to our calculations, 32.6% of all employees in Spain could potentially perform their work remotely.⁵ Generally speaking, the potential for working from home

Remote working in 2019 versus working from home potential

(% of total employment)



Source: BPI Research, based on internal calculations and data from Eurostat, the National Statistics Institute and Dingel and Neiman (2020).

is somewhat higher for women and increases with age and education level.⁶

From a European perspective (see first chart), the average potential of the former EU-28 (37%) is somewhat higher than that of Spain, a result of the high capacity displayed in highly-advanced countries with respect to remote work, such as Luxembourg (53.4%), Sweden (44.2%) and the United Kingdom (43.5%). The country to country differences largely reflect disparities in the sectoral compositions of their economies. Economies with a greater relative weight of high-value-added services (such as information and communications or financial services) have a greater potential for remote working than countries where sectors such construction, tourism or retail prevail, since remote working is more difficult in the latter sectors due to their very nature.⁷

Following on from this, looking at the relationship between the potential for remote working and the

^{1.} Data from the 2019 EU Labour Force Survey. The figures shown reflect the percentage of workers who indicate that they either regularly or occasionally work from home.

^{2.} See I. Dingel and B. Neiman (2020) «How many jobs can be done at home» (http://www.nber.org/papers/w26948).

^{3.} Dingel and Neiman (2020) use data from the O*NET survey, which provides detailed information on the work context and generic activities performed in each occupation.

⁴. Based on their classification for US occupations, we convert their data to the European system (ISCO-08) and aggregate them at a three-digit level, taking into account occupational shares. This conversion implicitly assumes that the tasks of each occupation are carried out in the same way in both Spain and the US.

Similar studies have been published both by the Bank of Spain (30.6%), and by Juan César Palomino, Juan Gabriel Rodríguez and Raquel Sebastián (33%). The small differences are the result of slightly different methodologies and data from different periods.
 The potential for remote working by age range is 22% (15-24 years), 33% (25-44 years), 32% (45-64 years) and 38% (65 years or older).

By education level, it is 11.1% (those with lower secondary school studies), 23.5% (upper secondary level studies) and 51.2% (university graduates and above).

^{7.} Specifically, the two sectors with the greatest potential for remote working – information and communications, and financial and insurance activities (both 80%) – together contribute almost twice as much to the UK's GDP (12.5%) as they do to Spain's GDP (6.7%). This puts the UK in a better position to benefit from remote working.

potential economic impact of the COVID-19 pandemic is quite revealing. If we assume this impact to be the difference between the 2020 GDP growth forecasts published in October 2019 and in April 2020, we can see that those countries with a high capacity for teleworking appear to be least affected by the coronavirus shock (see second chart).⁸ While the economic consequences of the shock will undoubtedly depend on many variables, the potential of workers to perform their tasks from home is an important mechanism for mitigating the effects of the lockdown. Thus, the differences in the occupational and sectoral structure observed between different European countries will likely translate into a greater or lesser capacity to cope with the economic impact caused by social distancing measures.

To what extent has COVID-19 changed remote working habits?

As COVID-19 has spread and, as a result, lockdown measures have been tightened, companies have widely opted to employ remote working as a means by which to maintain employment and ensure the continuity of economic activity. The significant increase in the demand for tools that enable virtual communication is a clear sign of the substantial increase in teleworking since the state of alarm was declared. To name a few examples, daily users of Zoom (a software tool for conducting video calls and virtual meetings) have risen from 10 to 300 million in just five months; Google Meet and Microsoft Teams are among the five most downloaded applications in April and May, and Facebook has just launched its own video conferencing tool.

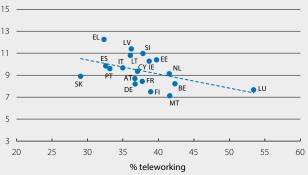
On the other hand, a survey conducted by the regional government of Valencia (Generalitat Valenciana) and a recent study by Eurofound offer a first indication of the magnitude of the current practice of teleworking in Spain. According to both analyses, since the lockdown measures were first imposed, around 30% of employees have been working remotely, a figure very close to the teleworking potential that we estimate for Spain.⁹ Likely, faced by the halt in economic activity due to the COVID-19 outbreak, firms and whole sectors have discovered capacities for remote working that have been left unexploited until just a few months ago.

Teleworking potential and economic exposure to the COVID-19 outbreak by sector

Since remote working is an effective mechanism to mitigate the effects of the lockdown, the COVID-19 outbreak is penalising each economic sector to a greater or lesser extent depending on its ability to implement

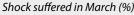
Teleworking potential and fall in the IMF's GDP forecast

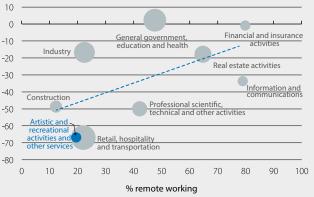
Fall in the 2020 GDP growth forecast between October 2019 and April 2020 (pps)



Source: BPI Research, based on internal calculations and data from Eurostat, the IMF, the LFS and Dingel and Neiman (2020).

Remote working potential and economic impact by sector





Note: The shock has been calculated according to the methodology described in note 10 of this article. The size of the dots reflects the sector's relative weight as a proportion of total GDP. The agricultural sector is excluded.

Source: BPI Research, based on internal calculations and data from Eurostat, the National Statistics Institute, the LFS and Dingel and Neiman (2020).

working from home.¹⁰ As can be seen in the third chart, those sectors that suffered the largest economic impact of the COVID-19 outbreak in the closing weeks of March are characterised by a lower potential for remote working. By contrast, real estate, telecommunications and financial services possess a greater potential for remote working and have managed to maintain a higher degree of activity.

On the other hand, within each sector there are occupations that have a greater potential than others for performing tasks from home. For instance, in the field of scientific and technical activities, we estimate that university professors can do 98% of their work from home, while the figure is only 34% for physics and

^{8.} IMF. «World Economic Outlook» of October 2019 and April 2020. 9. The sample by the Generalitat Valenciana includes only those people who have gone to work since 1 March. Specifically, the percentage fell from 36.9% in the first edition (29 March) to 18.9% in the most recent one (14 May). For the Eurofound study, see «Work, teleworking and COVID-19». The publication of the labour force survey for Q2 2020 will provide more detailed information on the spread of remote working in Spain in recent months.

^{10.} We classify sectors according to the magnitude of the shock they have suffered. In particular, we estimate the deviation of the gross value added (GVA) for each sector in Q1 2020 from that which would have been expected in the absence of COVID-19. In order to project the GVA that «would have been expected», we assume that its growth in Q1 2020 would have been equal to the average quarter-on-quarter change exhibited in 2019.

engineering technicians. Therefore, the relative distribution among occupations within each sector has a decisive impact on the sectors' overall potential.

Moving towards a future in which teleworking will become a common practice

Remote working has revealed itself as a fundamental component of economic activity, given the situation we are currently experiencing. Those companies that are able to successfully implement its practice are able to sustain their productive capacity more firmly. In other cases, the potential exists, but investment in the necessary digital capital is required (such as business infrastructures and mobile devices that allow for internet connections), as well as in human capital (staff training in the use of digital tools). After the coronavirus crisis, companies are likely to redouble their efforts in the field of digital transformation, which could facilitate the continued growth of remote working. Furthermore, what we have learnt during the long weeks of lockdown will likely facilitate the implementation process.

In this regard, the benefits of working from home can go far beyond the coronavirus crisis. An increase in remote working could facilitate more flexible working conditions, which would give people the opportunity to find a better balance between their working and family lives, or the possibility to live in areas further away from large cities. In other words, as briefly discussed in the Dossier of this same *Monthly Report*, simple measures such as the application of teleworking could bring about a better quality of life, as well as less congested and cleaner cities.

Activity and employment indicators

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Industry									
Industrial production index	0.3	0.7	1.4	0.8	0.5	-5.5	-12.2		
Indicator of confidence in industry (value)	-0.1	-3.9	-4.6	-2.0	-5.2	-5.4	-7.0	-30.7	-29.5
Manufacturing PMI (value)	53.3	49.1	49.9	48.2	47.2	48.2	45.7	30.8	
Construction									
Building permits (cumulative over 12 months)	25.7	17.2	21.9	13.0	8.0	-0.1	-3.2		
House sales (cumulative over 12 months)	14.2	3.3	5.7	1.5	-2.6	-4.4	-5.9		
House prices	6.7	5.1	5.3	4.7	3.6		-	_	_
Services									
Foreign tourists (cumulative over 12 months)	4.0	1.5	1.5	2.1	1.4	-0.8	-4.1	-13.0	
Services PMI (value)	54.8	53.9	53.2	53.5	53.6	42.5	23.0	7.1	
Consumption									
Retail sales	0.7	2.3	2.2	3.3	2.3	-3.6	-14.2	-31.6	
Car registrations	7.8	-3.6	-4.4	-7.9	5.1	-27.6	-69.3	-96.5	
Consumer confidence index (value)	-4.2	-6.3	-4.0	-5.8	-10.5	-10.3	-11.6	-29.2	-28.8
Labour market									
Employment ¹	2.7	2.3	2.4	1.8	2.1	1.1	_	_	_
Unemployment rate (% labour force)	15.3	14.1	14.0	13.9	13.8	14.4	_	_	_
Registered as employed with Social Security ²	3.1	2.6	2.8	2.5	2.2	1.2	-0.2	-4.0	
GDP	2.4	2.0	2.0	1.9	1.8	-4.1	-	-	-

Prices

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
General	1.7	0.7	0.9	0.3	0.4	0.6	0.0	-0.7	-1.9
Core	0.9	0.9	0.8	0.9	1.0	1.1	1.1	1.1	

Foreign sector

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	2.9	1.8	2.3	1.7	1.8	1.0	1.0		
Imports (year-on-year change, cumulative over 12 months)	5.6	1.0	3.9	3.0	1.0	-1.0	-1.0		
Current balance	23.3	24.9	21.4	22.2	24.9	25.4	25.4	•••	
Goods and services	32.6	35.2	32.1	32.5	35.2	35.5	35.5		
Primary and secondary income	-9.3	-10.3	-10.7	-10.2	-10.3	-10.0	-10.0		
Net lending (+) / borrowing (–) capacity	29.1	29.0	27.6	28.0	29.0	29.4	29.4		

Credit and deposits in non-financial sectors³

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

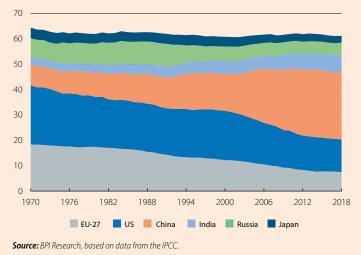
	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	03/20	04/20	05/20
Deposits									
Household and company deposits	3.2	5.4	5.8	5.4	5.4	4.4	4.3		
Sight and savings	10.9	10.7	10.9	10.3	10.3	8.9	9.0		
Term and notice	-19.9	-13.4	-12.8	-13.2	-13.9	-16.4	-17.2		
General government deposits	15.4	8.8	15.7	3.7	-2.1	-6.2	-9.2		
TOTAL	3.9	5.6	6.3	5.3	4.8	3.8	3.5		
Outstanding balance of credit									
Private sector	-2.4	-1.5	-1.1	-1.1	-1.5	-1.0	-0.6	0.8	
Non-financial firms	-5.5	-3.4	-3.0	-2.3	-3.0	-1.7	-0.1	4.1	
Households - housing	-1.1	-1.3	-1.3	-1.6	-1.5	-1.7	-1.9	-2.0	
Households - other purposes	2.8	3.2	4.4	3.4	2.2	2.5	1.9	0.5	
General government	-10.6	-6.0	-7.2	-5.4	-1.2	1.7	1.5	2.0	
TOTAL	-2.9	-1.7	-1.5	-1.4	-1.5	-0.9	-0.5	0.9	
NPL ratio (%) ⁴	5.8	4.8	5.4	5.1	4.8	4.8	4.8		

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:** BPI 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.

How is the EU positioning itself to combat climate change?

The COVID-19 outbreak has transformed our way of life and shaken our economy in an unimaginable way. New ways of producing and doing commerce may emerge, and remote working may spread, which could help to accelerate the economic transition towards a more sustainable and environmentally friendly system. These changes, which are nonetheless the result of a situation that we would prefer not to have endured, could have positive environmental consequences (for instance, in the short term we have already seen a decline in greenhouse gas emissions during the lockdown).¹ However, the green transition will only succeed if we truly acknowledge that it is a collective challenge that requires decisive action from regulators, businesses and households.

Greenhouse gas emissions by country (% of global greenhouse gas emissions)



A pandemic like that of COVID-19 and climate change share one thing in common: the magnitude of their impact, both in economic and humanitarian terms. So while our efforts must now focus on combating the effects of COVID-19, we must not forget that climate change is one of the biggest challenges we must face in the 21st century. In fact, green policies can also help us to emerge stronger from the current crisis. This is also the belief of the European Commission, which intends to give environmental policies a prominent role in its COVID-19 Recovery Plan.

Greenhouse gas emissions pose an unprecedented challenge: for every year they increase, the subsequent reductions have to be more stringent if the objectives of the Paris Agreement are to be achieved.² In 2010, it was estimated that global greenhouse gas emissions would need to be reduced by 3.3% per annum up until 2030 in order to limit the temperature rise to 1.5°C by 2050. However, in 2020 the annual average

reduction required is now 7.6%, a sign that we are not on the right track. Similarly, if we were to take into account the maximum total greenhouse gas emissions that we would need to emit up until 2050 in order to achieve the targets, at the current rate we would exhaust that limit some time between 2029 and 2033, and we would need to reduce net emissions to zero from then on.³

This is therefore a global challenge that affects the entire economy, although it has a greater impact on sectors with a more intensive use of fossil fuels: the energy sector, which emits around 40% of total CO₂ emissions, and transportation and industry, which emit around 20% each.⁴ These sectors will need to adapt their productive model in order to meet the new environmental standards, which will lead to significant changes in the way we live and produce.

The EU has reduced its greenhouse gas emissions, but there is still a long way to go

Some figures serve to illustrate the magnitude of the problem and the EU's position on how to address it. Today, the G20 economies are responsible for 77% of global greenhouse gas emissions, and the top five emitters (in this order, China, the US, the EU-27, India and Russia) account for 61% of global emissions. However, if greenhouse gas emissions are allocated according to where they are consumed (rather than where they are produced), then the US and the EU increase their share, while China's share decreases. Thus, in 2016, EU emissions calculated on the basis of consumption were 15% higher than if we look at their production, while in China they were 11% lower.⁵

That said, the weight of EU emissions as a proportion of the total emissions has fallen from 12% at the beginning of the century to 7.5% in 2018, although it remains the third biggest emitter. It is also the region with the lowest level of energy intensity – i.e. energy consumed per unit of GDP – in the world. This is an important milestone, given that achieving the objectives set by

3. See IPCC (2019). «Global warming of 1.5°C».

^{1.} It is estimated that in early April daily global CO₂ emissions fell by 17% compared to the average for 2019. See C. Le Quéré *et al.* (2020). «Temporary reduction in daily global CO₂ emissions during the COVID-19 forced confinement». Nature Climate Change.

^{2.} The 2015 Paris Agreement set the goal of limiting the temperature rise to 2°C above pre-industrial levels and to pursue efforts to limit the increase to 1.5°C. See the article «The climate challenge: the future of the planet at stake» in the Dossier of the MR11/2019 for more information on the relationship between increased greenhouse gas emissions and the occurrence of extreme climate phenomena.

^{4.} According to data from the IEA.

^{5.} According to data from G. Peters et al. (2014). «Sharing a quota on cumulative carbon emissions». Nature Climate Change and Global Carbon Project.

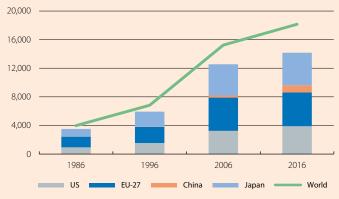
environmental policy will depend on our ability to reduce energy intensity, making it a key variable. Indeed, between 1990 and 2018, EU GDP grew by 61%, while its greenhouse gas emissions fell by 20%.

These are not the only encouraging figures: the so-called «green economy»⁶ is playing a growing role in the EU; the sector's gross value added grew by 4.1% in 2017, brining it to 288 billion euros and contributing 2.2% of the region's GDP. At the same time, the EU stands out in the field of innovation and ranks first in the number of environmental technology patents;⁷ in 2016, 26% of patents were registered in the EU, as we can see in the second chart.

The use of renewable energies has also been one of the hallmarks of EU action on climate issues. In fact, it is important to note that more than 32% of the electricity generated in the Union is produced from renewable sources, compared to 23% worldwide, and that almost 19% of the final energy consumption occurs through renewable energy (1% globally), bringing us closer to the target set for 2030 (32%).

Despite these advances and the heightened awareness about climate change in the EU, the data reveal insufficient action. In fact, we run the risk of missing the targets set for 2030 and 2050.⁸ This is because the measures taken to date do not appear to be sufficient to achieve the milestone of cutting greenhouse gas emissions by 40% by 2030 compared to 1990 levels. For this reason, giving a new green impetus to the European economy is essential, and the European Commission intends to do just that through its so-called Green Deal.⁹

Patents on environmental technologies (Number of patents)



Note: Includes patents registered with major international intellectual property institutes. Source: BPI Research, based on data from the OECD.

In short, if we consider the progress achieved to date and the leading position that the EU has assumed in the fight against climate change, the region is called upon to play an important role in the global context to encourage cooperation and global action in order to combat the climate emergency. Clearly, the EU will not be able to solve the problem alone, but taking decisive and well-designed measures will serve as a stimulus and a valuable example of good practice for the rest of the world. We cannot deny that this transition involves enormous challenges and that the transformation will be more costly for some economies, regions and social groups than for others. This will require us to manage the transition accordingly in order to avoid social and regional disparities, which could end up jeopardising the energy transition itself. Once we overcome the COVID-19 outbreak and economic activity has been reactivated, it will be the right time to intensify our efforts in building a more environmentally friendly economy, prioritising public investment in more sustainable sectors and promoting green financing.

^{6.} According to Eurostat, this includes the environmental goods and services sector: products created for environmental protection (for the prevention, reduction or elimination of pollution or other forms of environmental degradation) or resource management.

^{7.} According to OECD data (including patents registered in at least two intellectual property institutes), in 2016, the highest number of patents registered in the EU were in the fields of environmental management and technologies for mitigating climate change in the generation, transmission or distribution of energy and transportation.

^{8.} European Environment Agency (2019). «European environment: state and outlook 2020».

^{9.} See the article «The European Green Deal, between the desirable and the feasible» in this same Dossier.

The European Green Deal, between the desirable and the feasible

The EU is leading the way in the reduction of greenhouse gas (GHG) emissions, but there is still a long way to go both on the Old Continent and in the rest of the world if we are to avoid an increase in temperature above 2°C. With the aim of consolidating this leadership, the European Commission (EC) has presented the Green Deal, a framework (or growth strategy in the words of the EC) that includes measures aimed at achieving a level of net zero emissions, boosting economic growth with a more sustainable use of natural resources and doing so in a way that is fair within countries, sectors and individuals. To this end, one of the first steps taken by the EU has been to incorporate regulation that forces itself to reduce GHG emissions by 50% by 2030 compared to 1990 levels (instead of the 40% set out in the Paris Agreement) and to be climate neutral before 2050.¹ Despite the goodness of these intentions, are these objectives plausible? Are the measures taken by the EU sufficient? How are these plans altered by COVID-19?

The Green Deal has been presented by the EC of Ursula Von der Leyen as the flagship of its mandate, which is reasonable in view of the concerns about the climate emergency in Europe. According to a survey by the European Investment Bank (EIB), 82% of European citizens believe that the climate emergency is having an impact on their lives (this perception is more widespread among the Mediterranean states than those of Northern Europe). Also, 47% of Europeans see the climate emergency as one of the greatest threats their country faces. In this context, the EC has presented the Green Deal investment plan, with which it intends to «mobilise» at least 1 trillion euros over the next 10 years.² However, it is necessary to break down this figure and understand what exactly is meant by the term «mobilise».

An initial investment proposal that raised doubts

In its initial proposal, presented in January 2020, half of this mobilisation would come from the EU's own resources. At present, 20% of the 2014-2020 budget is considered to be green and, under the Green Deal, the EC intends to increase this to 25% for the period 2021-2027.³ To this end, among other measures, it proposes allocating 40% and 30% of the budgets of the Common Agricultural Policy and the European Maritime and Fisheries Fund, respectively, to tackling the climate emergency. In this regard, the EU's new taxonomy will help ensure that this 25% of the budget is truly green, as it specifies the requirements for an investment or asset to be considered as such. In addition, the EC estimates that Member States will co-finance some of the green projects included in the EU budget with 114 billion euros. On the other hand, the EU will deploy the Just Transition Mechanism, to which it initially wanted to contribute 7.5 billion euros and through which more than 143 billion euros would be mobilised over a 10-year period to help the regions hardest hit by the transition (for example, those with a high share of employment in the fossil fuel extraction and production sector or in energy-intensive industries).

The second largest contribution to the Green Deal investment plan consists of 279 billion euros from private investments made through the EIB's InvestEU programme, the successor to the so-called Juncker Plan. This programme would work very much like the Juncker Plan: the EIB would provide guarantees to projects that contribute to combating the climate emergency, thereby encouraging private investment in this field.⁴

Finally, the EU Emissions Trading System (EU ETS) will also contribute to the trillion-euro investment with 25 billion euros collected through the auctioning of carbon credits. Moreover, the EC proposes creating a carbon border tax to prevent companies from relocating their production centres to regions with less stringent environmental regulations (known as carbon leakage).

Thus, of the 1 trillion euros initially announced by the EC, the real increase in EU spending on the fight against the climate emergency would only amount to a 5-pp increase of the EU budget (from 20% to 25%) being allocated for this purpose, plus 7.5 billion euros within the Just Transition Fund. The rest will come from the «mobilisation» of private and public investment, an expression that the institution uses to refer to investments, mostly private, that materialise thanks to the guarantees offered by the EU. However, most groups in the European Parliament have asked that this expression be no longer used in order to preserve the EU's credibility.⁵

The Green Deal as a cornerstone of the European Commission's Recovery Plan

At the end of May, the EC proposed a 750 billion-euro programme for its recovery plan (Next Generation EU) aimed at supporting the economic recovery following the COVID-19 epidemic, taking into account the EU's long-term challenges (primarily decarbonisation and digitalisation). This programme would be financed through the issuance of EU debt. Following the same scheme as the budget for 2021-2027, 25% of this amount will go towards measures for adapting to and mitigating the climate emergency. Among the new measures, the contribution to the Just Transition Fund would increase from 7.5 billion euros to 40 billion euros and the EC would contribute 15.3 billion euros to the InvestEU fund in order to mobilise up to 240 billion euros

^{1.} By climate neutral, we mean that GHG emitted into the atmosphere are captured by natural carbon sinks or using carbon removal technologies, which have not yet been implemented. The slower the reduction in emissions, the more important the deployment of these technologies will be, as there will be more GHG in the atmosphere increasing the temperature of the planet.

^{2.} This was the proposal prior to the economic recovery programme presented on 27 May.

^{3.} The EU budget for 2021-2027 is currently being negotiated, and the health crisis triggered by the COVID-19 outbreak could significantly change its size and the amounts earmarked for the climate emergency.

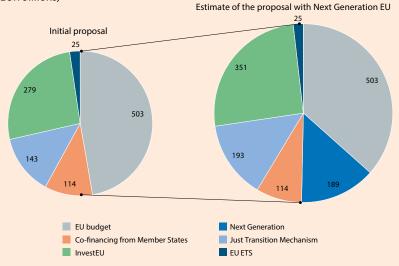
^{4.} In this regard, albeit outside the framework of the Green Deal, the EIB aims to make 50% of the financing it offers in 2025 green, compared to the current level of 25%. 5. In the resolution proposed on 12 May 2020, the EC was alerted to «the use of financial wizardry and dubious multipliers» to announce ambitious figures.

(approximately 30% of which would go to green projects).

Also, a significant portion of this new sum will be invested in the renovation of buildings to make them more energy-efficient. Thus, while supporting the labour-intensive construction sector and reducing unemployment, emissions from that sector will also be reduced – an important step given how much room for improvement it has in terms of energy efficiency. It should be recalled that buildings account for 36% of total EU emissions and the EC estimates that, in order to become the first climate-neutral continent, Europe's buildings will need to be renovated at twice the current rate (between 0.8% and 2.4% per year, depending on the Member State).

Thus, taking into account the initial proposal and the Next Generation EU proposal, the total mobilisation of funds aimed at galvanising a greener economy would amount to approximately 1.37 trillion euros over 10 years, which corresponds to an annual investment of 137 billion euros (1% of

Green Deal investment plan: the mobilisation of more than 1 trillion euros in 10 years (EUR billions)



Source: BPI Research, based on data from the European Commission and internal calculations.

EU-27 GDP in 2019). This is in comparison to the EC's own estimate that, in order to achieve the aforementioned objective of the Paris Agreement (i.e. a 40% reduction in GHG emissions), an annual investment of 240 billion euros would be required.⁶ If we take into account the proposed new target (a 50% reduction in emissions instead of 40%) and we assume a similar relationship in the investment required to reduce each unit of GHG emissions, then we reach the conclusion that the annual investment requirements increase to approximately 300 billion euros. Thus, the Green Deal Investment Plan would represent 45% of the necessary investment, meaning that the private sector and Member States would still need to be more ambitious.

Far from being an obstacle, the COVID-19 epidemic could act as a catalyst for the green transition

The humanitarian, economic and social cost of the health crisis triggered by COVID-19 will undoubtedly be extremely high, and the efforts of the authorities must focus on minimising the cost in lives, mitigating the economic impact of the lockdown and supporting the recovery of economic activity. On this last point, the measures taken to date could accelerate some of the trends that had already been taking place at the productive and institutional level which will contribute to curbing climate change. In February, the EC launched an appraisal of the EU's fiscal framework with the intention of adapting it to the EU's long-term challenges and, following the outbreak of the health crisis, some of the issues raised at that time have been accelerated. For instance, the EU will issue its own debt – something it had already done on certain previous occasions – to finance the Next Generation EU proposal. In addition, it is once again looking at the possibility of collecting some taxes directly (such as a digital tax or green taxes). If these proposals were to be implemented and become the norm, they would give the institution greater decision-making autonomy and greater funding capacity. This, in turn, would allow it to be more ambitious in its policies to address challenges, such as climate change, that go beyond the scope of the Member States themselves.

The COVID-19 epidemic has shown that remote working is a valid system for many businesses and occupations and that it has benefits both in terms of achieving a better work-life balance and in tackling the climate emergency. As explained in another article of this same report,⁷ in Spain around 30% of people in employment can work from home, a percentage that increases in urban areas up to 40%. Thus, if remote working were implemented in Spain two days a week for these workers, annual GHG emissions from land transportation would be reduced by 3% ⁸ – a small step, but a step nonetheless.

In short, it is only fair to acknowledge that the EC has made a firm commitment to combating climate change. However, it lacks the necessary strength to achieve this goal by itself, so the action of states and private initiatives will be key if we are to avoid global warming in excess of 2°C. Taking advantage of a turning point like the current one could be vital in tipping the balance, in the medium and long term, towards a sustainable and environmentally friendly economy.

(See an extended version of this article at https://www.bancobpi.pt/grupo-bpi/estudos-e-publicacoes-bpi)

^{6.} See European Commission (2020). «Identifying Europe's recovery need».

^{7.} See the Focus «The COVID-19 outbreak boosts remote working» in this same Monthly Report.

^{8.} To calculate this figure, we have taken mobility data from the *Enquesta de mobilitat en dia feiner* (Working-day mobility survey) conducted by Barcelona's metropolitan transport authority, ATM, as well as emission data from the Oficina Catalana del Canvi Climàtic (Catalan Office for Climate Change) and other data from the Labour Force Survey.

The EU's climate transition: a question of justice

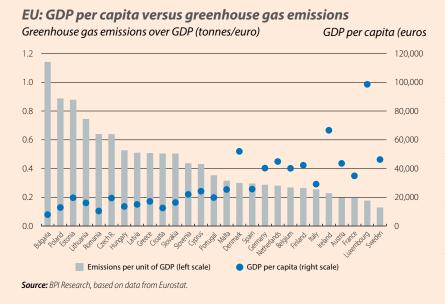
The EU's objective of achieving carbon neutrality by 2050 raises an important question: do the benefits of the climate transition outweigh the costs? The European Commission and most governments are in no doubt, and not in vain: it is estimated that the climate transition will boost the EU's GDP by 1.1% and employment by 0.5% in 2030 compared to a business-as-usual scenario (i.e. a scenario in which no measures are taken and emissions continue to grow at their current rate).¹

Beyond the aggregate impact of the climate transition, it is undeniable that it will not be neutral and that some countries and sectors will win while others will lose. The most disadvantaged sectors will be the extractive industries and the highly energy-intensive sectors of industry, while others will be forced to transform their business model (the automotive, chemical and construction industries). As a consequence, countries where these sectors have a greater relative weight will also experience more difficulties in implementing the transition.² The major challenge of economic policy will thus be to facilitate a transition that is as just and harmonious as possible, thereby preventing adverse political reactions, as happened in France with the revolt of the yellow vests.

European sectors and countries most affected by the climate transition

In the EU, the five countries that emit the most greenhouse gases are, in this order, Germany, France, Italy, Poland and Spain, responsible for 65% of the region's total emissions.

To assess what the impact of the climate transition will be by country and which ones are best positioned to tackle the risks that the transition poses, we analysed the greenhouse gas emissions per euro of GDP. One particularly worrying result of this analysis



is that the countries with the highest greenhouse gas emissions per euro of GDP are also the poorest (both if we measure poverty in terms of GDP per capita and if we use the poverty risk indicator),³ and they are dominated by Eastern European countries (see first chart). In general, these countries' greenhouse gas emissions come mainly from the energy sector (in Poland, for example, this sector's emissions account for over 40% of the total emissions generated by all economic activities, due to the use of coal). Spain and Portugal, on the other hand, are in a more favourable position. Thus, in order to reduce greenhouse gas emissions, it is the most polluting sectors⁴ that will have to undergo the biggest transformation over the coming years, and their relative weight in the gross value added of Eastern European countries is not insignificant, ranging from 11% in Lithuania to 21% in the case

of the Czech Republic. Furthermore, the most polluting sectors also play a significant role in the labour market in these countries, since they employ between 9.7% of the working population in Estonia and 30.6% in Romania.

If we consider the effort that will be required within the EU to take on the transition, it is these countries that are most likely to suffer from the enormous challenges it entails. Nevertheless, they can also benefit from the transition: investing in the fight against climate change results in more innovative and resilient economies, as well as in the creation of better-quality and more productive jobs.⁵ However, one of the main mechanisms that will be used to reduce greenhouse gas emissions is to increase their

^{1.} For example, the impact on Latvia's GDP will be almost +6%, but for Poland it will be residual. For further details, see Eurofound (2019). «Energy scenario: Employment implications of the Paris Climate Agreement».

^{2.} See Eurofound (2019). «Energy scenario: Employment implications of the Paris Climate Agreement».

^{3.} According to data from the Energy Poverty Observatory, most Eastern European countries had a higher percentage of the population at risk of poverty than the EU average (23.5% in 2016), with Bulgaria (40.4%) and Romania (38.8%) topping the list.

^{4.} All sectors that are carbon intensive.

^{5.} See European Commission (2019). «Employment and Social Developments in Europe», chapter 5.

cost through a carbon tax or a cap-and-trade scheme, such as the current EU Emissions Trading Scheme (EU ETS), which could cause energy costs to rise for a period of time.

Thus, the transition must be carefully managed so as to avoid social and regional disparities and to ensure that it is just and socially accepted by everyone. After all, we must remember that the positive effects of the transition will take some time to materialise, while the costs will be perceived much sooner. The relatively weaker position of Eastern Europe also poses a formidable challenge to the common European project; only a just transition will prevent a rise in Euroscepticism, which is already emerging in countries such as Hungary and Poland.

In this context, within the framework of the Green Deal, the EU presented the Just Transition Mechanism to help the regions, industries and workers affected by the climate transition. Its objectives will include, among others, training workers, improving energy efficiency in buildings, supporting the transition of companies to more environmentally friendly technologies and offering incentives for companies to invest in R&D. To finance this mechanism, in January 2020 the European Commission announced the creation of a Just Transition Fund (JTF) to cushion the socio-economic impact of the climate transition in the regions that will be hardest hit.

One problematic aspect of this transition fund is that its geographical allocation, in principle, is already pre-defined using somewhat generic and inflexible criteria. The allocation of the amount corresponding to each Member State would be based on certain specific criteria (largely linked to the carbon intensity of each state's regions and the percentage of the workforce that works in industry and coal mining), while the final distribution of funds will depend on the approval of the various countries' just transition territorial plans. Thus, half of the planned 40 billion euros would go to only four countries (8 billion to Poland, 5 billion to Germany, 4.4 billion to Romania and 3.4 billion to the Czech Republic), while Spain and Portugal would be allocated a very residual share (4.5% and 1.2% of the total, respectively).⁶ The expansion of this fund through the recovery plan and the tough negotiations that lie ahead offer a good opportunity to rethink the allocation criteria. On the one hand, part of this aid ought to be channelled to the sectors that will suffer the most from the COVID-19 epidemic. In this way, they could emerge better equipped to implement the transition and thus take full advantage of the benefits of the green economy, providing greater support to those economies with lower fiscal margins. On the other hand, with the uncertainty surrounding what impact the climate transition will have on employment and in the various geographical areas, it would be advisable to have a wide margin of discretion in the allocation of the funds in order to help the sectors and regions that are hardest hit, as it becomes possible to identify them more accurately with time.

Finally, one would expect the allocation of funds to be conditional on a serious evaluation of project results, rather than merely being linked to the general objectives outlined in the various Member States' just transition territorial plans. After all, it is not simply a question of dedicating a reasonable amount of resources to achieve the just transition (although this is also important), but also one of designing very well-targeted programmes that maximise the productive use and positive effects of the resources employed.

Ultimately, a successful climate transition will need to be handled very carefully to avoid weakening the cohesion of the common European project and to ensure that no one is left behind. In the end, it is a question of justice: justice between generations, between countries and between social groups. This transition will undoubtedly bring benefits for all Europeans, but at the same time it will come with considerable costs, so it is important that it be as inclusive as possible. The European Commission has already outlined some ideas for designing mechanisms to help achieve this, and the policies included within the recovery plan represent a major qualitative leap forward. However, much remains to be done, and those responsible for designing the transition must strive to ensure that the unquestionable ambition of the Green Deal is accompanied by decisive measures to make the transition a just one. It is time to convert words into action.

6. For further details, see European Commission (2020). «Allocation method for the Just Transition Fund».

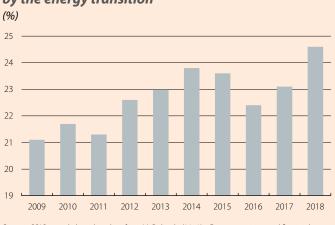
The necessary move towards a green financial sector

Thanks to the growing, and necessary, interest in the climate emergency, more and more studies are being published on the impact that this challenge will have on the economy. In fact, there is already a consensus that characterises the climate emergency as big, non-linear and uncertain. It is «big» because of the disruptive effects it will have on the productive model, either due to the physical risks it entails or those related to the transition.¹ It is «non-linear» because, as the average temperature of the planet increases, certain natural phenomena accelerate, such as the melting of the polar ice caps, which will further accentuate global warming, thereby exponentially increasing the frequency and violence of extreme natural events. Finally, it is «uncertain» because there are no historical precedents for such a high concentration of greenhouse gases as we have today that can help us to make precise forecasts of the consequences it will have.

The magnitude and uncertainty of the economic impact of the climate emergency is perfectly illustrated when we look at potentially stranded assets, which are primarily exposed to transition risks. The best example of such assets is the reserves of fossil fuels that have not yet been extracted, a significant portion of which should be left underground if we are to achieve the targets of the Paris agreement. There are various methods for estimating the impact of these assets on global wealth. While some studies focus on the total volume of reserves that should remain underground, others focus on the value of the investments already made to extract the fuel in question or the net present value of the revenues from these reserves. Thus, some estimates suggest that the impact of such a decision on global wealth would amount to between 1 and 4 trillion dollars, while others place it at 18 trillion dollars (approximately 15 times the annual GDP of Spain).² Like we said, a big and uncertain impact.

The financial sector will be affected by the climate emergency, although it can also help to mitigate it

In view of the potential impact of the climate emergency on the economy, the financial sector will need to incorporate climate risks into the comprehensive risk management associated with its activities (operational, credit, reputation or market risks). Take, for example, the case of a company with potentially stranded assets. In the event that a regulation limiting the extraction of these



Spain: bank financing to sectors potentially affected by the energy transition

Source: BPI Research, based on data from M. Delgado (2019). «Energy transition and financial stability».

assets were to enter into force, the valuation of that company would fall, as would its ability to service its debt payments. As such, any banks that had offered this company financing would be exposed to a credit risk due to the borrower's reduced solvency. Also, since these companies often use their assets as collateral when obtaining funding, upon executing the guarantees the bank would receive an asset that has no value, so it would also be exposed to market risk. The Bank of Spain estimates that up to 25% of the corporate debt held by Spanish banks is in sectors that are potentially vulnerable to these transition risks.³

On the other hand, the climate emergency also represents a major opportunity for the financial sector. The capital requirements of activities that help to mitigate and adapt to climate change are substantial and are unlikely to be met with public funds. The role that the private sector can play is therefore key. In this regard, the banks, as intermediaries between savings and investment, are in a prime position to channel capital flows into «green» projects. Nevertheless,

distinguishing between sustainable and harmful projects requires international standards. To address this, as part of the Green Deal the European Commission has approved the long-awaited taxonomy which can be used to determine which projects are green and thus facilitate the flow of capital towards an economy that is neutral in greenhouse gas emissions.

The EU taxonomy and the next steps

In this proposal, the EU proposes considering an activity as sustainable if, at a minimum, (i) it contributes substantially to one of the six environmental objectives specified in the second chart, (ii) it does not significantly harm any of these objectives, (iii) it fulfils certain social guarantees and (iv) its contribution is technically verifiable. Thus, a set of metrics have been determined for each economic sector, so that companies and investors can estimate what percentage of their activity or assets are green.

^{1.} Physical risks are those arising from the exposure of human activity to the natural system, while transition risks are those arising from the regulation that aims to bring the economy towards a lower level of greenhouse gas emissions and from the transformation of economic activities itself in order to meet the new environmental targets.

^{2.} See J.F. Mercure *et al.* (2018). «Macroeconomic Impact of Stranded Fossil Fuel Assets». Nature Climate Change 8. E IRENA (2017). «Stranded Assets and Renewables: How the Energy Transition Affects the Value of Energy Reserves, Buildings and Capital Stock».

^{3.} This article does not take into account companies individually; rather they are aggregated by sector. See M. Delgado (2019). «Energy transition and financial stability. Implications for the Spanish deposit-taking institutions». Financial Stability Review (Autumn edition).

Four types of activities that can be considered green will be distinguished: (i) those that are already low-emission (such as clean energy generation), (ii) the enablers (such as the manufacture of solar panel components), (iii) transition activities (those with a level of greenhouse gas emissions below their industry average, such as electricity generation using natural gas) and (iv) those aimed at adapting to the physical risks.

This «new common language» will avoid the use of divergent criteria when determining whether or not an activity is green. At the same time, it will combat the practice of greenwashing by companies and investors seeking to improve their reputation by engaging in activities which appear sustainable *a priori* but which, in the end, do not represent a real improvement in the environment. It will also open up a number of channels that can provide a boost to the transition towards a climate-neutral economy, such as:

• The publication of the type of activities being financed: the EU will require financial institutions to publish, for each financial product, the proportion of green activities being financed.⁴ Furthermore, large corporations that are already subject to non-financial disclosure requirements will have to report information regarding the new taxonomy. Thus, both investors and consumers will be able to know how polluting a company is or what verifiable actions they are taking to offset their carbon footprint.





Source: BPI Research.

Incentivising the financing of green projects: once green activities can be distinguished from the rest, the respective financing costs could be influenced (for instance, by offering guarantees that reduce the cost of green projects). Some of the tools that have been proposed include the green supporting factor and the brown penalising factor, which would need to be subtracted or added, respectively, from or to the minimum capital requirements applicable to financial institutions. That said, it does not seem desirable to use banks' capital requirements for a purpose unrelated to absorbing potential losses.

Pending challenges

To further reduce greenhouse gas emissions, it is necessary to be able to classify the most polluting activities as «brown» and to differentiate them from those that are simply not green, thus creating three groups of assets and activities: green, neutral and brown. However, the current proposal does not yet offer any tools to do so. Moreover, there is still some way to go in the identification of climate risks. Moving towards better detection and quantification of the physical and transition risks that will affect the various economic sectors is key for financial institutions to be able to make better-informed decisions based on international standards. Thus, once the climate risks have been quantified, stress tests can be carried out to see how resistant the financial sector (and all other sectors) is to the various environmental scenarios.

What about the role of monetary policy?

The mandate of the central banks focuses primarily on price stability, and the climate emergency certainly has an impact on prices. However, the direction that prices will take as a result of climate factors is far from clear, as there are demand and supply forces driving them up and down.⁵ For this reason, and because of their implications for financial stability risks, central banks are beginning to take action in order to better understand the impact of the climate emergency and to clarify whether they need to include environmental sustainability in their mandates in order to avoid a scenario that would be disruptive to economic growth and would generate sudden price fluctuations.

In this regard, drawing on the strategic review currently being undertaken by both the ECB and the Fed,⁶ voices have been raised proposing that the central banks purchase green assets (green QE). However, this measure is somewhat controversial given that, strictly speaking, the transition towards a climate-neutral economy is not yet within the mandate of the monetary authorities. Moreover, one of the main features of the ECB's purchases of corporate assets at present is precisely its neutrality with respect to the various economic sectors in order to avoid price distortions.

In short, monetary policy can at best aspire to complement and accompany whatever regulations are established by the authorities responsible for setting the course of the environmental transition.

^{4.} The first two EU environmental targets will be detailed at the end of 2020 and implemented by the end of 2021, by which time the remaining four pillars that are due to be implemented at the end of 2022 will have been defined.

^{5.} In a disruptive scenario in which extreme natural events occur more frequently and are more violent, we can assume that there will be a supply shock that will drive prices up. In other scenarios involving a reduction in economic growth, meanwhile, prices would tend to fall. See P. Bolton *et al.* (2020). «The Green swan – Central banking and financial stability in the age of climate change», BIS and Bank of France. Also, C. Alestra *et al.* (2017). «Long-term growth impact of climate change and policies: the Advanced Climate Change Long-term (ACCL) scenario building model», Bank of France.

^{6.} See the Focus «The ECB and the Fed: two mandates, one target» in the MR02/2020.

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