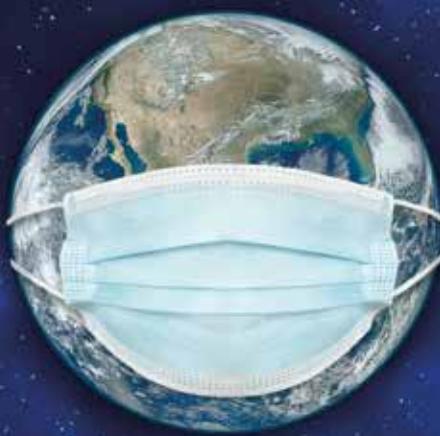


MR05

MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK
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ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS

The vulnerabilities of corporate debt in the face of a historic shock

INTERNATIONAL ECONOMY

Emerging countries and COVID-19: on the brink of a financial crisis?

SPANISH ECONOMY

Should we be concerned about the sustainability of public debt in the euro area?

DOSSIER: THE WORLD AFTER COVID-19

COVID-19 and black swans: lessons from the past for a better future

How COVID-19 will change the way we produce

Economic policies in the face of COVID-19: will the boundaries of the impossible be broken?

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

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

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

BPI Research (UEEF)
[www.bancobpi.pt /](http://www.bancobpi.pt/)
<http://www.bancobpi.pt/grupo-bpi/estudos-e-mercados/mercados-financeiros>
deef@bancobpi.pt

Paula Carvalho
 Chief Economist

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An incomplete union

The US fiscal response to the coronavirus crisis has, for now, been much more substantial than that of European countries. In part, this is because it has had to resort to extraordinary measures in order to fill the gaps of a welfare state that is less generous than those of Europe. The main reason, however, is the fact that the US Treasury enjoys the close collaboration of the Federal Reserve Bank (the Fed), which would even act as a lender of last resort if necessary. This support, in combination with the strength and size of the US economy, is fundamental in order for the Treasury's debt to be considered a totally safe asset, something that greatly facilitates the funding of the public deficit.

Europe lacks this great advantage. Without doubt, the European Central Bank (ECB) is playing a very important role in supporting member states through its public sector asset purchase programme and liquidity injections, but its response is not comparable to that of the Fed. Legal and political issues prevent it, as revealed by Germany's Constitutional Court ruling, which was as surprising as it was debatable. However, the underlying reason is that the euro area has 19 different treasuries, one for each member state, yet lacks a central treasury that represents them all. To mitigate the risk of a country making an inappropriate use of the lender of last resort and weakening the euro, Europe banned the ECB from directly financing any national government.

This restriction puts those European countries that have a weaker fiscal position at a disadvantage. They know that if they implement an aggressive fiscal policy, which is necessary to avoid a prolonged recession, the increase in the deficit and in public debt could generate doubts over the sustainability of their finances, driving up their risk premiums and, ultimately, unleashing a new sovereign debt crisis. If they try to avoid these risks then their response could be too timid, which would restrict their recovery and that of the euro area as a whole. It is no coincidence that Germany's fiscal response has been the most aggressive of all the euro area, and Italy's, the least. Moreover, in a context in which the framework for state aid has been relaxed, these discrepancies distort the single market.

A joint fiscal response at the European level is therefore needed. Creating a treasury like that of the US overnight is not politically feasible, but designing a fund that provides sufficient support for a strong recovery is absolutely essential, even if it is temporary.

To fund it, the EU could issue perpetual debt, as proposed by the Spanish government, or at least very long-term debt to make the most of the current low interest rate environment and reduce the risks of refinancing. Austria currently has a 100-year bond which pays a yield of 1% and the ESM pays less than 1% for debt issued for a 40-year term. With interest rates at this level, a one trillion-euro debt issue (representing more than 7% of the EU's GDP) would result in an annual cost of 10 billion euros in interest charges, less than 0.1% of the EU's GDP.

It will be important for the funds to be made available for use as soon as possible. Ideally, they would be deployed between this year and next, not in dribs and drabs over many years. In addition, they should come in the form of non-repayable transfers to member states or projects executed directly at the European level, not as loans that only add to member states' existing debt (debt issued directly by the EU is not assigned to member states individually).

There is a great deal at stake over the coming weeks as the EU decides how to proceed. It is not only a question of emerging from this crisis as soon as possible, but emerging together and with a stronger union.

Enric Fernández
Chief Economist
05 May 2020

Chronology

		APRIL 2020
		MARCH 2020
<p>3 The Fed cuts its reference rates by 50 bps, to the 1.00%-1.25% range.</p> <p>11 The World Health Organization declares COVID-19 a pandemic.</p> <p>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.</p> <p>14 The Spanish government declares the state of alarm.</p> <p>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).</p> <p>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.</p> <p>The Spanish government approves extraordinary urgent measures to deal with the impact of the COVID-19 pandemic.</p> <p>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.).</p>		<p>9 The Eurogroup agrees on a 540 billion-euro rescue package in the form of loans to help combat the COVID-19 crisis.</p> <p>12 OPEC and its allies reach a new agreement on crude oil production cuts until early 2022.</p> <p>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).</p>
		FEBRUARY 2020
		<p>5 The US Senate acquits President Donald Trump of the charges for which he faced impeachment.</p> <p>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.</p>
		JANUARY 2020
		<p>15 The US and China sign a first trade agreement (the first phase of a three-stage negotiation process).</p> <p>30 The World Health Organization declares the coronavirus outbreak that began in China a global health emergency.</p> <p>31 The United Kingdom's withdrawal from the EU takes effect and a transition period begins, lasting until 31 December 2020.</p>

Agenda

MAY 2020		JUNE 2020
<p>5 Spain: registration with Social Security and registered unemployment (April).</p> <p>6 Portugal: employment and unemployment (Q1).</p> <p>8 Spain: industrial production index (March). Portugal: turnover in industry (March). Portugal: international trade (March).</p> <p>15 Portugal: GDP flash estimate (Q1).</p> <p>18 GDP of Japan (Q1).</p> <p>19 Spain: international trade (March).</p> <p>22 Spain: loans, deposits and NPL ratio (March). Portugal: coincident indicators (April). Portugal: Fitch rating.</p> <p>28 Spain: state budget execution (April). Spain: CPI flash estimate (May). Euro area: economic sentiment index (May).</p>		<p>2 Spain: registration with Social Security and registered unemployment (May). Portugal: employment and unemployment (April).</p> <p>4 Governing Council of the European Central Bank meeting.</p> <p>9 Portugal: international trade (April). Portugal: new lending (April).</p> <p>9-10 Federal Open Market Committee meeting.</p> <p>12 Spain: Fitch rating.</p> <p>16 Spain: quarterly labour cost survey (Q1).</p> <p>17 Portugal: tourism activity (April).</p> <p>18-19 European Council meeting.</p> <p>22 Spain: loans, deposits and NPL ratio (Q1 and April).</p> <p>24 Spain: balance of payments and NIIP (Q1).</p> <p>29 Spain: CPI flash estimate (June). Euro area: economic sentiment index (June). Portugal: business and consumer confidence indicator (June).</p> <p>30 Spain: quarterly national accounts (Q1). Spain: household savings rate (Q1). Spain: state budget execution (May).</p>

A recession typical of a war

We now have the first estimates of the economic impact that the containment measures are having and the message they offer is not encouraging. In fact, the war-based vocabulary we often use when referring to the consequences of the fight against COVID-19 seems justified in economic terms. The fact is, the scale of the recession we are now immersed in is unprecedented in recent decades. We have to go back to the Second World War to find declines in economic activity of a similar magnitude.

In China, where the coronavirus first appeared, the fall in GDP in the first quarter of the year reached 9.8% quarter-on-quarter. A contraction on this scale had never been recorded in China since national accounting figures began to be published. In fact, we had never seen a negative growth rate in China. Now all eyes are focused on the speed of its recovery. The Asian giant has been gradually lifting the containment measures since early March and, while economic activity appeared slow to react at first, in the last few weeks of April we received somewhat more encouraging data which we expect will be consolidated over the coming months.

In the major developed countries, the containment measures were not implemented until mid or late-March, and to differing degrees. In the US, which was among the last countries to impose restrictions on movement, the drop in GDP stood at 1.2% quarter-on-quarter in Q1. In contrast, the euro area, which on the whole reacted a little earlier and imposed stricter restrictions on movement and economic activity, experienced a more severe drop in GDP of 3.8%.

It is worth highlighting the high degree of uncertainty that surrounds the first GDP estimate on this occasion, since the national statistics institutes have had to adjust the methodology used in order to capture the sudden and pronounced slowdown in activity that occurred at the end of the first quarter. After the likely revisions that will be carried out, the differences between countries could change (for instance, it is surprising to note that the contraction estimated for the Italian economy, at 4.7% quarter-on-quarter, is lower than that estimated for France or Spain, at 5.8% and 5.2%, respectively). That said, there is no doubt that the scale of the decline in economic activity is profound. This is reflected in the indicators related to the labour market, the unprecedented reduction in movement and energy consumption, the

collapse in the economic sentiment indices and a long list of other indicators. For the euro area's GDP to shrink by 3.8% in the first quarter as a whole, the slump in economic activity in the last two weeks of March had to have been around 25%, given that in January and February the economy remained stable. If we apply the same logic to the case of Spain, we find that the drop in activity probably reached around 30% starting from the declaration of the state of alarm.

This simple exercise helps to illustrate the magnitude of the decline in economic activity that we are probably currently experiencing. However, it also serves to illustrate how difficult it is to make forecasts in the current context. Indeed, small variations in the speed at which the containment measures are lifted could have significant economic consequences.

In these circumstances, the most sensible thing to do is to work with scenarios that show the possible evolution of economic activity on the basis of different hypotheses of how the social distancing restrictions will develop. The scenarios recently published by the Bank of Spain are a good example of this approach. According to its estimates, if the lockdown lasts 8 weeks, and the economic policy measures prove highly effective, then the fall in GDP this year could come to 6.8%. However, if the lockdown lasts as long as 12 weeks, and the economic policy measures are not so effective, then the fall in GDP is projected to reach around 12.4%. The war against the coronavirus is having a very high economic cost. We hope that, unlike other wars, the human cost is much lower and the return to normality, much faster.

Oriol Aspachs
Head of Research

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

Financial markets

	Average 2000-2007	Average 2008-2016	2017	2018	2019	2020	2021
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	0.16	0.35
5-year government bonds	3.91	2.85	0.31	0.36	-0.09	0.37	0.53
10-year government bonds	4.42	3.82	1.46	1.42	0.44	0.80	0.70
Risk premium	11	184	110	117	71	110	80
Portugal							
3-year government bonds	3.68	4.42	-0.05	-0.18	-0.34	0.37	0.57
5-year government bonds	3.96	5.03	0.46	0.47	-0.12	0.65	0.73
10-year government bonds	4.49	5.60	1.84	1.72	0.40	0.90	0.80
Risk premium	19	362	149	147	67	120	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	123.37	126.26
USD/JPY (yen per dollar)	115.34	97.50	113.02	112.38	109.25	107.28	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

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

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	-2.8	6.1
Developed countries	2.7	1.2	2.5	2.2	1.7	-5.6	5.5
United States	2.7	1.4	2.4	2.9	2.3	-5.1	5.5
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	-6.7	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	-0.8	6.5
China	11.7	8.4	6.9	6.6	6.1	1.0	9.3
India	9.7	6.9	6.6	6.8	5.3	-2.0	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	-3.7	1.3
Mexico	2.4	2.1	2.1	2.1	-0.1	-7.0	1.1
Chile	5.0	3.2	1.2	4.0	1.1	-4.0	1.8
Russia	7.2	0.9	1.8	2.5	1.3	-3.0	1.3
Turkey	5.4	4.8	7.5	2.8	0.9	-2.5	2.0
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	3.6
Developed countries	2.1	1.5	1.7	2.0	1.4	0.7	1.9
United States	2.8	1.6	2.1	2.4	1.8	0.7	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	0.2	1.6
Japan	-0.3	0.3	0.5	1.0	0.5	0.0	0.7
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	4.1	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	1.4	4.2
Brazil	7.3	6.4	3.5	3.7	3.7	3.3	3.8
Mexico	5.2	3.9	6.0	4.9	3.6	3.0	3.4
Chile	3.1	3.5	2.2	2.7	2.3	2.8	3.1
Russia	14.2	9.3	3.7	2.9	4.5	2.9	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	5.2	5.0

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	0.2	1.6
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	1.2	1.5
External funding capacity/needs (% GDP)	-5.2	-0.7	2.9	2.4	2.4	1.4	1.7
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	2.7	-8.0	4.8
Exports of goods and services	5.2	3.5	8.4	4.5	3.7	-25.2	39.6
Imports of goods and services	3.6	1.6	8.1	5.8	5.2	-25.0	35.3
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	-0.8	-0.3
External funding capacity/needs (% GDP)	-7.7	-2.7	2.1	1.4	0.9	0.2	0.7
Fiscal balance (% GDP)	-4.6	-6.4	-3.0	-0.4	0.2	-9.0	-2.4

Forecasts

COVID-19 quashes global economic activity

The worldwide spread of the coronavirus represents an unprecedented shock to the global economy. The containment measures intended to curb the COVID-19 epidemic have reached almost every corner of the world and have led to severe but necessary restrictions on global economic activity. The impact on activity is of such magnitude that the IMF has coined the term «The Great Lockdown» to describe the synchronised recession into which the world will be plunged in 2020. But without a doubt the key word of the moment, and of the times that are to come, is uncertainty. In recent weeks it has become apparent that the current degree of uncertainty is nothing like what we see in normal times. There is uncertainty at too many levels simultaneously: regarding medical and epidemiological aspects, the effectiveness of public policies in terms of health and economic measures, and behavioural changes among households, businesses and investors.

The containment measures spread and are prolonged. The restrictions imposed to combat COVID-19 have been reflected in a slowdown in the number of new infections in key economies such as those in the euro area, after which governments have begun to prepare plans for a gradual return to normality. However, we must not forget that this is not the situation in many other parts of the world. Furthermore, the strategies for easing the lockdowns generally still involve an extension of restrictions in countries that were already implementing them and a tightening of restrictions in other economies which so far had opted not to apply them, or to do so less strictly. The main global consequence of the lockdowns' extension in various fields (geographical, sectoral and in time) is that the economic shock will be significantly greater than expected just a month ago.

Can economic policy alleviate the shock? Faced with the scale of the shock, the economic policy response that has been put forward is undoubtedly a step in the right direction, although it may be inadequate depending on the region. A wide range of measures are being deployed in practically all countries, albeit on a somewhat differing scale. The US has announced one of the biggest fiscal and monetary stimulus packages, while in Europe there is a mix of countries that have committed to providing direct aid on a vast scale, such as Germany, and others which, due to their more constrained fiscal conditions, are proposing a more limited economic stimulus. Also in Europe, the measures announced by the Eurogroup are a step in the right direction, but they are still too timid, both because of their amount and because they still fail to propose mechanisms for sharing the cost and the debt, without which there will be significant pressure on national debt. That said, at the euro area level the ECB has acted both ambitiously and quickly in the monetary support measures it has introduced.

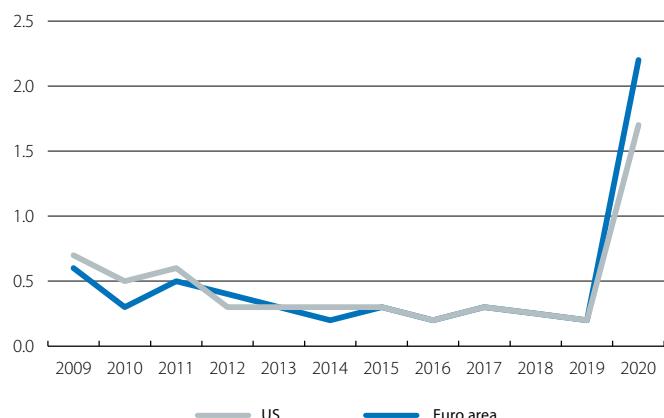
CaixaBank Research macroeconomic table

Growth forecasts (%)	2019	2020		2021	
		Current	Before the shock	Current	Before the shock
Global economy	2.9	-2.8	3.2	6.1	3.4
Advanced economies	1.7	-5.6	1.5	5.5	1.6
US	2.3	-5.1	1.8	5.5	1.8
Euro area	1.2	-6.7	1.1	6.6	1.3
Germany	0.6	-6.2	0.7	6.6	1.5
France	1.2	-6.2	1.4	6.9	1.5
Italy	0.2	-9.0	0.5	5.9	0.7
Spain	2.0	-7.2	1.5	6.9	1.5
Portugal	2.2	-8.1	1.7	6.1	1.6
Emerging and developing economies	3.8	-0.8	4.4	7.1	4.5
China	6.1	1.0	5.5	9.3	5.7

Source: CaixaBank Research.

Uncertainty in forecasts of change in GDP

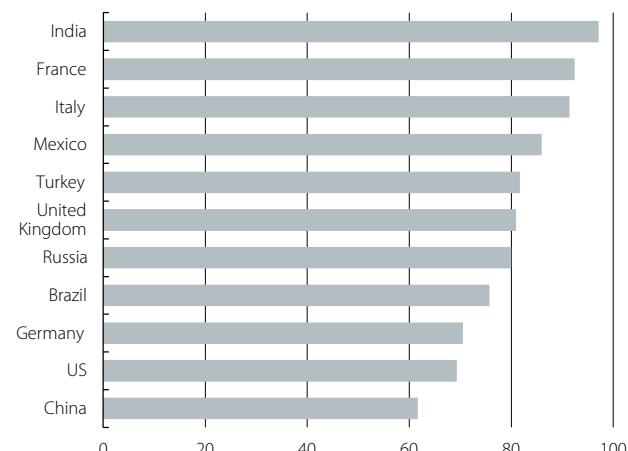
Standard deviation of forecasts according to the consensus of analysts one year in the future (pps)



Source: CaixaBank Research, based on data from the Consensus Forecast.

Lockdown stringency

Level (100 = maximum)



Source: CaixaBank Research, based on data from the Oxford COVID-19 Government Response Tracker, Blavatnik School of Government.

EMERGING MARKETS

Lessons from the epicentre of the pandemic. China was the first country to suffer the economic consequences of the COVID-19 outbreak and it is also the first to ease the lockdown measures and return to relative normality. What does the evolution of its economy tell us? Not only did the coronavirus have a heavy toll on economic activity, but the recovery in production and consumption is proving to be slower than initially expected. This illustrates the difficulty of achieving a quick rebound in domestic activity in a context of weak external demand. It also highlights the uncertainty that exists over whether the epidemic will have a lasting impact on business and consumer confidence. In Q1 2020, GDP fell by 6.8% year-on-year (-9.8% quarter-on-quarter), the first contraction of the economy since China began publishing quarterly national accounting data in 1992. The GDP of the industrial sector fell by 9.5%, and that of the services sector, by 5.2%. On the backdrop of significant impact affecting all sectors, the available indicators, including both the conventional ones, such as the manufacturing PMI (which only rebounded to 50.8 points in April), and the alternative ones (such as data on movements), suggest that the recovery is proving to be gradual.

Mexico slips further into recession, but the worst is yet to come. The preliminary national accounting data indicate that GDP fell by 1.6% quarter-on-quarter (-2.4% year-on-year) in Q1 2020 (-0.1% quarter-on-quarter in Q4 2019). This figure confirms that the poor pace of growth prior to the COVID-19 outbreak was a fragile position from which to deal with the shock. In the absence of the breakdown by component, the available information suggests that the Mexican economy is suffering primarily due to the deterioration in the external environment, particularly the decline in US GDP. To what extent is this behaviour representative of other emerging markets? It is, at least, in two major aspects. Firstly, it suggests that the macroeconomic effects of the shock are only just beginning to be felt and that, as in other parts of the world, the bulk of the decline in economic activity is yet to come. In the case of Mexico, this decline could resemble the great recessions of past decades (see chart). A second element that Mexico shares with many other emerging economies is that, for the time being, the main channel of impact is external, since the local lockdown began later (for a more in-depth view of the macroeconomic and financial consequences, see the Focus «[Emerging countries and COVID-19: on the brink of a financial crisis?](#)») in this same *Monthly Report*.

ADVANCED ECONOMIES

A sudden end to the long US expansion. In Q1 2020, US GDP suffered its biggest quarter-on-quarter drop since the 2008 financial crisis, amounting to -1.2%, which represents the seventh biggest quarter-on-quarter fall of the past 70 years (see chart). In year-on-year terms, GDP still showed positive growth (+0.3%), but well below the previous quarter (+2.3%). While this figure is by no means a good one, the expectations for Q2 are notably gloomier, as it is the period that

China: high-frequency economic activity indicators

Index (100 = January 2020)

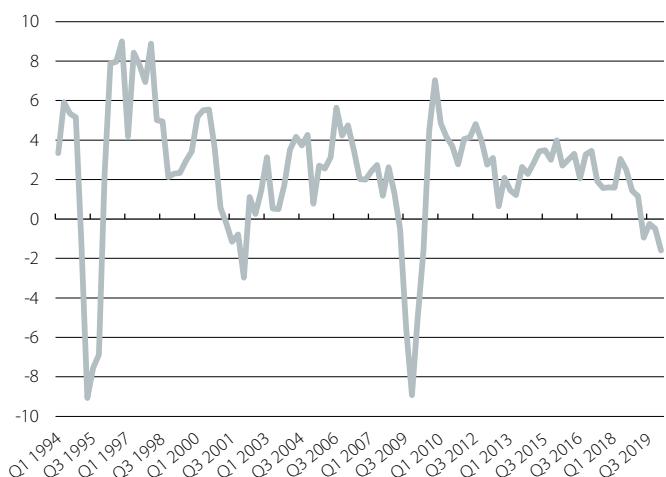


Note: The data for «Congestion» and «Metro users» represent a 7-day moving average. «Real estate sales» represent a percentage compared to one year earlier.

Source: CaixaBank Research, based on data from Capital Economics.

Mexico: GDP

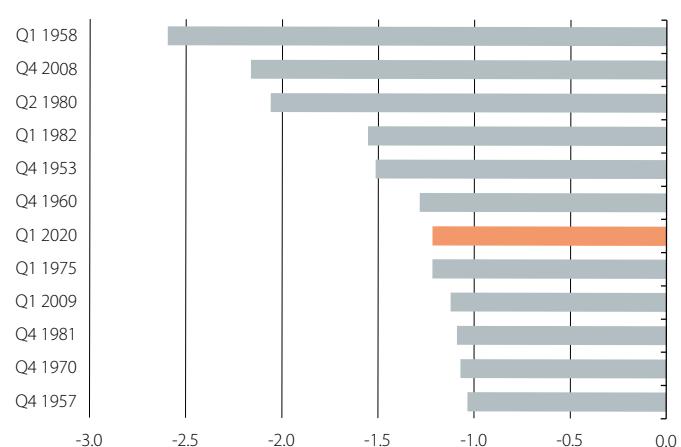
Year-on-year change (%)



Source: CaixaBank Research, based on data from the National Institute of Statistics and Geography (INEGI).

US: the 12 biggest quarter-on-quarter falls in GDP since 1950

Quarter-on-quarter change (%)



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

encompasses the lockdown and, therefore, the shutdown of activities in the country. In this context, the fiscal and monetary measures introduced to support the economy have been necessarily far-reaching. Specifically, following the new economic support package approved by Congress in late April, the fiscal measures could exceed 1.7 trillion dollars (8.6% of GDP), while the guarantees and other liquidity measures could approach the trillion-dollar mark (~4%-5% of GDP).

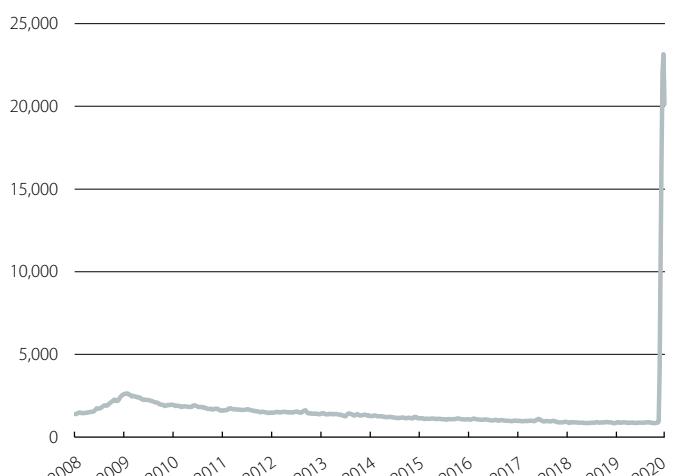
Skyrocketing unemployment and an easing of the lockdown in the US. One of the areas in which the erosion of economic activity is most evident is the labour market. In the four weeks to 25 April, cumulative US unemployment claims reached more than 20 million (to understand the scale of the crisis, in the same period in 2019 the figure was 860,000 claims). These figures suggest that the unemployment rate in April could be somewhere around 15%, a level not seen since the Great Depression. In this context of economic stagnation, the first steps have been taken to ease the state of lockdown. According to the COVID-19 Government Response Stringency Index developed by the University of Oxford, the measures introduced in mid-March began to be notably eased from 25 April. That said, the lifting of the lockdown is uneven, since the restrictions remain in place in some major states, such as California, Massachusetts and New York.

Economic activity collapses in the euro area. The Q1 2020 GDP figure for the euro area demonstrates the colossal impact of the coronavirus. GDP slumped 3.8% compared to the previous quarter and by 3.3% year on year. This quarter-on-quarter drop is unprecedented since the beginning of the economic and monetary union, exceeding even the worst declines of the double-dip recession of 2008-2012. Among the major countries, data is only currently available for Spain (-5.2% quarter-on-quarter), France (-5.8%) and Italy (-4.7%). As devastating as these figures are, the worst is yet to come. All the indicators suggest that the figure for Q2 will reflect a much more severe decline, since in Q1 the lockdown measures aimed at containing the virus were not implemented until the last two weeks of March. In this regard, the Economic Sentiment Indicator (ESI) fell from 94.2 points in March to 67.0 points in April, with declines in both the services sector and in industry.

Fiscal policy makes a move in Europe. Most EU countries have been relatively quick to implement various economic stimulus plans in order to contain the recession provoked by the shock (see table). In most countries, the shape the intervention is taking is similar, but not its intensity, since, as stated earlier, this depends on the fiscal position at the onset of the crisis, among other factors. At the European level, meanwhile, the Eurogroup announced a 540 billion-euro package of measures to assist member states in tackling the COVID-19 crisis (up to a maximum of 240 billion to fund health spending using loans from the ESM, 200 billion through the EIB and 100 billion in loans to help member states fund temporary unemployment plans). Furthermore, the European Council instructed the European Commission to draft a proposal for a Recovery Fund, the details of which still remain

US: unemployment claims

4-week cumulative figure (thousands)



Source: CaixaBank Research, based on data from the US Employment and Training Administration.

Euro area: Real GDP

Index (100 = 2010)



Source: CaixaBank Research, based on data from Eurostat.

Euro area: economic sentiment index

Level



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

practically unknown. All in all, it has been suggested that the Fund should be of a substantial size (the amounts being mentioned equate to between 7.2% and 10.8% of GDP).

The lockdowns begin to be lifted in the EU. Evidence that the spread of the pandemic is receding, coupled with the fact that the economic damage is proving particularly harsh, has led some European countries to begin to lift some of the lockdown measures. In France and Italy during the month of May, retail establishments will gradually be allowed to reopen (bars and restaurants will remain closed except for providing food to take away), the restrictions on movement between municipalities will begin to be lifted (travel will be permitted up to 100 kilometres in France and within the same region in Italy for reasons related to work, necessity or health) and social and sporting activities will be tolerated with certain limitations. In France, infant and primary schools will also reopen, followed by secondary schools, with limited capacity in the classes. Starting in June, the restrictions will be eased further in both countries, on the conditions that there is no resurgence in infections, face masks remain widely used and social distancing is maintained. Other countries, such as Germany and Austria, have followed different stages but with similar criteria: in the latter case the restrictions have been virtually non-existent since the beginning of May, while in Germany each federal state is determining the pace at which the measures are being lifted.

SPAIN

Unprecedented slump in economic activity. The GDP figure for Q1 2020 confirmed the expectation that the lockdown measures implemented to curb the spread of COVID-19 would have a historic impact on economic activity. In the first quarter of the year, GDP fell by 5.2% quarter-on-quarter (-4.1% year-on-year), the biggest decline in quarter-on-quarter terms since the beginning of the National Statistics Institute's historical series in 1995 (the second biggest drop was 2.6% quarter-on-quarter, in Q1 2009). From this figure, it can be inferred that during the last two weeks of March, while the state of alarm was in force, GDP fell by around 30%. This profound impact was to be expected, given the strictness of the lockdown and the importance to the Spanish economy of the tourism sector, which has been severely affected by the crisis. In fact, the decline in economic activity in Q2 will be clearly greater than in Q1, given that a greater number of weeks will be affected by the restrictions associated with the state of alarm. In this context, uncertainty surrounding the future outlook is unusually high, since minor changes in the process of lifting the lockdown could end up having a significant impact on economic activity. If the withdrawal of social distancing measures is gradual, then the decline in economic activity could reach double digits this year.

The economic activity indicators show few signs of improvement. Given the speed with which the impact of the crisis induced by COVID-19 has been felt, few of the usual indicators providing insights on the impact on the economy are available. However, the available data show that economic

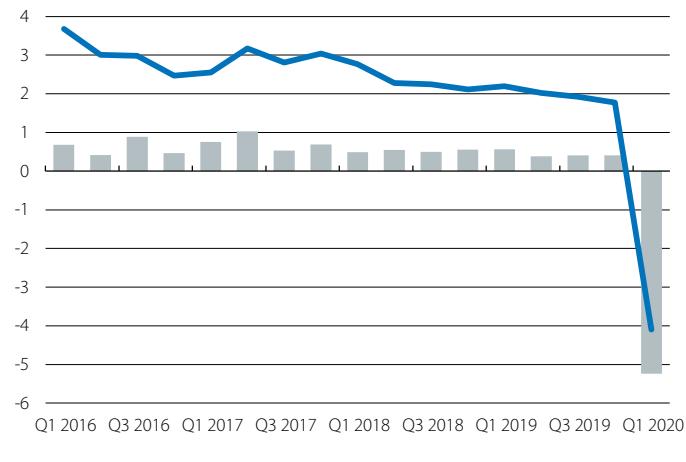
Economic measures in force in Germany, France and Italy

	Germany	France	Italy
Fiscal measures	<ul style="list-style-type: none"> Expansion of the plan of subsidies for reduced working hours. 3.5 billion (0.1% of GDP) for Health. 100 billion (2.9% of GDP) for the recapitalisation of companies. 50 billion (1.5% of GDP) in direct grants to small businesses (fewer than 10 employees). <p>Total ≈ 4.8% of GDP</p>	<ul style="list-style-type: none"> Cancellation of corporate taxes: on a case by case basis. Increase in temporary unemployment benefits. Solidarity fund for small businesses. 8 billion (0.4% of GDP) for the health system. <p>Total ≈ 2.4% of GDP</p>	<ul style="list-style-type: none"> 3.5 billion (0.2% of GDP) for the health system. 10.2 billion (0.6% of GDP) for households and businesses. Tax credits for small businesses. Aid for the transport and aviation sectors (incl. Alitalia). <p>Total ≈ 0.9% of GDP</p>
Deferrals	<ul style="list-style-type: none"> Deferral of corporate taxes (500 billion, 14.5% of GDP). <p>Total ≈ 14.5% of GDP</p>	<ul style="list-style-type: none"> Deferral of taxes and of utility and rent bills for businesses. <p>Total ≈ 9.4% of GDP</p>	<ul style="list-style-type: none"> Deferral of up to 220 billion (13.2% of GDP) of loans to SMEs and independent workers. Deferral of up to 10.7 billion (0.6% of GDP) in taxes and benefits for businesses. <p>Total ≈ 13.8% of GDP</p>
Guarantees	<ul style="list-style-type: none"> 822 billion (24% of GDP) in guarantees for loans to businesses through KfW. 500 billion (14.5% of GDP) in guarantees through the Economic Stabilisation Fund. Unlimited quantity of guarantees for loans to SMEs. The government assumes 100% of the risk. <p>Total ≈ unlimited</p>	<ul style="list-style-type: none"> 338 billion (14.0% of GDP) in guarantees for businesses (guaranteeing between 70% and 90%). <p>Total ≈ 14.0% of GDP</p>	<ul style="list-style-type: none"> Up to 300 billion (16.8% of GDP) in guarantees for businesses. <p>Total ≈ 16.8% of GDP</p>

Source: CaixaBank Research, based on data from national authorities.

Spain: GDP

Change (%)



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

activity remains very subdued. According to internal CaixaBank data, in April, expenditure (measured with card payments) decreased by 47.4% year-on-year. While a slight improvement on the 54.1% drop registered in the last two weeks of March, this figure still reflects a stark contraction in economic activity. By component, greater expenditure was observed in the category of food and pharmacies, while there was a collapse in the category of leisure and tourism (see chart). Similarly, data on electricity demand from REE show a decline of 17.6% year-on-year in April (excluding weekends), an even more pronounced drop than in the last two weeks of March (-10.4%). In March, meanwhile, the PMI index of the services sector experienced an unprecedented drop (-29.1 points), falling to 23.0 points. In addition, retail sales plummeted 14.1%, the biggest fall since the start of the series in the year 2000. In this context, headline inflation stood at -0.7% in April (0.0% in March). This was driven by the sharp fall in the price of oil and the deflationary effects of the COVID-19 crisis on the services affected (for instance, inflation of -4.3% was registered in water, electricity and gas distribution), which outweighed the inflationary effects on food (+4.0%).

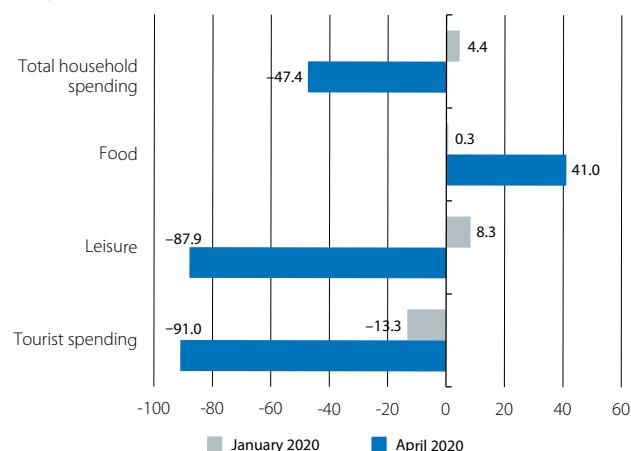
The labour market, in the eye of the storm. The labour market is one of the areas in which the impact of the crisis is being felt more acutely. Between the end of February and the end of March, the number of workers registered with Social Security (SS) fell by 834,000. This figure does not include employees affected by temporary furlough measures (ERTEs), estimated at 3.9 million people in mid-April, a figure equivalent to 16.8% of the total labour force. These employees receive unemployment benefits, but continue to be registered with SS, so they are not counted in the registered unemployment data. In addition, 1.01 million self-employed workers have currently stopped working (4.4% of the labour force). The speed with which the labour market can absorb this contingent of workers as the economy returns to normal will be key in determining the long-term impact of the COVID-19 crisis.

PORTUGAL

Unprecedented paralysis of Portugal's economic activity due to COVID-19. The lockdown has also severely shaken Portugal's economic activity since late March. This is demonstrated by sentiment indicators such as the European Commission's ESI, which in April plummeted to levels not seen in the last 20 years, or a survey conducted by the National Statistics Institute and the Bank of Portugal, in which 39% of companies stated that they had registered a fall in turnover of more than 50% in the last week of April. Furthermore, in March, retail sales and industrial production fell by 5.6% and 7.2% year-on-year, while auto sales fell by 87% year-on-year in April. Finally, ATM transactions fell by 46% year-on-year between mid-March and mid-April. With all these indicators, a contraction in GDP may already be expected in Q1, although the impact of the lockdown will clearly be more pronounced in Q2 (the restrictions under the state of emergency affected the entire month of April, and it has been extended into May).

Spain: evolution of spending registered on CaixaBank POS terminals

Year-on-year change (%)

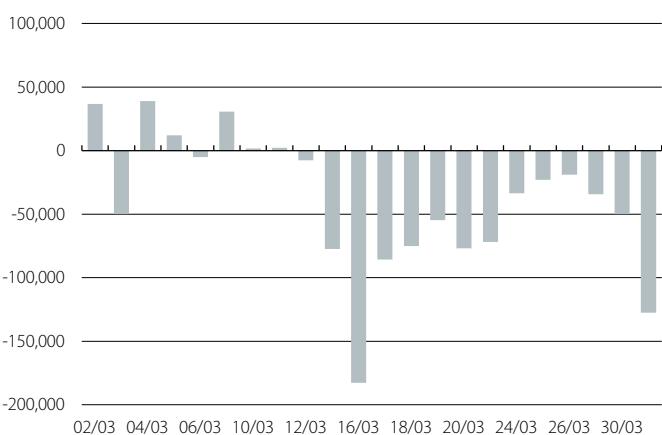


Note: «Food» includes household spending in supermarkets, food superstores and pharmacies. «Leisure» includes household spending on bars and restaurants, transport, entertainment and accommodation.

Source: CaixaBank Research.

Registration with Social Security

Daily net change (thousands)



Note: Series not seasonally adjusted.

Source: CaixaBank Research, based on data from the Ministry of Labour, Migration and Social Security.

Portugal: economic sentiment index and GDP

(Points)

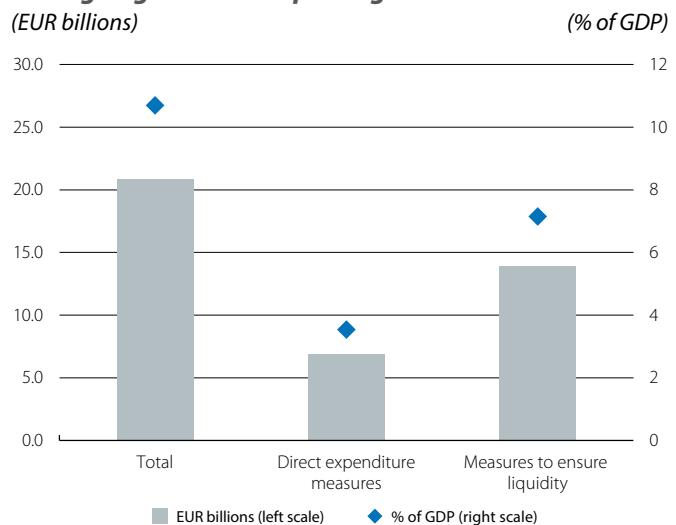
Year-on-year change (%)



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

The government introduces new measures to continue to support businesses and households. On the one hand, the government has increased the scale and scope of the lines of credit for businesses (up to 7,360 million euros, or 3.8% of GDP), making them available to self-employed workers and new sectors which were not initially covered, such as trade and transport. On the other hand, it is estimated that the direct public expenditure measures already announced (such as employment aid and household subsidies) amount to 3.5% of GDP. However, the impact of the lockdown on the labour market will be significant. As of the end of April, the number of people registered unemployed in job centres had increased by 14.8%, while the number of workers who have lost their jobs already represents 26% of the labour force in employment at the beginning of the year. The slump in employment has particularly affected the trade, accommodation and catering sectors. In fact, the environment is particularly demanding for sectors related to tourism, with initial estimates indicating a drop of around 50% in the number of guests staying in tourist accommodation in March.

Portugal: government package of measures



Source: CaixaBank Research, based on internal estimates and data from the Government of Portugal.

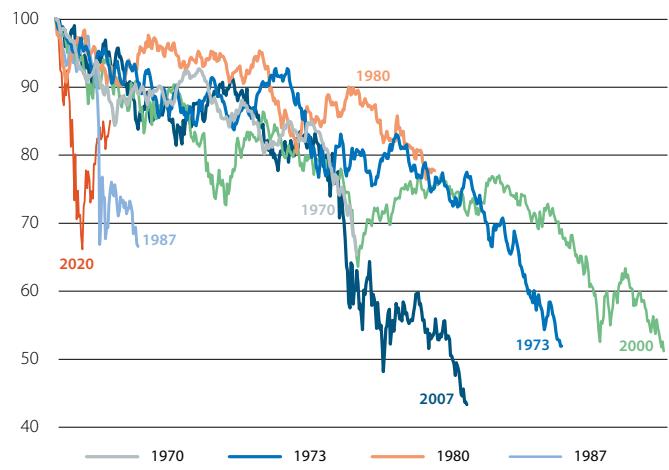
Financial markets' sentiment stabilises

The financial markets cling to economic support policies and de-escalation plans. After the collapse of February and March, which was not only severe but also of an unprecedented speed, in April investors enjoyed a respite, volatility decreased and financial security prices stabilised, even regaining some of the lost ground. Stock markets registered widespread gains (although they remain negative on a year-to-date basis), pressure on risk premiums eased (especially with regard to corporate debt, which had been more stressed in previous months), and in the currency market those of emerging economies showed greater stability. This better performance in the financial markets occurred as investors digested the rapid and significant response from economic policy and, in particular, the reduction of infections in key economies such as the euro area and the subsequent preparation of plans for the gradual lifting of restrictions on activity. However, despite the reduced stress in the markets, the financial environment remains highly demanding and prone to new spikes in volatility.

Oil dips into negative prices. The month proved more turbulent for the oil market, although in early April OPEC and other major oil-producing countries, such as Russia, put an end to a brief price war and signed a new agreement on production cuts. Specifically, in May and June 2020 there will be a reduction of 9.7 million barrels per day (mbd) compared to the levels of October 2018, while the cuts will be slightly less pronounced in the second half of 2020 (7.7 mbd) and throughout 2021 (5.8 mbd less from January 2021 until April 2022). However, the efforts of OPEC and its allies clashed with the freeze in demand caused by the COVID-19 crisis and the price of crude oil continued to fall, to the point where, in some indices, it even turned negative (in particular, in the case of WTI US crude oil contracts maturing in May). This anomaly was a reflection of the fact that, with the low oil prices, the accumulation of stocks is beginning to saturate US storage centres and forcing buyers to cope with higher storage costs. Thus, as the execution date of the May contracts approached, many US refineries were only willing to acquire new barrels of oil if they were compensated for the increase in costs, and on Monday 20 April the price of the WTI barrel came to be traded at -37.6 dollars, driving down the rest of the market. However, the price of Brent oil always remained in positive territory and, driven by an improvement in market sentiment, came to close the month of April with a slight recovery up to 25 dollars.

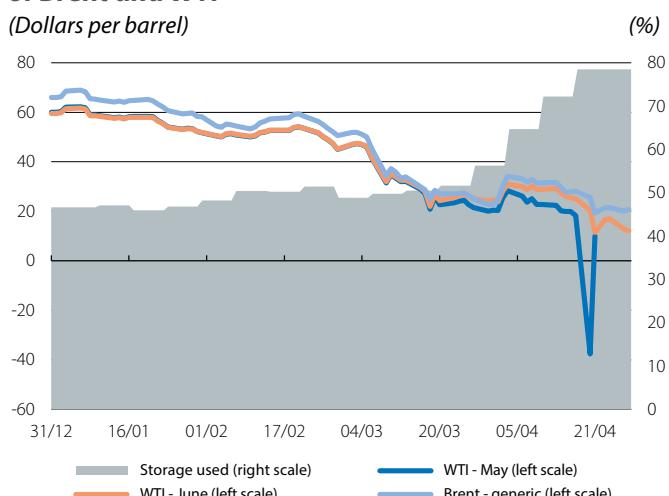
Stock markets recover some of the lost ground. Following the sharp declines suffered in March, in April the major stock market indices experienced gains of around 10%, both in advanced economies (although in the euro area there was greater disparity between the periphery and the core) and in

S&P 500: the biggest falls Index (100 = maximum prior to the fall)



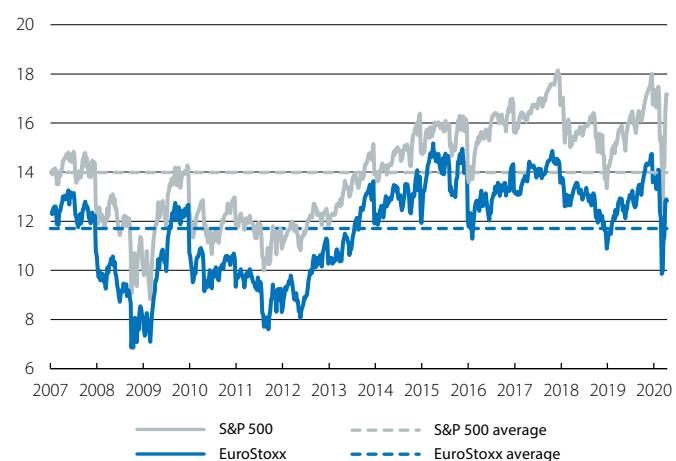
Source: CaixaBank Research, based on data from Bloomberg.

Oil: storage capacity in Cushing and price of a barrel of Brent and WTI



Source: CaixaBank Research, based on data from Bloomberg.

P/E ratio: evolution and average of recent years (Forward 12-month ratio)



Source: CaixaBank Research, based on data from Bloomberg.

emerging economies. In addition to the improvement in sentiment, the publication throughout April of corporate earnings for Q1 2020 also gave the stock markets a boost. Despite reflecting a sharp deterioration in earnings in year-on-year terms due to the impact of the COVID-19 outbreak, in general the earnings published were somewhat better than expected by analysts, who in the preceding months had substantially lowered their forecasts. However, in the year as a whole the indices remain clearly negative and the volatility of the stock markets remains at historically high levels. Moreover, the recovery was not equal across all sectors and was especially concentrated in those less sensitive to the business cycle (such as health, non-cyclical consumption and telecommunications).

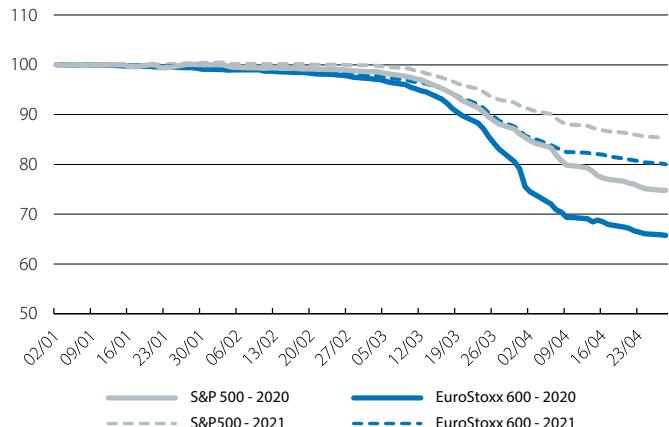
Tensions in credit markets take a respite. The surge in risk premiums on corporate debt that occurred in March tempered in April. The actions of the major central banks (the Fed and the ECB) through the special asset purchase programmes (involving the purchase of assets such as mortgage-backed bonds and corporate debt) provided support for investor confidence and favoured the easing of tensions in the credit markets, in both the investment-grade and the high-yield segments. Nevertheless, the credit environment continues to be highly demanding. One of the aspects arousing the most reticence among investors, and which lies behind the largest corporate risk premiums, is the capacity of the high-yield market to absorb all those companies that are losing their investment-grade rating (we analyse this phenomenon of «fallen angels» in the Focus [«The vulnerabilities of corporate debt in the face of a historic shock»](#) in this same *Monthly Report*).

The Fed, ready to expand the safety net. After quickly launching a battery of substantial measures in March, the April meetings of the major central banks resulted in far fewer developments in terms of monetary policy. In contrast, the Fed and the ECB focused on analysing the change of economic scenario and reiterated that they are prepared to redouble their efforts if necessary. On the one hand, in the US, at the end of the Fed's last meeting, Jerome Powell described a gloomy economic outlook for the US economy in Q2, marked by a sudden drop in economic activity as well as the anticipation of a rise in the unemployment rate above 10% and weak inflation. Powell did not announce any new monetary policy measures, but remarked that the frictions in the domestic financial markets were moderating after the implementation of a full battery of measures (including unlimited purchases of treasuries and mortgage bonds). He also stressed that, in the face of the high degree of uncertainty surrounding the current economic outlook, the Fed could increase the stimuli to help the recovery to be as strong as possible.

The ECB strengthens liquidity. Like the Fed, the ECB also presented an economic scenario involving a deep recession

Evolution of expectations of corporate earnings in 2020 and 2021

Index (100 = January 2020)

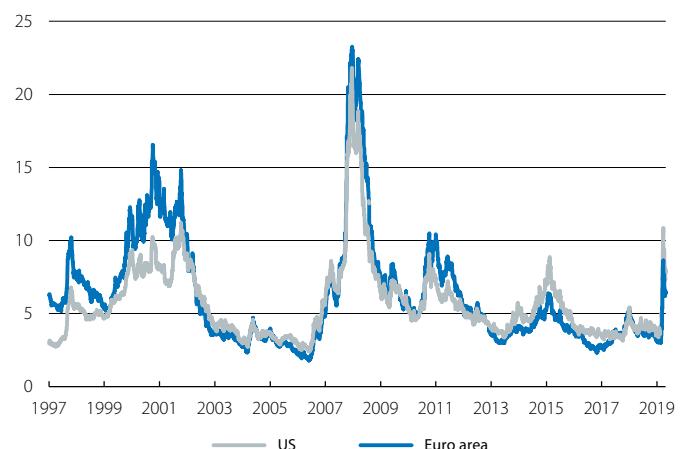


Note: Evolution of the expectations of earnings per share in 2020 and 2021.

Source: CaixaBank Research, based on data from Bloomberg.

Speculative-grade corporate risk premiums

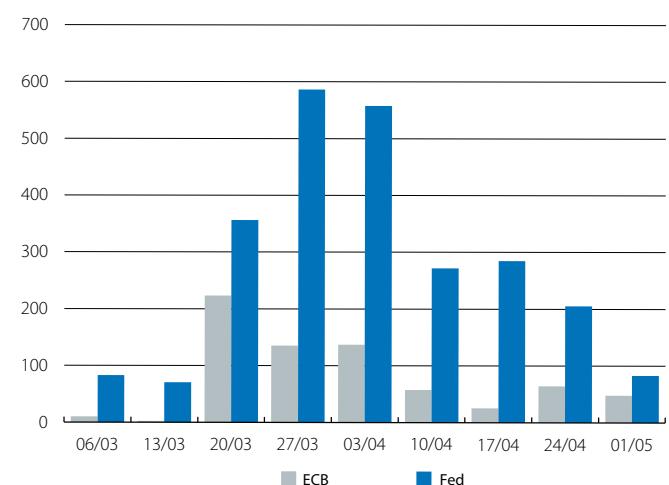
(pps)



Source: CaixaBank Research, based on data from the Federal Reserve Bank of St. Louis.

Central bank balance sheets: weekly increase

(EUR and USD billions)



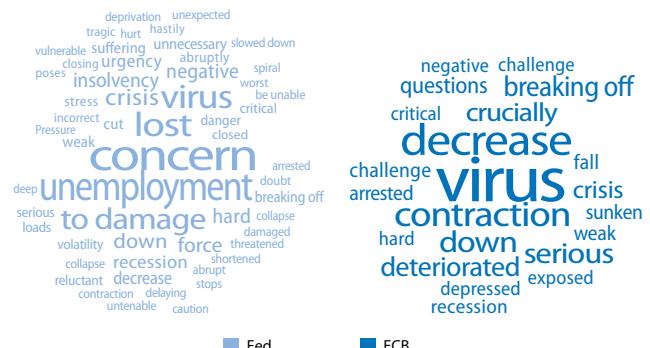
Source: CaixaBank Research, based on data from Bloomberg.

in the euro area for 2020. In this context, the Bank announced new stimuli, which come in addition to those already adopted in March, in order to bolster the abundance of liquidity and avoid credit tensions. The new measures included a reduction in the cost of financing through the TLTRO-III and the creation of a new programme of emergency liquidity injections to combat the impact of the pandemic (PELTRO). This programme will be launched starting in May 2020 and, with a maturity date in mid-2021, will satisfy all requests at an interest rate of -0.25%. Furthermore, the Bank made clear that it was prepared to increase the scale of its various tools to whatever extent necessary.

All eyes are on the risk premiums of the periphery. The deployment of measures by the Fed and the ECB facilitated a stable environment with very low sovereign yields in the US and Germany. However, the month was less placid for sovereign yields in the periphery of the euro area. The growing funding needs of these countries in order to cope with the impact of the COVID-19 crisis continued to drive up their risk premiums (+35 bps in Italy, +16 bps in Spain and +6 bps in Portugal). In addition, in April, the ratings agency Fitch downgraded Italy's sovereign credit rating by one point (to BBB-). The ECB, meanwhile, maintained a high level of public debt purchases in its emergency programme to combat the effects of the pandemic (PEPP) and concentrated the purchases of its other programme (PSPP) in the peripheral countries (the geographical distribution of the purchases of the PEPP is not yet known).

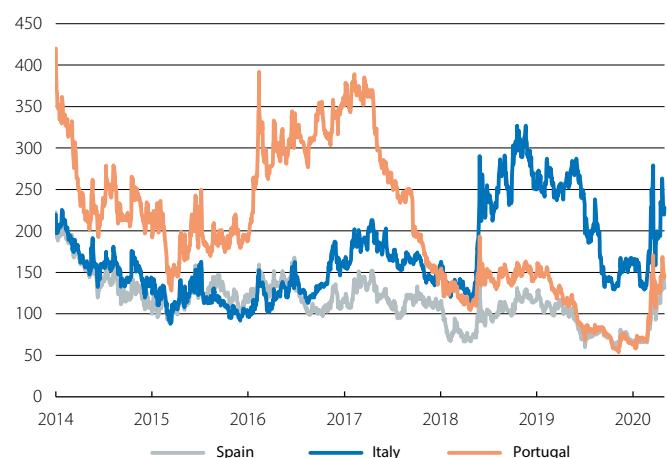
The emerging markets present high financing tensions. The surge in credit spreads observed in advanced economies in March had a greater impact on emerging economies. While the recovery of market sentiment in April and the implementation of injections of dollars by the Fed managed to reduce risk premiums on the debt of emerging economies, the collapse in oil prices exacerbated the situation for many oil-producing countries. In the currency market, meanwhile, emerging currencies were more stable, but they continue to be weak in the year as a whole (the JP Morgan aggregate index of emerging currencies has registered a cumulative decline of around 15% since the beginning of the year).

April meetings of the Fed and the ECB: main negative words



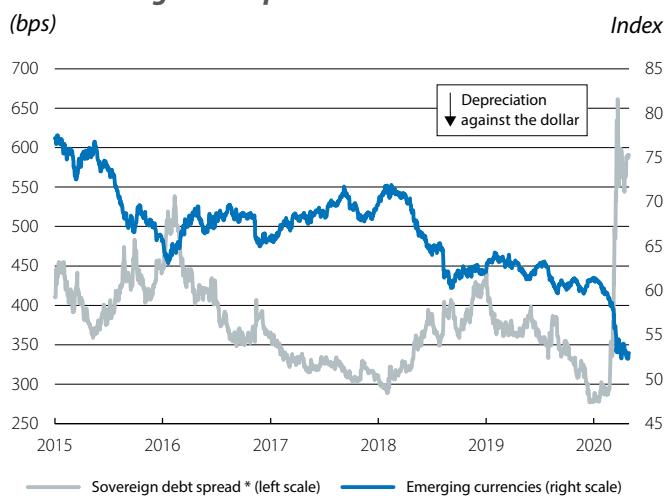
Source: CaixaBank Research.

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



Source: CaixaBank Research, based on data from Bloomberg.

Emerging economies: currencies against the US dollar and sovereign debt spread



Note: * Spread between the emerging economy average and US treasuries.

Source: CaixaBank Research, based on data from Bloomberg.

The vulnerabilities of corporate debt in the face of a historic shock

- The paralysis of economic activity will lead to a fall in global GDP not seen since 1930. Are there latent financial fragilities that could amplify this decline?
- In a more demanding financial environment, the high levels of debt will be put to the test, its quality will deteriorate and mechanisms that amplify economic stress could be activated due to the interconnections that exist between different assets.
- In the face of these risks, economic policy has reacted quickly and decisively, especially on the part of the central banks, which may still need to redouble their efforts.

The impact of the COVID-19 outbreak on the economy is one of historic proportions and the IMF has predicted that the fall in GDP growth this year will be the biggest recorded since the Great Depression. Whilst – unlike the recession of 2008 – excessive risk-taking and a credit boom are not the cause of this crisis, the paralysis of economic activity will put stress on many companies' financial health. Furthermore, the market turmoil (with historic falls in the stock markets) and the widespread tightening of financial conditions could activate latent vulnerabilities that may amplify the initial shock. In this environment, how will the COVID-19 outbreak affect corporate balance sheets? Which financial vulnerabilities should we be concerned about? And what protection does the response from economic policy offer?

The COVID-19 economic crisis is affecting firms' liquidity in particular, but their solvency could also suffer

The paralysis of economic activity is reducing many businesses' ability to generate income. However, firms' costs have not reduced by the same amount, since some of them are not directly linked to production, which leads to short-term liquidity problems. This is illustrated by the 25% and 20% reductions in the 2020 business profit expectations of the Eurostoxx 600 and the S&P 500, respectively. In addition, the COVID-19 outbreak has led to a widespread tightening of financial conditions, which could hinder firms' access to their sources of liquidity. As we can see in the second chart, firms' ability to access liquidity in the wholesale markets has been somewhat mixed: in March, higher-grade debt issues were the highest since 2019, whilst the lower-grade debt market dried up. For this reason, many of the measures offered by the various advanced economy governments have been aimed at providing companies with liquidity (for instance, with public credit lines and guarantees or tax payment deferrals) and ensuring that those which were solvent prior to the economy's stagnation remain so when it is reactivated.

However, the change of environment could also affect some companies' solvency in the medium term. Despite the central banks' efforts to maintain an accommodative

US: financial conditions

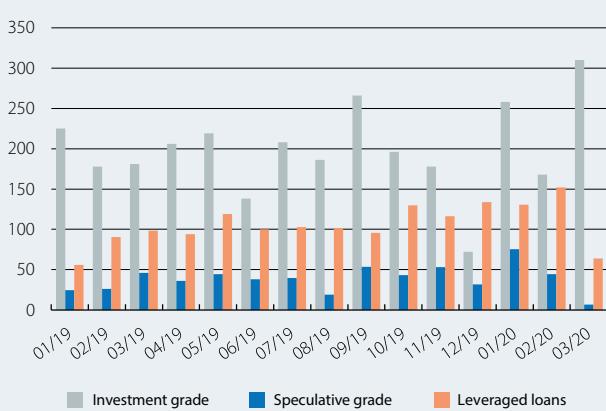
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Source: CaixaBank Research, based on data from the Federal Reserve Bank of Chicago.

World: corporate debt issues by segment

(USD billions)



Source: CaixaBank Research, based on data from the IMF.

environment, the cost of financing for the most vulnerable companies is likely to increase, which will put even more strain on their balance sheets. There are also significant differences between sectors. Most notably, all the indicators suggest that the normalisation of economic activity will be more gradual in sectors such as leisure and tourism. The energy sector is also suffering heavily due to the collapse in the oil price.

The vulnerabilities of corporate debt: quantity, quality and interconnections

These liquidity and solvency difficulties could once again expose the various vulnerabilities that exist in non-financial corporate debt. On the one hand, the amount of corporate debt is at historically high levels. According to data from the BIS, corporate debt in the US stands at an all-time high of 75% of GDP, while in the euro area it stands at 107%, slightly below its all-time peak of 111%.

The quality of this debt in some segments is also a source of concern. One of the main vulnerabilities is the risk of so-called fallen angels – companies whose debt, while currently rated as investment grade, could be slashed to high yield with only a small reduction in their credit rating. Given that many funds have limits on the level of high-yield assets they can hold in their portfolio, when an angel falls, this usually triggers fire sales, which drive the price down even further. In addition, this situation increases the supply of assets of this segment and increases the cost of financing and refinancing, both for the fallen angels themselves and for all other companies with high-yield debt. In the third chart we can see the volume of corporate debt in Europe and the US that is currently at risk of becoming a fallen angel (i.e. debt currently lying on the bottom rungs of investment grade, namely BBB and BBB-/Baa2 and Baa3). The magnitude of the potential new fallen angels is particularly worrying given that, in past episodes of financial stress, between 2% and 4% of the total investment-grade debt was downgraded to high yield. At current levels, this would amount to 160 billion euros in Europe and 230 billion dollars in the US. However, today this fraction could be even bigger, because there is a higher concentration of debt in the lower rungs of investment grade.

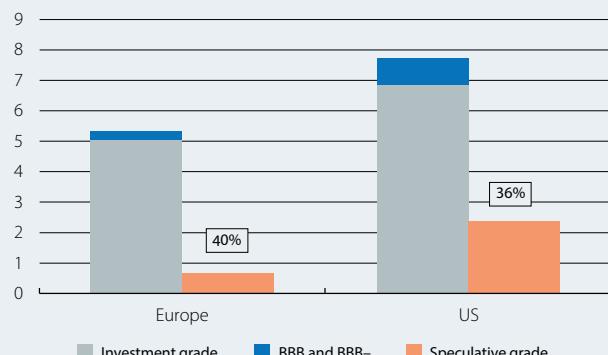
Another vulnerability related to the quality of corporate debt lies in new lending to highly-indebted companies (known as leveraged loans). This type of credit accounts for some 1.2 trillion dollars in the US and around 0.2 trillion euros in the EU (or approximately 8% of all corporate debt in advanced economies).¹ The primary risk related to this segment of corporate debt is that, in situations of financial stress, it tends to suffer more cases of rating downgrades, forced deleveraging and higher defaults. So far, the drop in the price of these assets has been approximately half that registered during the Great Recession (see fourth chart).

Most of this debt lies on the balance sheet of the banking sector, but the fifth chart shows how a not so insignificant portion lies in the hands of less capitalised financial institutions or is packaged into collateralised loan

1. Financial Stability Board (2019). «Vulnerabilities Associated with Leveraged Loans and Collateralised Loan Obligations».

Europe and the US: corporate debt

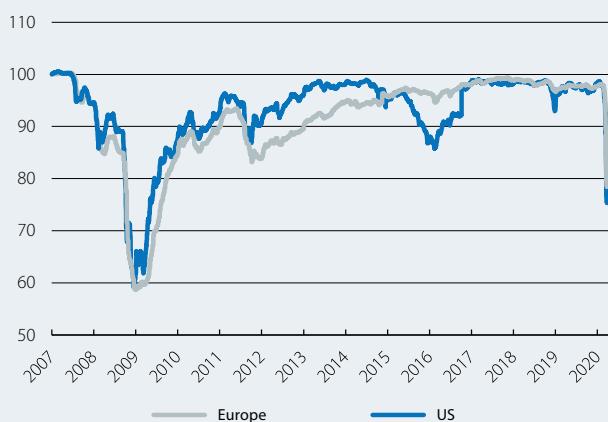
(EUR and USD trillions)



Source: CaixaBank Research, based on data from Bloomberg.

Europe and the US: price of leveraged loans

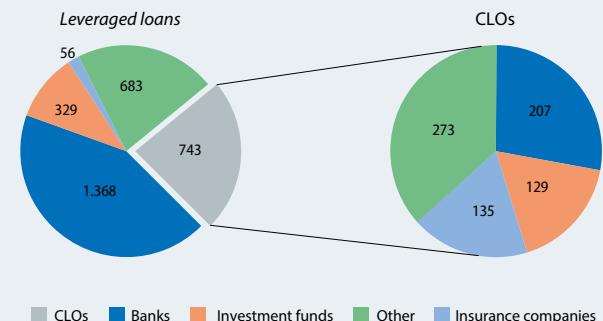
Index (100 = January 2017)



Source: CaixaBank Research, based on data from Bloomberg.

Holders of leveraged loans and CLOs

(USD billions)



Source: CaixaBank Research, based on data from the Financial Stability Board.

obligations (CLOs), which are made up of sets of other assets with differing levels of risk (public debt, high-rating corporate debt, leveraged loans and even equities). This process involving the securitisation of leveraged loans generates a complex system of interconnections in the financial system (between the

originators of each underlying asset, the originators of each CLO, buyers of CLOs, etc.). In this regard, the poor quality of the underlying assets that comprise CLOs is of particular concern (the vast majority are below investment grade), as is the significant growth of the CLO market in the last decade (it has more than doubled). However, there are technical elements which make CLOs less sensitive to changes in market sentiment than other instruments which amplified episodes of financial turbulence in the past.² In addition, as a whole, the market for securitised assets is barely half the size that it reached in the quarters leading up to the financial crisis of 2008.

The response from economic policy is on the right path, but is it enough?

In order to ensure that these risk elements do not become amplifiers of the shock, **it is important that the corporate sector continues to have favourable access to stable sources of financing**. Both governments and the major central banks have taken action in this regard, although the scope of the measures differs between regions. As an example, the direct fiscal measures announced in the US and Germany³ represent 8.6% and 4.8% of GDP, respectively, while in economies with less fiscal space, such as Italy or Spain, the bulk of the stimulus has focused on aspects such as public guarantees. In the US, the Fed and the Treasury have also coordinated to facilitate the flow of credit and the proper functioning of the markets.⁴

The central banks, meanwhile, have taken a particularly aggressive stance in order to contain financial stress, ensure the proper functioning of the markets and guarantee that credit continues to flow in favourable conditions.⁵ As for corporate debt, the programmes announced to date could lead to the ECB and the Fed acquiring around 2% and 7%⁶ of the corporate debt that exists in their respective markets during 2020. Moreover, both the Fed and the ECB have helped to ease tensions in the market of fallen angels by announcing that they will accept debt that was investment grade at the beginning

of the health crisis as collateral, even if it falls to speculative grade (provided that, at the time of purchase, the rating is not below BB– and BB, respectively).

All in all, the bulk of the measures is limited to investment grade debt. However, as we have seen, there are significant vulnerabilities in lower-grade debt, and this is a segment which registered default rates of 9.6% and 13.4% in 2001 and 2008 recessions, respectively, and which is unlikely to be immune to the COVID-19 outbreak.

Ricard Murillo Gili

2. For example, CLOs do not allow early repayments, and the flow of their payments is not dependent on sources with refinancing needs with shorter maturities than those of the underlying assets.

3. Which include furlough schemes similar to Spain's «ERTEs», or subsidies to small and medium-sized enterprises.

4. See the article [«Economic policies in the face of COVID-19: will the boundaries of the impossible be broken?»](#) in the Dossier of this same *Monthly Report* for more details on the coordination of monetary and fiscal policy in the euro area.

5. The measures taken include slashing interest rates to minimum levels, injecting liquidity into the financial system, promoting the use of capital buffers accumulated in recent years to absorb new costs, and large-scale purchases of public and corporate debt.

6. For the ECB, we assume that its allocation to corporate debt represents a similar percentage in the current programmes to the portion allocated in the past (20 billion per month plus the 120 and 750 billion announced in March). In the US, we focus on the Primary and Secondary Market Corporate Credit Facility (500 and 250 billion dollars, respectively).

Interest rates (%)

	30-Apr.	31-Mar.	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	-0.27	-0.36	9	11.0	3.6
1-year Euribor	-0.12	-0.17	5	13.1	-0.4
1-year government bonds (Germany)	-0.54	-0.67	13	9.2	0.3
2-year government bonds (Germany)	-0.76	-0.69	-7	-15.9	-17.3
10-year government bonds (Germany)	-0.59	-0.47	-12	-40.1	-61.1
10-year government bonds (Spain)	0.72	0.68	5	25.5	-26.1
10-year government bonds (Portugal)	0.82	0.87	-5	37.5	-30.4
US					
Fed funds	0.25	0.25	0	-150.0	-225.0
3-month Libor	0.56	1.45	-89	-135.2	-200.4
12-month Libor	0.86	1.00	-13	-113.2	-188.1
1-year government bonds	0.14	0.15	-1	-142.4	-225.0
2-year government bonds	0.20	0.25	-5	-137.4	-213.7
10-year government bonds	0.64	0.67	-3	-127.8	-188.6

Spreads corporate bonds (bps)

	30-Apr.	31-Mar.	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	80	97	-16	36.2	21.7
Itraxx Financials Senior	101	117	-16	49.8	31.8
Itraxx Subordinated Financials	218	255	-37	104.6	75.4

Exchange rates

	30-Apr.	31-Mar.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.096	1.103	-0.7	-2.3	-2.2
EUR/JPY (yen per euro)	117.420	118.640	-1.0	-3.6	-5.6
EUR/GBP (pounds per euro)	0.870	0.888	-2.1	2.8	2.3
USD/JPY (yen per dollar)	107.180	107.540	-0.3	-1.3	-3.5

Commodities

	30-Apr.	31-Mar.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	353.2	370.2	-4.6	-12.0	-15.6
Brent (\$/barrel)	25.3	22.7	11.1	-61.7	-64.3
Gold (\$/ounce)	1,686.5	1,577.2	6.9	11.2	31.8

Equity

	30-Apr.	31-Mar.	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	2,912.4	2,584.6	12.7	-9.9	-1.1
Eurostoxx 50 (euro area)	2,927.9	2,786.9	5.1	-21.8	-16.4
Ibex 35 (Spain)	6,922.3	6,785.4	2.0	-27.5	-26.4
PSI 20 (Portugal)	4,284.2	4,069.6	5.3	-17.8	-20.4
Nikkei 225 (Japan)	20,193.7	18,917.0	6.7	-14.6	-9.3
MSCI Emerging	924.9	848.6	9.0	-17.0	-14.6

Emerging countries and COVID-19: on the brink of a financial crisis?

- The major emerging countries are experiencing a rapid economic deterioration.
- Their financial situation is under stress due to the dollar crunch, the tightening of financial conditions and the increase in sovereign risk premiums.
- The severity of the crisis they will experience will largely depend on what happens to global growth and on the effectiveness of the measures of the major central banks.

The coronavirus pandemic is having a severe impact on emerging economies. As we will set out in further detail below, the shock of the COVID-19 outbreak is being transmitted through real and financial channels both quickly and intensely. As a result, around 100 countries, most of them emerging, are exploring the possibility of obtaining assistance from the IMF or expanding that which they already have in place. What is going on? Are we entering into a new widespread crisis in the emerging markets like that of the 1980s and 1990s?

From what position are emerging economies facing the shock of the COVID-19 outbreak?

Recently, we thought that the economic health of the emerging economies was generally good, with the exception of a few already-identified cases, known as the fragile economies (such as South Africa and Turkey). Upon reviewing the major macroeconomic and financial balances, we can see this is still the case (see first table).

However, underneath this positive overall assessment lie certain vulnerabilities. The main one, by far, is that emerging economies' level of indebtedness, either public or private depending on the country, has increased more than what should be advisable in the last decade. This is the case, for instance, with the levels of public debt of Brazil, Hungary and India and those of foreign debt of Turkey, Poland, Hungary and South Africa.

These levels were not of great concern while the macroeconomic and financial conditions were

favourable. However, unfortunately the pandemic has completely changed the economic and financial context.

The real transmission of the COVID-19 shock

There is a great deal of uncertainty surrounding the future impact of the measures being implemented to combat the COVID-19 crisis. In order to assess the impact of the current crisis in each emerging country, it is also necessary to take into account their exposure to certain areas that are likely to be especially hard hit. Broadly speaking, the recession will be deeper for countries with a closer trade relationship with the US, China and the EU (where the pandemic is more prevalent); for countries more reliant on tourism (a sector that is particularly sensitive to the closure of borders); for countries with higher oil exports (which have plummeted due to the combination of a fall in demand and producers losing their grip on the supply), and, finally, for countries that are more dependent on the sectors hardest hit by the containment strategies (which we expect to end up being applied in almost all countries).

As is evident from the second table below, the major emerging countries are all exposed to these particularly vulnerable areas to some extent. However, Mexico, South Africa, Brazil, Russia and Poland are expected to experience a particularly pronounced economic decline.

The financial transmission of the COVID-19 shock

Various financial transmission channels have been activated in recent months – at an unusually high rate

Emerging countries: macroeconomic and financial fundamentals

	India	Indonesia	Korea	Brazil	Mexico	South Africa	Turkey	Russia	Poland	Hungary
Current account balance (% of GDP)	-0.9	-2.7	4.5	-2.9	-0.2	-1.3	1.1	5.6	1.5	-0.9
External debt (% of GDP)	20.0	36.0	24.0	35.0	37.0	52.0	63.0	29.0	61.0	76.0
Inflation (%)	6.6	3.0	1.0	4.0	3.3	4.6	9.8	2.5	4.7	3.9
Ratio of reserves/S/t external debt (%)	170.0	187.0	218.0	253.0	186.0	87.0	61.0	428.0	112.0	156.0
Fiscal balance (% of GDP)	-0.3	-0.3	1.3	-5.5	-2.3	-1.0	-2.1	2.8	0.5	-0.3
Public debt (% of GDP)	69.0	34.0	38.0	75.9	53.8	57.0	29.0	15.0	47.4	67.0
Reference rate (%)	4.7	4.5	0.8	3.8	6.5	4.3	11.9	6.0	0.5	0.9

Notes: The figures in orange indicate the levels of the variables that lie in a risk zone. For inflation, this indicates that the target of the national central bank is not being met.

For the reference rate, the figures marked indicate countries with a negative real interest rate.

Source: CaixaBank Research, based on data from Bloomberg and Refinitiv.

Main real transmission channels of the COVID-19 shock

	Trade ¹	Tourism ²	Hydrocarbons ³	Containment ⁴	Change in GDP (%) (forecast)	Cumulative change in GDP 2020-2021 (%)	
					2020	2021	
India	4.4	4.7	-3.0	100.0	-2.0	5.0	2.9
Brazil	5.3	7.9	1.0	79.2	-3.7	1.3	-2.4
Russia	15.1	4.9	15.0	85.7	-3.0	1.3	-1.7
Korea	15.9	4.1	-4.0	81.0	-1.2	3.4	2.2
Mexico	31.9	16.1	2.0	90.5	-7.0	1.1	-6.0
Indonesia	5.3	5.8	1.0	76.2	-1.0	4.0	3.0
Turkey	13.2	11.7	0.0	85.7	-2.5	2.0	-0.5
South Africa	10.8	9.0	0.0	100.0	-5.4	0.4	-5.0
Poland	37.5	4.5	1.0	81.0	-4.6	4.2	-0.6
Hungary	65.7	8.0	2.0	90.5	-3.1	4.2	1.0

Notes: The orange shading indicates greater relative intensity of the shock. 1. Sum of exports to the US, EU and China, as a percentage of GDP. 2. Contribution of the tourism sector to GDP, as a percentage of total GDP. 3. Net energy exports, as a percentage of GDP. 4. COVID-19 Government Response Stringency Index developed by the University of Oxford, where 100 is the maximum score.

Source: CaixaBank Research, based on data from Refinitiv, the University of Oxford, Barclays Capital and the IMF.

and with an unprecedented degree of intensity. Indices that seek to summarise how stressed or relaxed financial conditions are have registered a sudden tightening in recent weeks. For instance, according to Goldman Sachs' global financial conditions index, which takes into account changes in interest rates and spreads for a set of developed and emerging economies, among other factors, the financial conditions have stood at levels similar to those observed in 2008-2009. This tightening has been accompanied by an unprecedented decline in the net inflows of foreign capital not seen since those years, as reflected by an extreme depreciation of the major emerging currencies against the US dollar (compared to the beginning of 2020, on the order of 20% in the cases of South Africa, Brazil and Mexico at the time of writing).

This episode points towards two weaknesses in emerging economies. The first is their dependency on foreign financing and, therefore, their sensitivity to a sudden stagnation of capital inflows. Although the current account deficits are not particularly worrisome in most emerging economies, the foreign funding needs, in gross terms, are clearly high in Turkey, South Africa, Hungary, Brazil, India and Indonesia due to the substantial levels of public and private debt repayments due in 2020. In the first two countries, there is also a low level of reserves, which could accentuate the liquidity problems.

The second weakness is the high exposure to debt denominated in US dollars. Once again, South Africa and Turkey appear on the lists, but so do Poland and Hungary if we swap the dollar for the euro or the Swiss franc. The conviction that avoiding a scarcity of dollars is key has led to the reactivation of the Federal Reserve's swap lines with various emerging countries' central banks. This certainly offers some assistance, although the

experience of 2008-2009 and the sheer level of indebtedness in dollars both serve to warn us that this is only part of the solution.

Compounding the tightening of financial conditions and the dollar crunch, there is a third aspect derived from the doubts surrounding public solvency. Although the state of the public finances in general is not greatly alarming, perhaps with the exception of Brazil, what is of concern is the fact that a significant portion of public debt is denominated in dollars or other foreign currencies (over 10% of GDP in the case of Turkey, Hungary and Poland). The increase in risk premiums of sovereign bonds, as evidenced by the increase in the premiums of CDSs and some downward credit rating revisions (Mexico and South Africa, for example), suggests that investors perceive the countries of greater risk to be: Indonesia, Mexico (here the weak link is the quasi-state oil company Pemex), Brazil, South Africa and Turkey.

What is the margin for manoeuvre?

The reading so far highlights the importance of the real channels and, above all, the financial channels in the transmission of the shock of the COVID-19 outbreak in emerging markets. Can they do anything about it? The available margin for manoeuvre varies greatly depending on the country and the aspect of economic policy that we take into consideration. With regards to the fiscal position, with the exception of Brazil, the available margin is fairly large, although perhaps insufficient to fully absorb an economic and financial shock on the scale of the COVID-19 crisis. Less obvious is the margin available to monetary policy, since in most emerging economies the real interest rate is negative or very low and the incidence of unconventional monetary expansion measures is, in practice, an unknown, given that it is unexplored territory.

For the time being, most emerging countries are taking fiscal policy action through a combination of state guarantees, deferrals of tax and Social Security payments and advances of social transfers similar to those we have witnessed in advanced economies. The fiscal response from emerging economies is also similar to that of advanced countries in that there is significant disparity in their magnitude: some countries, such as Mexico, are being rather unambitious, while others, such as Russia, are mobilising more public resources. As for monetary policy, the offence is taking the form of reference rate cuts and some macroprudential actions.

An uncertain future... which could rapidly change

These actions, while necessary, are not going to be the only factors that will determine how emerging economies' macroeconomic and financial situation will develop in the near future. The key part of the match, as previously mentioned, is being played away from home: it is critical that the recovery of the advanced world is as quick as possible and that the financial tensions are contained. The uncertainty regarding both aspects is extreme, and yet we shall nevertheless venture to sketch out some potential future scenarios.

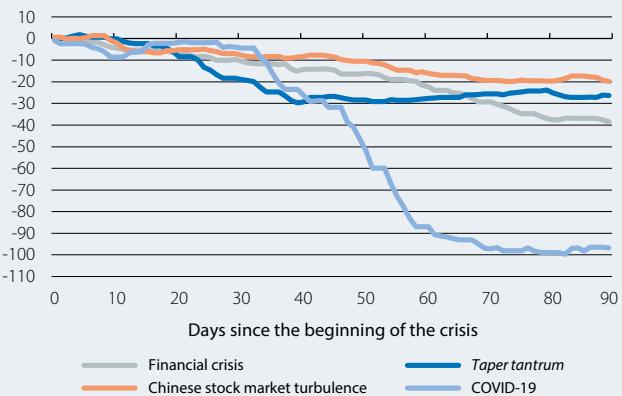
If the predictions for the fall and recovery of growth are fulfilled, in general terms the emerging economies analysed herein will register severer recessions in 2020, before recovering some of the lost ground in 2021. The danger here, as in most economies, is that the impact turns out to be less temporary than expected and ends up causing permanent income losses, which could have major social and political implications. Although serious, this is not the most dangerous aspect, at least in the short term.

The greatest danger lies in the risk of a far-reaching financial crisis occurring. While it is almost impossible to identify the ways in which this could materialise, the paths that could lead to this financial collapse may already have been revealed: an intensification of external vulnerabilities, the dollar crunch, depreciatory pressure, new tightening of financial conditions and doubts over sovereign solvency.

Let us return to the initial question: are we on the brink of a global financial crisis in the emerging economies? The odds are not low. In contrast to the conclusions drawn in the immediate past, the major conclusion of this Focus is that the group of potentially fragile emerging countries encompasses all – or almost all – of them. If the financial tensions worsen, as has happened in other major crises such as that of the late 1990s, then contagion would be likely and the duration uncertain, and it would almost certainly come in various waves. None of this is

Evolution of foreign capital flows into emerging economies

(Aggregate USD billions)



Note: This chart measures the evolution in the daily aggregate foreign investment flows into emerging economies during the first 90 days of each crisis: «Financial crisis» from 9 August 2008, «Taper tantrum» from 17 May 2013, «Chinese stock market turbulence» from 26 June 2015 and «COVID-19» from 21 January 2020.

Source: CaixaBank Research, based on data from the IIF.

inevitable, but for everyone's sake we trust that decision makers will continue to act swiftly and, in the case of the major central banks, in an ambitious and coordinated manner.

Alex Ruiz and Beatriz Villafranca

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

UNITED STATES

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Activity									
Real GDP	2.4	2.9	2.3	2.1	2.3	0.3	–	–	–
Retail sales (excluding cars and petrol)	4.5	4.7	3.8	4.3	4.0	3.0	3.9	4.5	0.6
Consumer confidence (value)	120.5	130.1	128.3	132.1	127.0	127.3	130.4	132.6	118.8
Industrial production	2.3	3.9	1.2	0.2	-0.7	-2.1	-0.9	0.0	-5.5
Manufacturing activity index (ISM) (value)	57.4	58.9	52.4	49.4	48.1	50.0	50.9	50.1	49.1
Housing starts (thousands)	1,209	1,250	1,256	1,282	1,441	1,466	1,619	1,564	1,216
Case-Shiller home price index (value)	200	211	216	216	219	...	221	222	...
Unemployment rate (% lab. force)	4.3	3.9	3.6	3.6	3.5	3.8	3.6	3.5	4.4
Employment-population ratio (% pop. > 16 years)	60.1	60.4	60.6	60.9	61.0	60.8	61.2	61.1	60.0
Trade balance ¹ (% GDP)	-2.8	-2.4	-3.1	-3.1	-2.9	...	-2.8	-2.8	...
Prices									
Headline inflation	2.1	2.4	1.8	1.8	2.0	2.1	2.5	2.3	1.5
Core inflation	1.8	2.1	2.1	2.3	2.3	2.2	2.3	2.4	2.1

JAPAN

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Activity									
Real GDP	2.2	0.3	0.9	1.7	-0.7	...	–	–	–
Consumer confidence (value)	43.8	43.6	39.4	37.1	38.1	36.0	38.8	38.3	30.9
Industrial production	2.9	1.0	-1.5	-1.9	-6.7	...	-2.4	-3.7	...
Business activity index (Tankan) (value)	19.0	20.8	7.0	5.0	0.0	-8.0	–	–	–
Unemployment rate (% lab. force)	2.8	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.5
Trade balance ¹ (% GDP)	0.5	-0.1	-0.5	-0.4	-0.3	-0.3	-0.4	-0.2	-0.3
Prices									
Headline inflation	0.5	1.0	0.8	0.3	0.5	0.5	0.7	0.5	0.4
Core inflation	0.1	0.3	0.6	0.6	0.7	0.7	0.8	0.6	0.6

CHINA

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Activity									
Real GDP	6.9	6.7	6.2	6.0	6.0	-6.8	–	–	–
Retail sales	10.3	9.0	8.5	7.6	7.7	-18.2	-20.5	-20.5	-15.8
Industrial production	6.6	6.2	5.6	5.0	5.9	-7.3	-13.5	-13.5	-1.1
PMI manufacturing (value)	51.6	50.9	49.6	49.7	49.9	45.9	50.0	35.7	52.0
Foreign sector									
Trade balance ^{1,2}	420	352	395	428	424	361	381	374	361
Exports	7.9	9.9	-1.0	-0.4	1.8	-13.4	-33.3	7.9	-6.6
Imports	16.3	15.8	-3.8	-6.3	3.0	-2.9	-16.4	13.5	-0.9
Prices									
Headline inflation	1.6	2.1	2.6	2.9	4.3	5.0	5.4	5.2	4.3
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	6.8	6.6	6.8	7.0	7.0	7.0	6.9	7.0	7.0

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

Source: CaixaBank Research, based on data from the Department of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Standard & Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Thomson Reuters Datastream.

EURO AREA

Activity and employment indicators

Values, unless otherwise specified

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Retail sales (year-on-year change)	2.5	1.6	2.1	2.7	1.8	...	2.2	3.0	...
Industrial production (year-on-year change)	2.9	1.0	-1.4	-2.1	-2.8	...	-1.8	-3.9	...
Consumer confidence	-5.4	-4.9	-7.0	-6.8	-7.6	-8.8	-8.1	-6.6	-11.6
Economic sentiment	110.4	111.5	103.8	102.0	100.6	100.1	102.6	103.4	94.2
Manufacturing PMI	57.4	55.0	47.7	46.4	46.4	47.2	47.9	49.2	44.5
Services PMI	55.6	54.5	53.1	52.8	52.3	43.8	52.5	52.6	26.4
Labour market									
Employment (people) (year-on-year change)	1.6	1.5	1.2	1.0	1.0	—	—	—	—
Unemployment rate (% labour force)	9.1	8.2	7.6	7.5	7.5	7.4	7.4	7.3	7.4
Germany (% labour force)	3.8	3.4	3.1	3.1	3.2	3.2	3.2	3.2	...
France (% labour force)	9.4	9.1	8.5	8.5	8.4	8.2	8.1	...	...
Italy (% labour force)	11.3	10.6	10.0	9.8	9.8	9.8	9.7	9.7	...
Real GDP (year-on-year change)	2.7	1.9	1.2	1.4	1.0	-3.3	—	—	—
Germany (year-on-year change)	2.8	1.6	0.3	0.6	0.5	...	—	—	—
France (year-on-year change)	2.4	1.7	1.5	1.5	0.9	-5.8	—	—	—
Italy (year-on-year change)	1.8	0.7	0.2	0.5	0.0	-4.7	—	—	—

Prices

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

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
General	1.5	1.8	1.4	1.0	1.0	1.1	1.4	1.2	0.7
Core	1.0	1.0	1.1	0.9	1.2	1.1	1.1	1.2	1.0

Foreign sector

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

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Current balance	3.2	3.2	2.8	3.0	3.1	—	2.9	3.0	...
Germany	8.1	7.3	7.1	7.5	7.7	...	...	...	...
France	-0.7	-0.6	-0.7	-0.8	-0.8	...	...	...	...
Italy	2.7	2.6	2.7	2.7	...	...	...	...	...
Nominal effective exchange rate¹ (value)	96.5	98.9	97.3	97.7	96.9	...	...	...	...

Credit and deposits of non-financial sectors

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

	2017	2018	Q2 2019	Q3 2019	Q4 2019	Q1 2020	01/20	02/20	03/20
Private sector financing									
Credit to non-financial firms ²	2.5	3.8	3.9	3.9	...	...	...	...	...
Credit to households ^{2,3}	2.6	3.0	3.3	3.4	...	...	...	...	...
Interest rate on loans to non-financial firms ⁴ (%)	1.3	1.2	1.1	1.1	...	...	...	...	...
Interest rate on loans to households for house purchases ⁵ (%)	1.7	1.6	1.6	1.5	...	...	...	...	...
Deposits									
On demand deposits	10.2	7.9	7.6	8.6	...	...	...	...	...
Other short-term deposits	-2.7	-1.5	0.4	0.7	...	...	...	...	...
Marketable instruments	1.6	-4.2	-4.9	-1.7	...	...	...	...	...
Interest rate on deposits up to 1 year from households (%)	0.4	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: CaixaBank Research, based on data from the Eurostat, European Central Bank, European Commission, national statistics institutes and Markit.

Should we be concerned about the sustainability of public debt in the euro area?

- The measures necessary to combat the COVID-19 outbreak will generate a significant increase in public debt in the world's major economies, including in the euro area.
- The sustainability of euro-area debt is not in question, but the environment is demanding and places the ECB in a key position. A swift and sustained recovery in economic activity is also essential, which in turn requires a coordinated economic policy response.

The COVID-19 pandemic has forced economic activity to be suspended. This paralysis, together with the imperative to protect workers and businesses with a decisive fiscal policy response, will result in a significant increase in public debt among the major economies of the euro area (as shown in the IMF's own estimates, which we reproduce in the first chart). Furthermore, in the absence of a more ambitious EU fiscal policy, the projections suggest that the increase in debt will be much greater in countries where the public sector already had a high level of indebtedness beforehand. In the financial markets, this situation has raised concerns over public debt sustainability and these doubts have been reflected both in the rise in sovereign risk premiums (described in the financial markets economic outlook section of this same *Monthly Report*) and in the expectation – implicit in financial security prices – of potential credit rating downgrades (see second chart), especially before the ECB announced its support package to combat the COVID-19 crisis in March.

Does the COVID-19 crisis compromise the sustainability of the public finances?

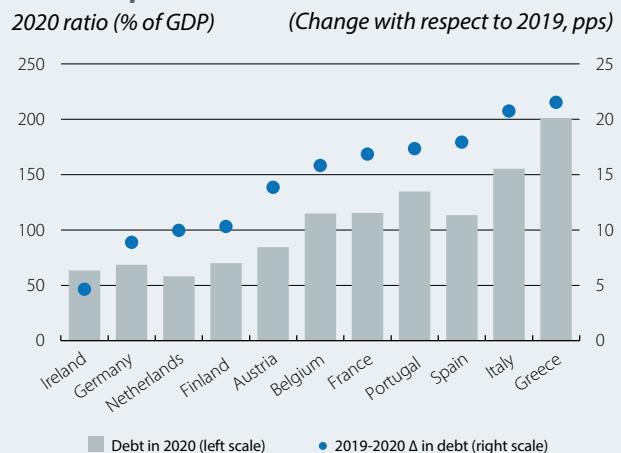
The sustainability of public debt depends on four elements: the initial level of debt, the fiscal balance (surplus or deficit), the interest payments generated by the debt and the growth of the economy.^{1,2} One of the key relationships between these four factors is the one between growth and the interest rate. Starting from an initial level of debt, GDP growth reduces the burden which that debt represents relative to the total resources in the economy, while interest charges raise the total amount to be repaid: thus, the greater the economic growth relative to the interest rate, the easier it will be to reduce the debt burden. In this regard, the ECB's monetary policy has anchored an environment of sufficiently low interest rates so as not to compromise

1. In particular, if we denote the public debt to GDP ratio in year t as d_t , the primary fiscal balance (excluding interest charges) as b , the interest rate as i and nominal GDP growth as g , then the public debt to GDP ratio evolves as follows:

$$d_{t+1} = d_t + \frac{i_{t+1} - g_{t+1}}{1 + g_{t+1}} d_t - b_{t+1}$$

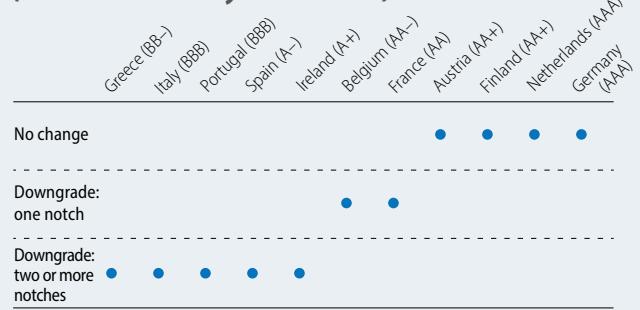
2. Growth is a particularly important element, since it represents the resources that are available to repay the debt in the future. In other words, a debt of 1,000 euros is more sustainable for an economy that only produces 100 euros today but will produce 700 in the future than it is for an economy that produces 700 euros today but whose future production will remain at 100. It is also precisely for this reason that debt sustainability is assessed in terms of the debt to GDP ratio (and not in terms of its absolute volume).

Ratios of public debt to GDP in 2020



Source: CaixaBank Research, based on data and forecasts from the IMF's April 2020 Fiscal Monitor.

Euro area: official ratings as of January 2020 and changes implicit in the movements in CDSs (between January and March)



Source: CaixaBank Research, based on internal estimates, data from Bloomberg and ratings from Fitch.

the sustainability of the debt.³ However, in order for this to happen, not only will it be important that the ECB maintains an environment of low rates, but also that the COVID-19 crisis does not cause lasting damage to economic growth. In other words, it is vital that there is a decisive and coordinated economic policy response⁴ that allows a rapid economic recovery and, as a result, growth in economic activity well above that of interest charges.

3. In particular, there is no euro area economy in which the interest rate of its overall public debt exceeds its long-term nominal GDP growth (neither today, nor in the coming years based on the future path implicit in market rates).

4. See the article «Economic policies in the face of COVID-19: will the boundaries of the impossible be broken?» in this same *Monthly Report*.

In the future, is it feasible to achieve a level of fiscal discipline that neither compromises growth nor puts the sustainability of debt at risk?

Despite allaying fears in the short term, the fact that both the ECB and future growth will have a key role to play in determining the sustainability of debt suggests that the outlook for the most heavily indebted economies of the euro area is somewhat fragile. When the recovery is set in motion, the first challenge will lie in defining a fiscal policy which helps to boost the economy. In a second phase, the challenge will be to ensure that fiscal policy becomes more disciplined but without smothering growth. When we analyse the available margin for manoeuvre, it is clear that this will not be an easy task – but not an impossible one either.

One of the limits of this path is defined by the primary fiscal balance (i.e. excluding interest payments) that enables us to keep the debt ratio stable at its levels projected for 2020. At the other end of the spectrum, the limit is set by the balance that would reduce debt down to 60% in 20 years.⁵ As shown in the third figure, in which we present these two limits, both the expectation of GDP growth returning to normal and the ECB's support in the form of low interest rates provide a good safety buffer: all the major economies of the euro area could reduce the public debt ratio with an even more expansive fiscal policy than that implemented in 2015-2019. However, reducing it significantly is quite another matter: Italy, France and Spain would need significantly more positive primary balances than those registered in recent years, and Portugal would have to be at least as disciplined as it was in 2015-2019.

Would a tightening of risk premiums compromise the sustainability of debt?

The above findings depend on two important assumptions: (i) a return to sustained nominal GDP growth in the coming years, and (ii) the interest rate environment remaining favourable. Therefore, a tightening of financial conditions and the consequent increase in the cost of debt could jeopardise governments' room for manoeuvre. How fragile is each economy in the face of this change in the environment? To answer this question, in the fourth figure we present an estimate of the interest rate threshold starting from which a sustained increase in the debt ratio would be triggered (assuming a primary fiscal balance equal to the average for 2015-2019 and a nominal GDP growth equal to each country's potential). Compared with the current interest cost, virtually all countries appear to have a certain capacity to withstand higher interest rates (the exception is France, which in our estimates is penalised for having maintained a primary fiscal balance of around -2% on average in 2015-2019). In the case of Italy, Belgium and Spain, the interest rates that would put pressure on their levels of debt exceeds current levels by more than 1 pp.

5. In compliance with the current configuration of the European treaties.

Primary fiscal balance and debt sustainability in the euro area *

	Balance that stabilises debt at 2020 levels		Balance that reduces the debt ratio to 60% in 2040 **		2015-2019 average balance (cyclically adjusted)
	Forward rate scenario	2019 rate scenario	Forward rate scenario	2019 rate scenario	
Germany	-1.6	-1.3	-1.1	-0.9	1.9
Austria	-1.9	-1.3	-0.4	0.0	0.9
Belgium	-1.9	-1.2	1.2	1.7	0.0
Spain	-1.9	-1.2	1.2	1.7	-0.2
Finland	-1.6	-1.4	-1.0	-0.8	-0.4
France	-2.1	-1.8	1.1	1.3	-1.9
Greece	-2.5	-2.1	5.2	5.4	7.2
Ireland	-1.9	-1.5	-1.7	-1.4	1.1
Italy	-0.5	0.5	4.2	4.9	2.2
Netherlands	-1.4	-1.2	-1.5	-1.3	1.6
Portugal	-1.8	-0.9	2.3	2.9	2.6

Notes: * Assuming a nominal GDP growth that is stable and consistent with the long-term forecasts of the IMF in October 2019. In the «Forward rate scenario», the cost of debt is projected based on the expectations of market interest rates. In the «2019 rate scenario», it is assumed that the cost of debt remains constant at its 2019 level.

** In 2021 a nominal GDP growth rate is applied in accordance with the latest forecasts of the IMF (which project a rebound in excess of the long-term rate). From then on, growth is once again assumed to be equal to long-term growth.

Source: CaixaBank Research, based on internal calculations and data and forecasts from the IMF.

Interest rates and debt sustainability in the euro area

	Cost of debt (%)			2020 debt ratio (% of GDP) ***
	Cost starting from which the debt ratio would be destabilised **	Cost in 2019	2000-2019 average cost	
Germany	6.20	1.32	3.42	69
Austria	4.65	2.00	3.96	85
Belgium *	3.05	1.95	4.00	115
Spain *	3.25	2.32	4.00	113
Finland	2.77	1.37	3.46	70
France *	1.44	1.50	3.48	115
Greece	6.39	1.66	3.93	201
Ireland	6.60	2.21	3.89	63
Italy *	3.57	2.47	4.10	156
Netherlands	6.40	1.45	3.57	58
Portugal	5.18	2.55	4.06	135

Notes: * Countries with ratios greater than 100% and where the rate that would destabilise the debt is lower than the historical average.

** Assuming a primary balance equal to the average for 2015-2019 (cyclically adjusted) and a nominal GDP growth according to the long-term forecasts of the IMF in October 2019.

*** IMF forecast for 2020.

Source: CaixaBank Research, based on internal calculations and data and forecasts from the IMF.

Should we be concerned?

Our analysis suggests that the sustainability of public debt is not in question. However, it also shows that the environment is highly demanding and places the ECB in a key position. But achieving a sustained recovery in economic activity will be just as key, and this requires a coordinated response from economic policy.

Adrià Morron Salmerón

Activity and employment indicators

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Industry									
Industrial production index	0.3	0.7	1.4	0.9	0.5	...	-1.3	...	...
Indicator of confidence in industry (value)	-0.1	-3.9	-4.6	-2.0	-5.2	-5.4	-4.0	-7.0	-30.7
Manufacturing PMI (value)	53.3	49.1	49.9	48.2	47.2	48.2	50.4	45.7	...
Construction									
Building permits (cumulative over 12 months)	25.7	17.2	21.9	13.0	8.0	...	1.0	...	...
House sales (cumulative over 12 months)	14.2	3.2	5.7	1.5	-2.6	...	-3.9	...	...
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	0.1	0.8	-1.4	...
Services PMI (value)	54.8	53.9	53.2	53.5	53.6	42.5	52.1	23.0	...
Consumption									
Retail sales	0.7	2.3	2.2	3.3	2.3	-3.5	1.8	-14.1	...
Car registrations	7.8	-3.6	-4.4	-7.9	5.1	-27.6	-6.0	-69.3	...
Consumer confidence index (value)	-4.2	-6.3	-4.0	-5.8	-10.5	-10.3	-7.9	-11.6	-29.2
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	1.9	-0.2	...
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	02/20	03/20	04/20
General	1.7	0.7	0.9	0.3	0.4	0.6	0.7	0.0	-0.7
Core	0.9	0.9	0.8	0.9	1.0	1.1	1.2	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	02/20	03/20	04/20
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	2.9	1.8	2.3	1.7	1.8	...	2.3	...	...
Imports (year-on-year change, cumulative over 12 months)	5.6	1.0	3.9	3.0	1.0	...	0.7	...	...
Current balance	23.3	24.9	21.4	22.2	24.9	...	27.6	...	...
Goods and services	32.6	35.2	32.1	32.5	35.2	...	37.3	...	...
Primary and secondary income	-9.3	-10.3	-10.7	-10.2	-10.3	...	-9.7	...	...
Net lending (+) / borrowing (-) capacity	29.1	29.0	27.6	28.0	29.0	...	31.8	...	...

Credit and deposits in non-financial sectors³

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Deposits									
Household and company deposits	3.2	5.4	5.8	5.4	5.4	4.4	4.5	4.3	...
Sight and savings	10.9	10.7	10.9	10.3	10.3	8.9	9.1	8.9	...
Term and notice	-19.9	-13.4	-12.8	-13.2	-13.9	-16.6	-16.7	-17.4	...
General government deposits	15.4	8.8	15.7	3.7	-2.1	-29.4	-5.2	-78.6	...
TOTAL	3.9	5.6	6.3	5.3	4.8	2.3	3.9	-0.8	...
Outstanding balance of credit									
Private sector	-2.4	-1.5	-1.1	-1.1	-1.5	-1.1	-1.4	-0.6	...
Non-financial firms	-5.5	-3.4	-3.0	-2.3	-3.0	-1.8	-3.0	-0.3	...
Households - housing	-1.1	-1.3	-1.3	-1.6	-1.5	-1.7	-1.5	-2.0	...
Households - other purposes	2.8	3.2	4.4	3.4	2.2	2.7	2.9	2.3	...
General government	-10.6	-6.0	-7.2	-5.4	-1.2	1.8	0.1	1.6	...
TOTAL	-2.9	-1.7	-1.5	-1.4	-1.5	-0.9	-1.3	-0.5	...
NPL ratio (%)⁴	5.8	4.8	5.4	5.1	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: CaixaBank Research, based on data from the Ministry of Economy, the Ministry of Public Works, the Ministry of Employment and Social Security, the National Statistics Institute, the State Employment Service, Markit, the European Commission, the Department of Customs and Special Taxes and the Bank of Spain.

Activity and employment indicators

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

	2018	2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	02/20	03/20	04/20
Coincident economic activity index	2.6	2.3	2.4	2.2	2.1	2.0	2.0	2.1	...
Industry									
Industrial production index	0.1	-2.4	-2.2	-4.1	0.5	-1.3	0.9	-7.2	...
Confidence indicator in industry (value)	0.8	-3.2	-3.3	-3.7	-4.3	-4.6	-4.2	-6.1	-15.9
Construction									
Building permits (cumulative over 12 months)	19.1	7.5	16.5	13.3	7.5	...	...	...	...
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	11.1	10.3	...
Services									
Foreign tourists (cumulative over 12 months)	4.8	7.1	4.9	5.8	6.8	...	7.2	...	...
Confidence indicator in services (value)	14.1	12.9	14.2	11.5	10.6	5.8	6.5	2.7	-18.2
Consumption									
Retail sales	4.2	4.6	5.7	4.3	3.7	3.0	9.3	-4.7	...
Coincident indicator for private consumption	2.5	2.3	2.3	2.5	2.5	1.8	1.8	1.5	...
Consumer confidence index (value)	-4.6	-8.0	-8.9	-7.6	-7.1	-8.6	-8.1	-9.9	-21.0
Labour market									
Employment	2.3	1.0	0.9	0.9	0.5	...	-0.2	...	...
Unemployment rate (% labour force)	7.0	6.5	6.3	6.1	6.7	...	6.4	...	...
GDP	2.6	2.2	2.1	1.9	2.2	...	...	...	...

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	1.0	0.3	0.5	-0.2	0.3	0.4	0.4	0.0	0.0
Core	0.7	0.5	0.6	0.1	0.4	0.2	0.1	0.0	-0.1

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	02/20	03/20	04/20
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	5.1	3.6	3.3	2.1	3.6	...	3.2	...	...
Imports (year-on-year change, cumulative over 12 months)	8.2	6.6	8.3	7.8	6.5	...	4.6	...	...
Current balance									
Goods and services	0.8	-0.2	-0.2	-0.6	-0.2	...	-0.2	...	...
Primary and secondary income	1.5	0.8	0.5	0.2	0.8	...	0.8	...	...
Net lending (+) / borrowing (-) capacity	2.8	1.9	1.7	1.4	1.9	...	1.9	...	...

Credit and deposits in 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
Deposits¹									
Household and company deposits	3.8	5.0	4.5	5.3	5.2	...	5.1	...	...
Sight and savings	14.3	14.4	13.3	15.1	14.9	...	15.4	...	...
Term and notice	-3.0	-2.4	-2.3	-2.5	-2.8	...	-3.6	...	...
General government deposits	-1.9	-13.6	-11.9	-17.1	-13.7	...	-9.7	...	...
TOTAL	3.5	4.0	3.6	4.1	4.2	...	4.4	...	...
Outstanding balance of credit¹									
Private sector	-1.5	-1.2	-1.3	-0.7	-0.6	...	-0.4	...	...
Non-financial firms	-4.0	-4.2	-4.1	-3.3	-3.3	...	-4.2	...	...
Households - housing	-0.8	-0.1	0.0	0.0	-0.2	...	0.2	...	...
Households - other purposes	4.2	4.1	2.7	4.2	6.3	...	8.9	...	...
General government	2.4	-8.5	-8.2	-6.4	-7.1	...	-5.2	...	...
TOTAL	-1.4	-1.5	-1.6	-1.0	-0.9	...	-0.6	...	...
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: CaixaBank Research, based on data from the National Statistics Institute of Portugal, Bank of Portugal and Datastream.

COVID-19 and black swans: lessons from the past for a better future

There are events that have a very low probability of occurring but which, when they do occur, have a huge impact and are difficult to predict. They are black swans. Some examples of black swans include the First World War, the Wall Street Crash of 1929, which led to the Great Depression, and the 2008 financial crisis. Pandemics such as the Black Death in the 14th century, Spanish flu in 1918-1920 and COVID-19 today are also examples. In this article, we will embark on a journey of the history of some of these events in order to analyse what socio-economic changes they caused and whether mankind learned anything from them. The hope is to help us to better contextualise the black swan that we are currently enduring in these difficult times.

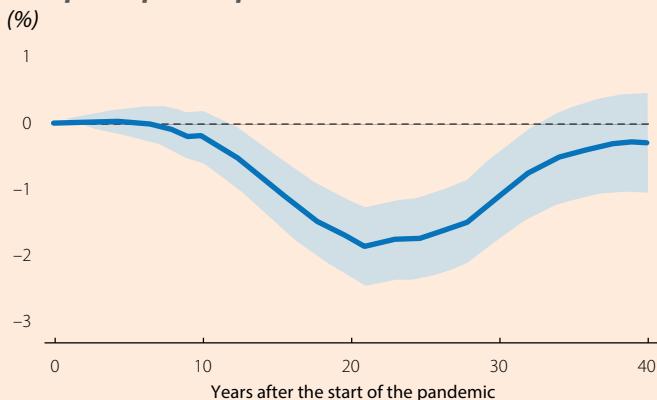
How frequently do these events occur? The Harvard economist Robert Barro estimates that, every half a century (i.e. with an annual probability of 2.0%), events occur which cause a sudden drop in a given major economy's GDP. As for their effects, black swans in general, and pandemics in particular, have a significant and lasting impact on the economy. Recent research estimates that pandemics cause prolonged economic damage that applies downward pressure on interest rates for 40 years,¹ since they are usually followed by households saving more due to the fear of a resurgence and greater risk aversion, fewer investment opportunities and a large dose of prudence. According to these results, the effects of the COVID-19 outbreak could persist for quite some time, although in the end this will largely depend on whether lasting changes occur in our consumption and investment preferences and habits, as well as on how long it takes to discover a vaccine.

The COVID-19 outbreak has characteristics that classify it as a black swan: it is a shock that has a low probability of materialising but a very high impact. It may also meet the third condition, namely the difficulty in predicting it, although on this note the debate is served: many virologists² have been warning of the possibility of the emergence of new pandemics for almost a decade and some governments, such as that of the US, had conducted exercises simulating pandemic scenarios following the Ebola outbreak. In any case, and beyond this debate, in a world as globalised and connected as ours, pandemics are likely to recur more frequently than we thought up until recently (remember that, recently, we have already experienced several major epidemics such as SARS, influenza A, MERS, Zika and Ebola). It is no coincidence that cities with greater trade activity in the Middle Ages and in the Modern Age – Amsterdam, Venice and London – were hit with more frequent and virulent outbreaks of the plague. Thus, it is imperative that we learn from the mistakes we have made with the COVID-19 outbreak in order to be better prepared from a health perspective and to minimise the impact of future pandemics.

One of the big questions that arises in society is whether, once this pandemic is over, we will return to normal or there will be major social changes. While it is difficult to give definitive answers, a historical look at previous pandemics indicates that they tend to leave a major mark on society. For instance, the first pandemics that ravaged the Roman Empire (the Antonine plague in the years 165-180 AD and the plague of Cyprian in 250-270 AD) led to a heightening of spirituality, which favoured the expansion of Christianity,³ while the plague of Justinian (541-543 AD) accelerated the decline of the Byzantine Empire.

However, if there is one pandemic that caused unexpected socio-economic changes, which paradoxically ended up being positive in the long run, it was the Black Death (1346-1351), which decimated up to 60% of the European population. After the Black Death, the shortage of labour led to a sustained increase in wages – something unlikely to occur with COVID-19 as it has a very low mortality rate among the labour force –, as well as in workers' bargaining power, which weakened the feudal system in Western Europe. In addition, in Europe there was an unusual increase in the level of consumption among the survivors, which marked an exception to the pattern of increased private savings usually observed after pandemics. This may have been linked not only to the increase in wages but also to the heightened awareness of the transient nature of life.⁴ Other major changes

Europe: impact of pandemics on the interest rate (%)



Note: The chart shows the natural rate of interest (that which balances savings and investment). The study focuses on the 12 most severe pandemics that Europe has suffered since the Black Death. Confidence intervals of 95%.

Source: O. Jordá, S.R. Singh and A.M. Taylor (2020). «Longer-run economic consequences of pandemics». National Bureau of Economic Research, n° w26934.

1. See Ò. Jorda et al. (2020). «Longer-run economic consequences of pandemics». National Bureau of Economic Research, n° w26934.

2. See N. Wolfe (2011). «The viral storm: the dawn of a new pandemic age». Macmillan.

3. See R. Stark (2009). «The Rise of Christianity». Editorial Trotta.

4. See P. Schmelzing (2020). «Eight centuries of global real interest rates, RG, and the suprasecular decline». Bank of England Staff Working Paper, n° 845, 1311–2018.

included the introduction of technological improvements to make up for the lack of labour, which led to inventions such as Gutenberg's printing press⁵ and to women beginning to join the labour market in the societies of north-western Europe. This wealthier society also became more sophisticated, such that there began to be a demand for manufactured goods, cities attracted workers from rural areas and a new middle class was formed. In fact, prominent historians and economists, such as Daron Acemoglu from MIT, consider that the social and economic changes that took place as a result of the plague marked the turning point for the development of inclusive institutions in 17th-century England, which laid the foundations for the Industrial Revolution.

Finally, the Spanish flu of 1918 also had major effects, albeit negative ones: according to a recent study,⁶ the panic among the population led to a prolonged increase in the distrust in human relations in the countries hardest hit by the pandemic. In the current situation, if a similar increase in distrust were to occur, e-commerce and the digital economy could be given an even stronger boost, to the detriment of face-to-face interactions.

The good news is that, throughout history, society has managed to learn from the great crises it has been hit with, both in terms of health and economics. For instance, in terms of health, after a brief initial period characterised by superstition and distrust of doctors, the Black Death led to a much greater interest in the medical sciences (with a proliferation in the 15th century of medical treatments to combat it, which became very popular), as well as to the establishment of permanent health committees in European cities to deal with future pandemics. Thanks to the development of health institutions, by the 16th century health controls at borders had already become widespread, as had confining the sick to specially designated areas, which allowed the impact of new waves of plague that followed to be better contained. Another example comes from the cholera epidemic that decimated London in the 19th century and which led to an improvement in the sewerage systems to avoid contagion by drinking contaminated water.

The lessons from the Spanish flu also did not fall on deaf ears: its terrible effects (up to 50 million victims) raised governments' awareness of the great impact of pandemics, which led to the establishment of public health systems in most European economies and, in 1919, to the creation in Vienna of an organisation to combat epidemics at the international level that can be considered the precursor of the WHO. Another particularly valuable lesson for the current situation is that the North American cities that were initially stricter in their social distancing policies ended up enjoying better economic performance in the years that followed than those which were not.⁷

Society has also managed throughout history to learn from traumatic episodes from an economic point of view. When the Great Crash of 1929 occurred, the passive attitude of the governments of the time exacerbated the crisis and the subsequent cascade of bank failures, business closures and escalating unemployment. However, this fateful historical experience helped to steer the response to the Great Recession of 2008, which was very different and included a greater involvement on the part of the governments of the worst affected economies in order to avoid a major economic depression. After the Second World War, economies also took note of the adverse effects of the protectionist and isolationist policies that they had implemented since 1914, and they created a successful framework for the integration of trade which cemented the foundations of globalisation. The last economic black swan, the 2008 financial crisis, also prompted significant changes. Much has been done to correct the deficiencies identified in the financial sector. In particular, banks must meet higher capital, liquidity and transparency requirements, and the role of management and supervisory bodies has been strengthened.

However, the current crisis highlights that it was a mistake not to finish shoring up the Economic and Monetary Union. Among other things, the banking union is yet to be completed and a fiscal capacity has not yet been created at the European level. In the short term, such a capacity is essential for covering the high current funding needs of European states in order to rebuild their economies, but ultimately it is essential for the proper functioning of the monetary union.⁸

In short, our historical tour suggests that the COVID-19 crisis marks a critical juncture that could lead to decisive changes in the world's trajectory. In particular, it can open the door to new, more sustainable ways of producing and working⁹ as well as to a rethinking of how and where we want to live. In addition, it serves as an opportunity to dedicate more resources to our healthcare systems, accelerate technological change, create a new social contract between generations and strengthen our mechanisms for global cooperation. Mankind has shown in the past that it is capable of learning from black swans and ushering in a better world. Let us hope that this occasion is no different.

Javier Garcia-Arenas

5. See D. Herlihy (1997). «The Black Death and the transformation of the West». Harvard University Press.

6. See M. Le Moglie *et al.* (2020). «Epidemics and Trust: The Case of the Spanish Flu». IGIER Working Paper, n° 661.

7. See S. Correia *et al.* (2020). «Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu». Working Paper.

8. See the article «[Economic policies in the face of COVID-19: will the boundaries of the impossible be broken?](#)» in this same Dossier for an in-depth analysis.

9. For details, see the article «[How COVID-19 will change the way we produce](#)» in this same Dossier.

How COVID-19 will change the way we produce

Today's economic headlines are focusing on the devastating economic impact that the COVID-19 crisis is having on the labour market, businesses and households, and on the steps being taken by more than half the world's governments and central banks to mitigate these effects. However, when everything passes, the changes that the current crisis is triggering more quietly and discreetly in many other aspects will become apparent. In this article, we focus on the changes that are likely to occur in the way we produce.

More robust global value chains

For years, the hyper-optimisation and hyper-globalisation of supply chains and the just-in-time strategy¹ have played a key role in the enormous efficiency gains achieved in the production of goods and services. However, the outbreak of the current pandemic has highlighted their fragility. An interruption in only one link in the chain can cause the entire production process to grind to a halt.

The automotive industry is already aware of this domino effect following the earthquake and tsunami that hit the east coast of Japan in 2011.² Since then, some of the firms in the sector that were affected by that disaster decided to increase their stocks of key components within their production chain or to diversify some of their production lines. Toyota, for instance, developed the RESCUE system, a complex database with information on all the distribution networks of each component, which shores up the production process in the event of unexpected events. However, these strategic changes are not exempt from risks: this greater robustness comes at the expense of reduced competitiveness.

The shock of the coronavirus could support a strategic shift towards more robust supply chains in many more sectors and companies. It is difficult to generalise about what features these new global supply chains will have, but they will no doubt be shorter and, therefore, less globalised; they will have more redundancy in terms of key components (i.e. with alternatives in the production of these components), and they will perform more checks at all stages of production. Also, in the field of logistics, there is likely to be greater investment in stocks.

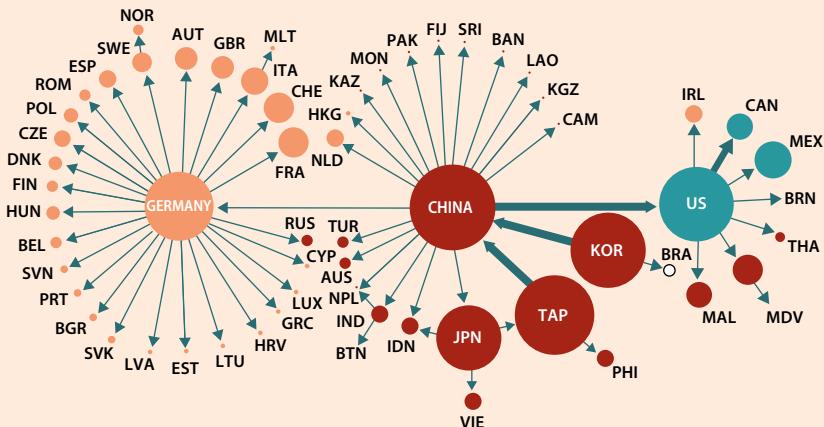
As for the dilemma of whether to maintain more processes or links in the chain in the country of origin or abroad, the inability to predict where the next black swan will occur (whether at home, abroad or worldwide) invites diversification within and beyond our borders. In any case, this diversification will offer more alternatives in the face of disruptions to activity.

On the note of this national/international dilemma, the fragility of supply chains was already revealed in February, when the COVID-19 epidemic was concentrated in Wuhan (China) and a global escalation of such intensity was not foreseen. Since then, and after activity ground to a halt in most of the Asian giant's factories and industries, the appropriateness of the world's high dependency on China was called into question. Indeed, this dependency is prevalent across most of the world's economies in a large number of global production and manufacturing chains, such as the electronic goods needed for information and communication technologies (see first chart).

Digitalisation and automation: supporting production and the fight against COVID-19

Another trend that the coronavirus crisis is revealing is the greater resilience of firms that are more digitalised and automated in disruptive contexts like the current one. Digitalisation and automation facilitate remote working and social distancing in factories, warehouses and shops, and there is ample scope for improvement in these areas. For instance, in terms of remote working, various studies estimate that, at present, between 20% and 35% of jobs can be performed remotely in the major advanced economies.³

Global value chain of Information and Communication Technology manufacturing



Note: The size of the circles represents the value added of the exports. The width of the arrows represents the size of the trade flow (in terms of value added) between countries.

Source: World Trade Organization («Global Value Chain Development Report 2019»).

1. A policy of maintaining stocks at their lowest possible level, whereby suppliers deliver what is needed at just the right time to complete the production process.

2. For more information about the significant impact that the earthquake and tsunami of 2011 had on production as a result of high proliferation of global supply chains, see H. Inoue and Y. Todo (2019). «Firm-level propagation of shocks through supply-chain networks». *Nature Sustainability*, 2(9), 841-847.

3. See T. Boeri, A. Caiumi and M. Paccagnella (2020). «Mitigating the work-security trade-off while rebooting the economy». *Covid Economics* 2 VoxEU. And also J.I. Dingel and B. Neiman (2020). «How many jobs can be done at home?». White Paper. Becker Friedman Institute (also NBER WP W26948).

There is no doubt that post-COVID-19 many companies will increase their investment in digital capital in order to facilitate remote services as well as remote working. This greater flexibility will allow them to shore up their production processes, similar to the redundancy that we highlighted in global supply chains. In addition, the flexibility of being able to work remotely on a regular basis has been associated with improvements in worker productivity, especially in more creative tasks.⁴

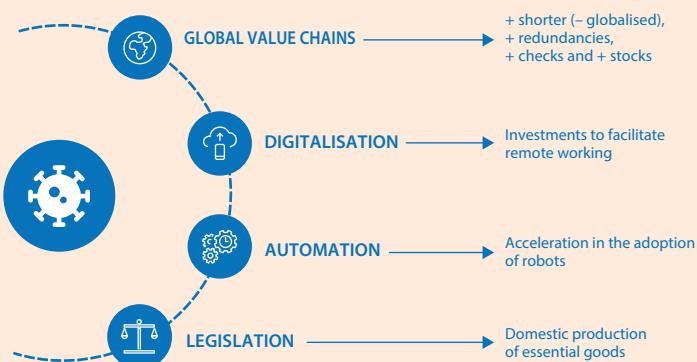
In the same vein, companies can also be expected to increase investment in automated machines in order to ensure greater social distancing both among their employees and their customers. McDonald's, for example, has accelerated the tests it was conducting to use such machines in its kitchens and in servicing customers. Furthermore, several studies show that automation in companies not only spreads gradually, but there are also surges at certain times, particularly after economic recessions.⁵ Thus, the need for social distancing combined with the sharp contraction in economic activity throughout the world will provide a double boost to the spread of automation.

Finally, capital in digital and automation technologies represents one of the key tools in the very fight against COVID-19 itself. The current international collaboration⁶ on the coronavirus in the scientific field has been largely made possible by the digital platforms that instantly share the information obtained by each team.⁷ In many hospitals, meanwhile, autonomous robots that emit ultraviolet light are helping in the disinfection of surfaces. Also, mobile phone geolocation technology could prove to be a very useful tool in containing the spread of the coronavirus. In Europe, for instance, a project using this technology has already been launched with the backing of the European Commission.⁸

A shift towards «made at home»?

No doubt companies will also have to deal with regulatory changes in relation to their production models as a result of the health crisis. Governments could legislate that certain goods and services that are considered essential, such as primary healthcare equipment, must be produced locally. Even Adam Smith himself considered the possibility of certain exceptions in his argument in favour of free trade, one of them being precisely when certain industries were necessary for a country's defence or national security (in this case, defence against an invisible enemy like the virus, but defence nonetheless).⁹

Changes in production post-COVID-19



Source: CaixaBank Research.

secured its self-reliance in the field of agriculture and food with the common agricultural policy as early as 1962, now it is key to achieve a stable supply of goods and services that are deemed essential.

In short, more robust value chains, a definite boost to digitalisation and automation, and adaptation to a new legislative environment that could become more protectionist are some of the changes that we may observe in the way we produce. Changes in value chains and in the way we work could help to accelerate the economic transition towards a more sustainable and environmentally-friendly system. However, we must also take into account the many other changes that will be driven by the consumption habits that arise and prevail after the health crisis: these could include the growth of e-commerce, a return to local products or greater demand for health services, to name just a few of the most likely candidates.

Claudia Canals

4. See N. Bloom, J. Liang, J. Roberts and Z.J. Ying (2015). «Does working from home work? Evidence from a Chinese experiment». *The Quarterly Journal of Economics*, 130(1), 165-218. And E.G. Dutcher (2012). «The effects of telecommuting on productivity: An experimental examination. The role of dull and creative tasks». *Journal of Economic Behavior & Organization*, 84(1), 355-363.

5. See B. Hershbein and L.B. Kahn (2018). «Do recessions accelerate routine-biased technological change? Evidence from vacancy postings». *American Economic Review*, 108(7), 1737-72. And N. Jaimovich and H.E. Siu (2020). «Job polarization and jobless recoveries». *Review of Economics and Statistics*, 102(1), 129-147.

6. It is important to mention that this type of collaboration is a form of globalisation. As such, not all forces point towards deglobalisation with the outbreak of the pandemic.

7. See, for example, the article in the *New York Times* of 14 April «Covid-19 Changes How the World Does Science, Together».

8. Pan-European Privacy-Preserving Proximity Tracing (<https://www.pepp-pt.org/>).

9. See A. Smith (2010). «The Wealth of Nations: An inquiry into the nature and causes of the Wealth of Nations». Harriman House Limited.

10. The EU's still inadequate response to the needs of the COVID-19 crisis, however, could lead to a completely opposite scenario to the one we propose here.

Economic policies in the face of COVID-19: will the boundaries of the impossible be broken?

There are two major differences between the current crisis in the euro area and that of 2009-2012. Firstly, the coronavirus and the containment measures implemented by the countries of the euro area represent a much greater economic shock than the previous crisis. In 2009, the GDP of the euro area fell by 4.5% compared to 2008, whereas this year the fall may well be twice as deep. Secondly, the economic impact of the coronavirus is quite symmetrical and will affect all euro area economies to a similar degree. These two characteristics of the current crisis justify both risk-sharing mechanisms between countries and coordination between fiscal policy and monetary policy.

A differing response at the national level

The scale of this crisis has given rise to unprecedented national responses. National governments have adopted a wide variety of measures aimed at cushioning the impact of the crisis on firms and households. The most prominent measures include programmes of guarantees for bank loans and lines of credit through national development banks, temporary employment reduction measures (such as ERTEs in Spain or the *Kurzarbeitgeld* in Germany), deferrals of tax payments and, in some cases, direct payments to citizens and direct subsidies to companies. These measures will entail a significant increase in European countries' level of public debt. For this reason, the magnitude of the economic response thus far has been very different between countries depending on the strength of the public accounts. In Spain and Italy, for example, both the guarantee programmes and the direct expenditure have been much more timid than in Germany, which has announced unlimited guarantees for loans to SMEs, among other measures.

Without risk-sharing mechanisms between European countries, this discrepancy between the national responses constitutes a distortion of the single market and could lead to an asymmetric recovery and a deepening of the economic disparities in the euro area, which in turn could put the very existence of the monetary union at risk.

The severity of the situation requires a coordinated response on many levels

The recovery will be weaker and slower if there are no mechanisms that help it occur in a synchronised manner.¹ In the absence of synchronisation, the first countries to begin to recover will find themselves with a weak external demand, both within the euro area and worldwide. In addition, firms will continue to be stunted by disruptions in supply chains that are highly integrated at the European level. What is more, without a common response there could be financial and economic fragmentation between EU countries, while the differing responses at the national level could compromise the level playing field in the European single market. For instance, a company's survival or its conditions for accessing credit will depend not only on its creditworthiness and competitiveness, but also on the generosity of the support schemes available in the jurisdiction where it is established. The political effects of a prolonged economic divergence between countries after the crisis could also be harmful to the euro area, with the possibility of a rise in populism in the worst affected countries. In short, a synchronised recovery at the European level is not only a question of solidarity between countries but it is also in each country's own interest. In other words, all economies would benefit from coordination at the European level.

The current context also requires the coordination to go beyond synchronisation or a common response between states: it requires coordination between the public and private sectors, and between the various flanks of economic policy. On the one hand, if firms and households fund the decline in their income with excessive debt, then the burden of this new debt will curb the recovery in demand and prolong the difficulties. Hence a significant portion of the aid must be direct and not only in the form of debt. Furthermore, the fact that it is the public sector that is absorbing these costs ought to allow for a greater mobilisation of funds, at a lower cost and using debt with longer term maturities.² On the other hand, faced with the prospect of public debt increasing substantially during the course of the COVID-19 crisis, fiscal policy and monetary policy must also be coordinated in order to dispel any doubts about the sustainability of the debt, to lighten its burden and to ensure that it does not compromise the economy's future performance.³

1. According to ECB estimates, the close economic links in Europe mean that a 15% exogenous increase in the production of the main euro area economies is amplified, generating a 20% increase in the production of the euro area as a whole, even in the short term. Fabio Panetta, «Joint response to coronavirus crisis will benefit all EU countries», opinion article from Politico.eu.

2. Taking on longer-term debt facilitates the distribution of the costs across different generations - a necessary strategy for dealing with impacts of a great magnitude and with abundant historical precedents, particularly in relation to the financing of wars.

3. As the euro area already learned in the public debt crisis of 2010-2012, doubts over the sustainability of debt lead to a tightening of financial conditions, which exacerbates the weakness of the economy. On the other hand, the requirement for an excessively fast reduction in debt could lead to a sustained restrictive fiscal policy, which would make the recovery more difficult and restrict future economic performance (even compromising it).

A European fiscal response

On 25 March, nine European heads of state (of Belgium, France, Italy, Luxembourg, Spain, Portugal, Greece, Slovenia and Ireland) wrote a letter to the president of the European Council demanding a pooling of the European fiscal response, backed by shared debt. The European response so far has been very different. On 23 April, the Council adopted a series of measures that are not aimed at sharing the costs of combating the coronavirus crisis, but rather at sharing the cost of funding the national measures. In this regard, the Council approved the creation of a new line of credit under the European Stability Mechanism, a fund which would serve to provide loans to national governments in order to finance their various temporary workforce reduction measures (such as furlough schemes, or ERTEs in Spain), and a fund of guarantees so that the European Investment Bank can increase its lending to European companies. These measures are welcome, since they reduce euro area countries' funding costs. However, they are insufficient because they do not respond to the main problem: the fact that some countries cannot take all the necessary measures for fear of the increase in public debt they will entail.

This is why the European Recovery Fund, on which the European Council has still not been able to reach a consensus, is so crucial. In order for it to be effective, this fund will need to have two essential characteristics: it must be big enough (at least 10% of euro area GDP or a figure of a similar magnitude to the public deficit that most countries will reach this year) and it must incorporate an element of redistribution. The idea would be for this fund, supported by national guarantees, to be able to issue debt and then invest in the countries most affected by the crisis, thus ensuring a symmetrical recovery. Although some of these investments can be implemented in the form of loans to member states (long-term and at low rates), it will be important for a large portion to take the form of direct transfers. This will avoid an excessive rise in the debt of the recipient countries and prevent its sustainability from being called into question.

The creation of a fund with these characteristics would be a huge step forward for the euro area, and that is precisely why it is politically so difficult. The idea of direct transfers and shared European debt is met with fervent rejections in the bloc's richest countries. Furthermore, if such measures were adopted without taking their opinion into account, there would be a risk of a rise

in anti-European populism in the countries of the north, as happened after the last crisis with the creation of parties like the AfD in Germany. Indeed, it seems somewhat politically infeasible to move towards a true fiscal union, with taxation powers for the euro area and a European ministry of finance with a significant budget, and with the possibility of issuing eurobonds. This would require a level of political union which, for now, is non-existent and for which there is no political consensus. But this crisis is demonstrating the need, at the very least, for an element of central fiscal stabilisation which facilitates the sharing of risks, like the Recovery Fund, and a European safe asset, as the debt issued by this Fund would be. This is not just a matter of solidarity; it is also in the self-interest of all the countries involved, as well as being a matter of stability for the monetary union. Moreover, the Recovery Fund could carry out investments that would help achieve progress towards the EU's objectives: the digitisation of the economy and green and social sustainability. In a world with high national debts, these objectives could be called into question.

If European fiscal policy fails to step up to the plate and establish a mechanism of this nature, monetary policy will have to take the reins. For now, through its asset purchase programmes, the ECB has been the European institution that has reacted the quickest and most decisively to this crisis. As shown in the table, the ECB's purchases of euro area countries' sovereign debt in 2020 are expected to be highly significant; in fact, they will be comparable to the increase in the deficit projected for this year. Nevertheless, assuming that these purchases are temporary, their

Purchases of public debt by the ECB in 2020 and the impact of the COVID-19 crisis

(% of 2019 nominal GDP, except where otherwise indicated)

	Estimated purchases	Purchases in an extreme scenario	Impact on real GDP in 2020 projected by the IMF (%)	Capital key (% relative to the capital of euro area countries)
Germany	5.7 (5.2–6.3)	7.8	-8.2	26.4
Austria	5.4 (5.0–6.0)	7.5	-8.7	2.9
Belgium	5.7 (5.3–6.3)	7.8	-8.2	3.6
Spain	7.1 (6.5–7.9)	9.7	-9.8	11.9
France	6.3 (5.8–6.9)	8.6	-8.4	20.4
Ireland	3.6 (3.3–4.0)	5.0	-10.3	1.7
Italy	7.0 (6.5–7.8)	9.7	-9.7	17.0
Netherlands	5.3 (4.9–5.9)	7.3	-9.1	5.9
Portugal	8.2 (7.5–9.1)	11.2	-9.6	2.3
Others	7.5 (6.9–8.3)	10.3	-9.6	7.8

Note: The estimated purchases assume that 75% of the total purchases correspond to public debt (in line with the proportion registered in March 2020). In the extreme scenario, it is assumed that the APP and the PEPP allocate 82% (in line with the average registered since June 2016) and 100% of their purchases to public debt, respectively. In both estimates, it is assumed that 10% of the public debt purchases is allocated to debt of supranational agencies. The impact of the crisis on real GDP growth is calculated as the difference between the 2020 growth forecast per the WEO of October 2019 and per the WEO of April 2020.

Source: CaixaBank Research, based on internal estimates, data from the ECB and GDP forecasts from the IMF's World Economic Outlook of April 2020.

function is once again to contain member states' financing costs, not to share the expense of combating this crisis. Of course, these purchases could be extended and the ECB could even hold the sovereign bonds on its balance sheet indefinitely, resulting in a *de facto* pooling and monetisation of the debt purchased.⁴ In fact, some political leaders may prefer this option, which offers an «implicit» way of pooling the debt that would go more unnoticed by the electorate, rather than an explicit sharing of the debt through the issuing of eurobonds, which could prove more costly from an electoral point of view. But this would be a risky strategy, as there are legal limits to what the ECB can do and the possibility of the European Court of Justice declaring such action to be unconstitutional cannot be ruled out.

Coordination between fiscal and monetary policies: as necessary as the preservation of independence

Central bank independence is one of the cornerstones of the proper functioning of the economy. Episodes of European hyperinflation of the 20th century, as well as more recent cases like that of Venezuela, leave no room for doubt: when institutions are fragile and fiscal policy forces the central bank to monetise public deficits on a recurring basis, the sustained growth in the supply of money ends up causing runaway inflation and, ultimately, economic collapse.⁵ However, we should not confuse independence with an absence of coordination between fiscal policy and monetary policy.

Rarely is it desirable for fiscal and monetary policy to act in opposite directions: when a central bank wants to combat a scenario of high inflation, it requires the tightening of monetary policy to be accompanied with a certain fiscal restraint (otherwise, the two policies would be counteracting each other). And vice versa: if fiscal policy becomes restrictive during a phase of cyclical weakness (for instance, by trying to contain the rise in public debt), in the end it is exerting a contractionary effect on the economy which counteracts the action of monetary policy.

It is therefore important that the coordination between fiscal and monetary policy is the result of decisions that are taken freely and independently and are guided by the respective mandates of the fiscal and monetary authorities. This is why it is key to have a strong institutional system which is capable of allowing monetary policy to provide coverage for fiscal policy when, as is currently the case, the severity of the economic recession requires a fiscal boost (with the consequent increase in public debt) and which, at the same time, protects the central bank from attacks on its independence when a tightening of monetary policy is required in order to avoid an excessive rise in inflation as activity returns to normal.

The central banks with greater independence lead the coordination

Under the protection of these strong institutions, the Bank of England has gone as far as opening a direct line of credit to finance the needs of the United Kingdom Treasury.⁶ In principle, this is a temporary measure and the Treasury must repay the full amount of the credit granted by the end of the year. In general, the measures of the Fed, the ECB, the Bank of Japan and the Bank of England have stood out for incorporating a significant increase in purchases of public debt in their jurisdictions.⁷ Such actions are aimed at anchoring a low interest rate environment and providing coverage for a fiscal expansion without the fear of this generating doubts about the sustainability of the debt.⁸ Like any other investor, the central bank receives interest payments and, if the bonds reach maturity, repayment of the principal. In addition, when the economic environment improves, the central bank can sell these assets and return them to the market. In this regard, more than monetising debt, asset purchases conducted by the central bank serve to reassure investors and prevent a panic in the market which, by tightening financing conditions, would lead to their fears that the debt is unsustainable becoming self-fulfilled. In other words: they prevent the economy from falling into disarray as a result of the mere fear of it doing so.

ECB: beyond the limits?

Are these purchases sufficient to accommodate the fiscal expansion and the increase in public debt? For example, with the measures announced so far, the ECB will make net purchases of assets amounting to around 9% of the euro area's GDP: a quantity unprecedented in the history of the euro area. However, throughout April, when the ECB not only had announced the stimulus

4. Under the PSPP and PEPP asset purchase programmes, there is a pooling of the risk in 20% of the purchases. Specifically, 10% of the purchases of public debt are allocated to debt of supranational European institutions, while another 10% is implemented by the ECB directly. The remaining 80% of purchases are made by each country's central bank (of their own respective sovereign debt), which would also assume any potential losses themselves (as opposed to the Eurosystem as a whole).

5. The IMF estimates that Venezuela suffered an inflation rate of 65,374% and a budget deficit of 30% in 2018, while in 2019 its GDP would have shrunk by 35%. The supply of money, meanwhile, has grown by some 350,000,000% over the past five years, according to data from the Central Bank of Venezuela.

6. Specifically, it has increased the limit up to which the government can draw down on the «Ways and Means Facility» (the Treasury's current account with the central bank) by an undisclosed amount.

7. See the details in the Fed and ECB Observatories of 23 and 24 April at www.caixabankresearch.com.

8. A more explicit way to do this is through so-called yield curve control, which consists of announcing that the central bank will purchase whatever volume of public debt is required to keep sovereign rates anchored at a given target rate. The Bank of Japan has been implementing this strategy since 2016 in order to keep 10-year sovereign interest rates at 0%.

package but had also begun aggressively implementing it, the sovereign risk premiums of the euro area remained relatively high – an indication of the concern over the absence of greater joint action on the part of the European authorities. The reason for this concern is that the bulk of the fiscal stimulus still falls to national governments and the severity of the declines expected in economic activity require a substantial increase in the levels of public debt, which were already high to begin with. In fact, as shown in the table, the severity of the scenario is such that it has even dwarfed the purchases announced by the ECB: when the restrictions of the programmes in their current configuration are taken into account, we see that even in the best case scenario the ECB's capacity to absorb public debt of economies such as Italy or Spain will be limited to around 10% of their GDP. This figure would have seemed like more than enough at the beginning of the COVID-19 crisis, but it could prove insufficient if the declines in GDP end up being greater than currently anticipated and if the recovery is more gradual, such that the deficits are not reduced quickly after this exercise.

«Helicopter» money: a worryingly suitable option

As an alternative to asset purchases, a much more direct and profound form of coordination has been proposed: for the central banks to buy as much public debt as is needed to finance the fiscal stimulus to combat the COVID-19 crisis to perpetuity (i.e. its repayment is not required). This option, popularly known as «helicopter money» due to the fact that it effectively involves the central bank «giving away money» to citizens (money that can be distributed by the government), has some major attractions in the current situation, at least theoretically speaking.⁹ Firstly, it would involve an injection of liquidity to firms and households that would be quick to deploy and could offset their drop in income. Secondly, it is a solution in which neither households, nor firms nor governments are left burdened by debt (and, therefore, the debt does not curb the recovery in demand). Finally, insofar as it is a temporary measure and it is only used in a critical emergency, it is possible that it will not result in unwanted spikes in inflation: the injection would occur at a time of a freeze in economic activity and, when the economy is reactivated, the central bank would retain its independence in order to adjust monetary policy as required to control inflation. However, even if this option were feasible, it should be borne in mind that governing a stimulus of this nature would be very difficult. The monetary financing of a fiscal stimulus would set a precedent and strong political pressure could emerge to gradually lower the bar for such interventions – if they are effective in these circumstances, why not for causes as worthy as the fight against extreme poverty? Such a response could also generate perverse incentives: the incentives to adopt a disciplined fiscal policy in order to build a protective buffer against the onslaught of the next recession (even when the cycle allows it) would be lost. Even with less aggressive coordination, such as public debt purchase programmes (in secondary markets) like those currently in force, the fiscal consequences of the monetary action could affect central banks' credibility, reputation and independence: the more public debt the central bank holds on its balance sheet, the greater the fiscal consequences of its decisions and, therefore, the greater the temptation to politically influence the course of monetary policy. Hence, before COVID-19 rocked the scenario, the strategies of central banks such as the Fed involved gradually reducing the size of their balance sheets in parallel with very gradual rate rises.

Coordination or tightrope walking

With all these ingredients, it is clear that the COVID-19 crisis puts economic policies at a true crossroads: the blow to the economy is so profound that they are required to act quickly, aggressively and in a coordinated manner. But is it possible to do so while also preserving the credibility of the central banks' independence? In Europe, greater ambition on the part of fiscal policy at the European level would help to relieve the pressure of having to adopt more extreme solutions. If the film is left with just one actor, the ECB, it will be navigating the biggest drop in GDP since the Great Depression while walking a tightrope.

Álvaro Leandro and Adrià Morron Salmeron

9. J. Galí (2020). *Helicopter money: the time is now*. Column from VoxEU.org.

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