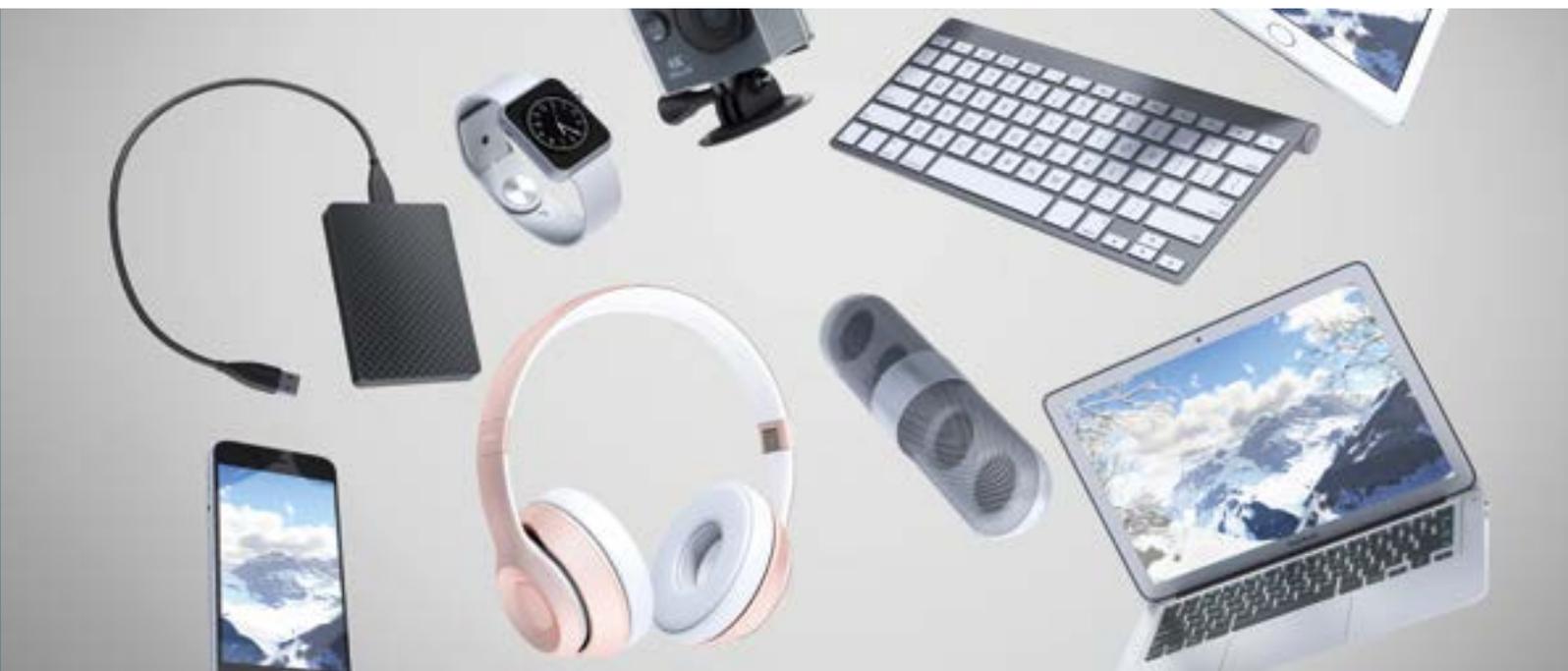


MIR02

MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK

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ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS

*What goes up... must come down?
The outlook for equities*

INTERNATIONAL ECONOMY

*The Great Resignation: paradigm shift
in the US labour market?*

SPANISH ECONOMY

*The second-round effects of the inflationary
shock*

*Supply chains: no escalation in the
disruptions*

DOSSIER: THE TECH GOODS BOOM: CHANGE OF TREND OR SUMMER LOVE?

*The global demand for technological
goods: change of trend?*

*The demand in Spain for technological
goods: what the future holds*

*Characteristics of the demand for electronic
goods in Spain*

*The global chip supply: disruptions and
new trends*

**MONTHLY REPORT -
ECONOMIC AND FINANCIAL
MARKET OUTLOOK**
February 2022

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

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INDEX

1 EDITORIAL

3 KEY POINTS OF THE MONTH

4 FORECASTS

7 FINANCIAL MARKETS

9 *What goes up... must come down? The outlook for equities*
Antonio Montilla

12 INTERNATIONAL ECONOMY

15 *The Great Resignation: paradigm shift in the US labour market?*
Clàudia Canals and José Ramón Díez

19 SPANISH ECONOMY

21 *The second-round effects of the inflationary shock*
Màxim Ventura

23 *Supply chains: no escalation in the disruptions*
Oriol Carreras

26 PORTUGUESE ECONOMY

29 DOSSIER: THE TECH GOODS BOOM: CHANGE OF TREND OR SUMMER LOVE?

29 *The global demand for technological goods: change of trend?*
Clàudia Canals and Oriol Carreras

31 *The demand in Spain for technological goods: what the future holds*
Clàudia Canals, Oriol Carreras and Eduard Llorens i Jimeno

33 *Characteristics of the demand for electronic goods in Spain*
Clàudia Canals, Oriol Carreras and Eduard Llorens i Jimeno

35 *The global chip supply: disruptions and new trends*
Clàudia Canals and Oriol Carreras

Economic policy is cooked in Brussels

When the economic policy debate makes the newspaper front pages or attracts likes on Twitter, it is usually relating to the national sphere. Only rarely do we witness debates relating to the European sphere. And yet, many of the decisions that set the course of the Spanish economy are taken in Brussels. Prior discussions also take place, of course, but they tend to remain in the background and be more technical in nature. The different voices slowly develop their viewpoints until for some reason, usually a crisis, the pressure increases and an agreement has to be reached urgently. We do not get to witness the negotiations that have taken place in the kitchen, only the final sprint to serve the dish on time. The same thing will probably occur again this year. The menu has already been decided upon and it looks set to be a source of heated discussion. Indeed, the debate among policymakers in Brussels is intense. The only thing remaining is to determine when the food must be served so that the attention of the media can get ready to capture the photo finish. Let us step in to the kitchen for a moment, as it is worth taking a look at what is going on behind the scenes.

Beyond launching the NGEU programme, one of the most important steps taken by the European Commission at the start of the pandemic was to formally allow countries to take robust economic measures to counter the economic impact of the health emergency. Brussels held the key to allow countries to do this, and it used it by letting them temporarily increase their budget deficits and debt levels above the limits set in the Stability and Growth Pact. Europe reacted quickly and decisively. Given that the nature of the current crisis was very different from that of a decade ago, the economic policy response also had to be different. Over the past two years, EU public debt as a whole has increased by 14 pps and ended 2021 at around 93% of GDP, far above the 60% limit. Spain is one of the countries where the increase has been most pronounced, reaching 25 pps, with public debt expected to end 2021 at around 120% of GDP.

But the suspension of the fiscal rules was intended to be only temporary, while the pandemic lasted. Unless a decision is taken otherwise, they will be reintroduced in 2023. In part, this is good news. It means that the end to this terrible crisis is in sight. However, after what has happened, reintroducing the old fiscal rules does not seem to be a good idea. The adjustment of the public finances that would be required could threaten the economic recovery. For instance, in the case of Spain, public debt would need to be brought down over a period of many years and at a rate that could not even be achieved during the very best times of the last expansionary cycle. Alternatively, the stability pact could be reintroduced, but with some flexibility in the rules to allow for breaches, as has been done on too many occasions in recent years. However, this would further erode its credibility. In short, it seems that choosing not to reform the European fiscal framework is simply not an option.

The European Commission has already opened a public consultation to relaunch the debate on the reform of the economic governance framework. The requirements state that the sustainability of the public finances must be assured without jeopardising the economic recovery, and that the rules must be simple and their application transparent. With the experience of the last few decades we already know that combining all these ingredients is not an easy task. But the European Commission is also opening the door to incorporate mechanisms into the framework that encourage economic reforms and that incentivise the investment needed to transition towards a more sustainable and environmentally friendly economy, while also facilitating the process of integration of the Economic and Monetary Union. These are ambitious goals, which inevitably place some of the most sensitive issues back on the European table.

Much of the debate focuses on how to adapt the deficit and debt targets to the new environment. At one extreme, there are those who would prefer to eliminate them and replace them with an institution that would carry out a detailed analysis of the fiscal policy that each country must pursue in order to ensure the sustainability of their public finances. Others prefer to keep the current rules in place, introducing some exceptions, such as excluding from the deficit calculation certain types of investment that facilitate the ecological transition. Conceptually, there is no clearly superior option. They all have their benefits, but also their drawbacks.

This time, however, the Commission invites us to go one step further. Perhaps this is the way in which all the various ingredients can fit together better than they have done in the past. The proposal put forward by the Elcano Royal Institute is along these lines. It is ambitious, realistic and detailed. It proposes a moderate revision of the fiscal rules, maintaining the deficit and debt thresholds as a benchmark but pointing out that, when they are exceeded, the reasons must be taken into account and a distinction must be made between situations that are triggered by temporary economic recession and those of a more chronic nature. It also proposes the creation of a European System of Independent Fiscal Authorities in order to prevent the generation of fiscal imbalances. Furthermore, it advocates the creation of a permanent central fiscal authority in the form of a European institution with resources to promote investment in key areas such as the energy transition. Access to these funds, which would be subject to certain milestones being met and reforms being implemented, ought to introduce the appropriate incentives for European countries to improve both their fiscal and their economic policies. Of course, all this would need to be accompanied by measures to boost the democratic legitimacy of the key institutions involved in this process and, in particular, the European Parliament should play a central role.

These are bold words. A window has reopened for Europe to take a big step forward. No doubt this will once again highlight the tension between the urgency to further shape the European project, because the links that unite us are growing ever greater, and the misgivings fuelled by the mistakes made and the cacophony that reigns in the new media. We must remain vigilant and continue to push to move ever closer to making the European dream a reality.

Oriol Aspachs
February 2022

Chronology

JANUARY 2022

- 1 Sixth wave of COVID in Spain.
- 23 A Taliban delegation begins talks with European powers and the US in Oslo.
- 24 The James Webb telescope reaches its final destination from which it will study the origins of the universe.

NOVEMBER 2021

- 13 The COP26 Climate Summit closes with a new deal on climate.
- 15 Migration crisis on the border between Belarus and Poland.
- 22 New mobility restrictions in Europe and spread of the Omicron variant.

SEPTEMBER 2021

- 1 The crisis affecting Chinese real estate firm Evergrande intensifies.
- 17 Moody's upgrades Portugal's rating (from Baa3 to Baa2).
- 26 Elections in Germany, bringing an end to the 16-year Merkel era.

DECEMBER 2021

- 3 The European Commission authorises the disbursement of 10 billion euros of NGEU funds to Spain.
- 8 Tension rises in the Ukraine crisis.
- 28 An agreement is reached on labour reform in Spain.

OCTOBER 2021

- 3 The International Consortium of Investigative Journalists publishes its investigation into accounts in tax havens: the Pandora Papers.
- 15 The delta plus variant of COVID-19 begins to spread.
- 30 G-20 summit at which the global minimum corporate tax is endorsed.

AUGUST 2021

- 1 The withdrawal from Afghanistan by the US and its European allies accelerates and the Taliban regain power.
- 9 The UN's Climate Change report talks of mankind's responsibility in relation to global warming and warns of changes that are irreversible for centuries.
- 17 The European Commission disbursed the first 9 billion euros of the NGEU funds to Spain.

Agenda

FEBRUARY 2022

- 2 Spain: registration with Social Security and registered unemployment (January).
- 9 Portugal: employment and unemployment (Q4).
Portugal: international trade (December).
- 15 Japan: GDP (Q4).
- 17 Spain: foreign trade (December).
Portugal: industrial production prices (January).
- 25 Spain: loans, deposits and NPL ratio (December).
Euro area: economic sentiment index (February).
- 28 Spain: CPI flash estimate (February).
Spain: balance of payments (December).
Portugal: GDP breakdown (Q4).
Portugal: CPI flash estimate (February).

MARCH 2022

- 2 Spain: registration with Social Security and registered unemployment (February).
Portugal: industrial production (January).
- 3 Portugal: new lending (January).
- 10 Governing Council of the European Central Bank meeting.
- 11 Portugal: S&P rating.
- 15-16 Federal Open Market Committee meeting.
- 17 Spain: quarterly labour cost survey (Q4).
- 18 Spain: S&P rating.
- 23 Spain: loans, deposits and NPL ratio (Q4).
Portugal: home prices (Q4).
- 24-25 European Council meeting.
- 25 Spain: 4Q GDP (second estimate).
Spain: balance of payments and NIIP (Q4).
Portugal: savings rate (Q4).
Portugal: general government budget execution (2021).
- 30 Spain: CPI flash estimate (March).
Euro area: economic sentiment index (March).
- 31 Spain: household savings rate (Q4).
Spain: state budget execution (February).

Geopolitical risk: a new obstacle for the recovery

The recovery of the global economy continues to face multiple challenges which, for now, it is managing to overcome thanks to the stimulus provided by the robust expansionary economic policies that have been deployed, the good response of the vaccines to the successive mutations of the virus and the continuous adaptation of the decisions taken by economic agents in response to such a complex scenario. As the IMF recently reminded us in the latest revision of its Economic Outlook, the business cycle will continue to face significant challenges in the medium term, as the unexpected rise in inflation and the emergence of bottlenecks in much of the production chain coincide with widespread high levels of debt, the shift in monetary policy in a number of countries and the uncertainty associated with the evolution of the pandemic. According to the Washington-based institution, the shock generated last year by the mismatch between global supply and demand alone reduced growth by 0.5 pps and raised inflation by 1 pps. Yet despite this, global economic activity grew by 5.9% in 2021 and could advance at rates exceeding 4% in 2022. Therefore, the revival continues to show high resilience and, above all, it is being accompanied by signs of strength in the labour market, as the latest employment data in countries such as Spain are demonstrating.

In this steep climb in which the business cycle is immersed, the latest stumbling block has been the rise in political risk in January. The threat of a possible armed intervention by Russia in Ukraine, if NATO's expansion to countries in its sphere of influence (geographic or political) is not halted, marks a new spoke in the wheel of the recovery due to its potential negative effects on growth and, above all, inflation. Assessing how increased geopolitical instability will affect the forecast scenarios is always a difficult task, as its impact is transmitted through a wide range of channels (trade, capital flows, wealth effect, etc.). Furthermore, there are difficulties in modelling the uncertainty associated with these types of events, as it ends up distorting agents' decisions and causing risk-off movements in the financial markets, as we have seen in much of January.

It is clear that Europe is the most fragile region in the event of an escalation in the tensions with Russia, taking into account its trade and financial ties with the Eastern European country and, above all, due to its high dependence on Russian natural gas (40% of the total imports). The supply shock that would be triggered by a further reduction in the supply of gas to Europe could hardly be offset by an increase in liquefied gas from the US or Qatar, and it would add fuel to the recent rise in prices in the euro area. And let us not forget that the starting point is already very high, with inflation at 5.1% in January and the

figure for some of the more sensitive components, such as processed and unprocessed foods, rising to 3.1% and 5.2%, respectively.

The central scenario remains the de-escalation of the conflict in the short term through diplomatic channels. The severity of the automatic sanctions that are being leaked, such as the closure of European capital markets to Russian companies, restrictions on the export of all types of products and even the closure of the financial system's access to SWIFT ought to discourage an escalation of the conflict, despite the fact that the Russian economy has regained resilience in recent years thanks to the significant increase in its foreign-exchange reserves. The recent decline in gas prices and in the risk premiums of the affected countries (Russia/Ukraine) is consistent with this relatively benign scenario that would allow us to maintain the central forecast scenarios unchanged.

However, we cannot rule out alternative scenarios such as a prolongation of the tensions for several months, with a rise in gas prices to the highs of December (though with no pressing supply problems) or, in the most extreme scenario, some kind of military intervention with a more pronounced rise in the price of gas. Even in a scenario without a serious supply problem, the inflationary pressures in the euro area would be prolonged and would end up filtering down to most of the components of the index. This, in turn, would adversely affect economic activity due to the loss of purchasing power and the impact it would have on the sectors most exposed to energy prices. The ECB's concern would no doubt be the rise in the risk of second-round effects on prices, forcing it to bring forward its interest-rate hikes. In fact, the markets are raising the stakes and now anticipate a 25-bp rise by the end of 2022.

In an adverse scenario in which Russia significantly reduced its gas exports, the impact on prices and economic activity would be more significant. This could lead to a stagflation scenario, which would hinder the monetary policy response and would not necessarily involve the central bank responding by tightening financial conditions.

The Ukraine conflict is nothing more than the canary in the coal mine for the growing instability on the geopolitical stage that we can expect to see over the coming years. The greatest exponent of this heightened instability will be the rivalry between China and the US, critical for the evolution of key issues such as the future of globalisation and the risk of technological fragmentation. Thus, how to incorporate that geopolitical risk into the analysis and the forecasting models is something we will have to consider and address from now on.

José Ramón Díez

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

Financial markets

| | Average 2000-2007 | Average 2008-2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------|----------------------|----------------------|-------|-------|-------|-------|-------|
| INTEREST RATES | | | | | | | |
| Dollar | | | | | | | |
| Fed funds (upper limit) | 3.43 | 0.68 | 1.75 | 0.25 | 0.25 | 1.00 | 1.75 |
| 3-month Libor | 3.62 | 0.90 | 1.91 | 0.23 | 0.21 | 1.20 | 1.95 |
| 12-month Libor | 3.86 | 1.40 | 1.97 | 0.34 | 0.52 | 1.55 | 2.28 |
| 2-year government bonds | 3.70 | 0.96 | 1.63 | 0.13 | 0.62 | 1.15 | 1.75 |
| 10-year government bonds | 4.70 | 2.61 | 1.86 | 0.93 | 1.45 | 2.20 | 2.50 |
| Euro | | | | | | | |
| ECB depo | 2.05 | 0.26 | -0.50 | -0.50 | -0.50 | -0.50 | -0.25 |
| ECB refi | 3.05 | 0.82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| Eonia | 3.12 | 0.47 | -0.46 | -0.47 | -0.49 | -0.48 | -0.25 |
| 1-month Euribor | 3.18 | 0.58 | -0.45 | -0.56 | -0.60 | -0.51 | -0.25 |
| 3-month Euribor | 3.24 | 0.74 | -0.40 | -0.54 | -0.58 | -0.46 | -0.17 |
| 6-month Euribor | 3.29 | 0.88 | -0.34 | -0.52 | -0.55 | -0.38 | -0.01 |
| 12-month Euribor | 3.40 | 1.07 | -0.26 | -0.50 | -0.50 | -0.29 | 0.14 |
| Germany | | | | | | | |
| 2-year government bonds | 3.41 | 0.45 | -0.63 | -0.73 | -0.70 | -0.40 | -0.15 |
| 10-year government bonds | 4.30 | 1.69 | -0.27 | -0.57 | -0.31 | 0.00 | 0.30 |
| Spain | | | | | | | |
| 3-year government bonds | 3.62 | 1.87 | -0.36 | -0.57 | -0.45 | 0.08 | 0.49 |
| 5-year government bonds | 3.91 | 2.39 | -0.09 | -0.41 | -0.25 | 0.23 | 0.63 |
| 10-year government bonds | 4.42 | 3.40 | 0.44 | 0.05 | 0.42 | 0.70 | 1.05 |
| Risk premium | 11 | 171 | 71 | 62 | 73 | 70 | 75 |
| Portugal | | | | | | | |
| 3-year government bonds | 3.68 | 3.66 | -0.34 | -0.61 | -0.64 | 0.05 | 0.52 |
| 5-year government bonds | 3.96 | 4.30 | -0.12 | -0.45 | -0.35 | 0.28 | 0.71 |
| 10-year government bonds | 4.49 | 5.03 | 0.40 | 0.02 | 0.34 | 0.70 | 1.05 |
| Risk premium | 19 | 334 | 67 | 60 | 65 | 70 | 75 |
| EXCHANGE RATES | | | | | | | |
| EUR/USD (dollars per euro) | 1.13 | 1.28 | 1.11 | 1.22 | 1.13 | 1.15 | 1.19 |
| EUR/GBP (pounds per euro) | 0.66 | 0.84 | 0.85 | 0.90 | 0.85 | 0.83 | 0.84 |
| OIL PRICE | | | | | | | |
| Brent (\$/barrel) | 42.3 | 81.5 | 65.2 | 50.2 | 74.8 | 70.0 | 65.0 |
| Brent (euros/barrel) | 36.4 | 62.9 | 58.6 | 41.3 | 66.2 | 60.9 | 54.6 |

Forecasts

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

International economy

| | Average 2000-2007 | Average 2008-2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|----------------------|----------------------|------|-------|------|------|------|
| GDP GROWTH | | | | | | | |
| Global | 4.5 | 3.4 | 2.8 | -3.1 | 6.0 | 4.2 | 3.8 |
| Developed countries | 2.7 | 1.4 | 1.7 | -4.5 | 5.2 | 3.7 | 2.6 |
| United States | 2.7 | 1.6 | 2.3 | -3.4 | 5.7 | 3.5 | 2.6 |
| Euro area | 2.2 | 0.8 | 1.6 | -6.5 | 5.2 | 4.1 | 2.8 |
| Germany | 1.6 | 1.3 | 1.1 | -4.9 | 2.8 | 3.7 | 2.8 |
| France | 2.2 | 0.9 | 1.8 | -8.0 | 7.0 | 3.6 | 2.1 |
| Italy | 1.5 | -0.4 | 0.4 | -9.0 | 6.3 | 4.2 | 2.6 |
| Portugal | 1.5 | 0.3 | 2.7 | -8.4 | 4.3 | 4.9 | 2.6 |
| Spain | 3.7 | 0.5 | 2.1 | -10.8 | 5.0 | 5.5 | 3.6 |
| Japan | 1.4 | 0.5 | 0.0 | -4.7 | 1.8 | 2.4 | 1.1 |
| United Kingdom | 2.6 | 1.3 | 1.7 | -9.4 | 7.1 | 4.0 | 2.0 |
| Emerging and developing countries | 6.5 | 5.0 | 3.7 | -2.1 | 6.8 | 4.8 | 4.8 |
| China | 10.6 | 8.2 | 6.0 | 2.2 | 8.1 | 4.7 | 4.9 |
| India | 7.2 | 6.9 | 4.8 | -7.0 | 9.2 | 7.3 | 7.5 |
| Brazil | 3.6 | 1.7 | 1.4 | -4.1 | 5.3 | 0.8 | 2.1 |
| Mexico | 2.4 | 2.1 | -0.2 | -8.3 | 6.2 | 3.0 | 2.3 |
| Russia | 7.2 | 1.1 | 1.3 | -3.1 | 3.8 | 2.5 | 2.0 |
| Turkey | 5.4 | 4.9 | 0.9 | 1.6 | 8.3 | 3.3 | 3.9 |
| Poland | 4.2 | 3.5 | 4.7 | -2.5 | 5.7 | 5.1 | 3.0 |
| INFLATION | | | | | | | |
| Global | 4.1 | 3.7 | 3.5 | 3.2 | 4.5 | 4.2 | 3.1 |
| Developed countries | 2.1 | 1.6 | 1.4 | 0.7 | 3.0 | 3.3 | 1.7 |
| United States | 2.8 | 1.8 | 1.8 | 1.2 | 4.7 | 5.1 | 1.9 |
| Euro area | 2.2 | 1.4 | 1.2 | 0.3 | 2.6 | 2.8 | 1.5 |
| Germany | 1.7 | 1.4 | 1.4 | 0.4 | 3.2 | 3.0 | 1.6 |
| France | 1.9 | 1.3 | 1.3 | 0.5 | 2.1 | 2.8 | 1.4 |
| Italy | 2.4 | 1.5 | 0.6 | -0.1 | 1.9 | 2.7 | 1.5 |
| Portugal | 3.0 | 1.2 | 0.3 | 0.0 | 1.3 | 2.2 | 1.7 |
| Spain | 3.2 | 1.4 | 0.7 | -0.3 | 3.1 | 4.5 | 1.2 |
| Japan | -0.3 | 0.4 | 0.5 | 0.0 | -0.2 | 0.7 | 0.7 |
| United Kingdom | 1.6 | 2.4 | 1.8 | 0.9 | 2.5 | 3.0 | 1.7 |
| Emerging countries | 6.7 | 5.6 | 5.1 | 5.1 | 5.6 | 4.9 | 4.1 |
| China | 1.7 | 2.6 | 2.9 | 2.5 | 0.9 | 1.2 | 1.4 |
| India | 4.5 | 7.7 | 3.7 | 6.6 | 5.0 | 5.5 | 4.5 |
| Brazil | 7.3 | 5.9 | 3.7 | 3.2 | 7.3 | 7.5 | 3.5 |
| Mexico | 5.2 | 4.2 | 3.6 | 3.4 | 5.4 | 3.9 | 3.5 |
| Russia | 14.2 | 8.2 | 4.5 | 4.9 | 6.3 | 4.4 | 4.1 |
| Turkey | 27.2 | 9.1 | 15.5 | 14.6 | 17.3 | 14.2 | 11.0 |
| Poland | 3.5 | 1.9 | 2.1 | 3.7 | 5.0 | 5.3 | 3.2 |

Forecasts

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

Spanish economy

| | Average 2000-2007 | Average 2008-2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|----------------------|----------------------|------------|--------------|------------|------------|------------|
| Macroeconomic aggregates | | | | | | | |
| Household consumption | 3.6 | -0.1 | 0.9 | -12.2 | 4.7 | 3.6 | 3.8 |
| Government consumption | 5.0 | 1.0 | 2.0 | 3.3 | 3.0 | 0.4 | -0.5 |
| Gross fixed capital formation | 5.6 | -1.9 | 4.5 | -9.5 | 4.1 | 7.6 | 5.4 |
| Capital goods | 4.9 | 0.0 | 3.2 | -12.9 | 15.5 | 8.8 | 4.6 |
| Construction | 5.7 | -3.8 | 7.1 | -9.6 | -3.0 | 5.4 | 6.0 |
| Domestic demand (vs. GDP Δ) | 4.2 | -0.3 | 1.3 | -8.9 | 5.0 | 4.6 | 3.1 |
| Exports of goods and services | 4.7 | 2.9 | 2.5 | -20.1 | 13.4 | 11.9 | 5.3 |
| Imports of goods and services | 7.0 | 0.1 | 1.2 | -15.2 | 12.8 | 8.2 | 4.2 |
| Gross domestic product | 3.7 | 0.5 | 2.1 | -10.8 | 5.0 | 5.5 | 3.6 |
| Other variables | | | | | | | |
| Employment | 3.2 | -0.7 | 2.6 | -7.6 | 6.7 | 5.2 | 3.0 |
| Unemployment rate (% of labour force) | 10.5 | 20.0 | 14.1 | 15.5 | 14.8 | 13.9 | 12.9 |
| Consumer price index | 3.2 | 1.4 | 0.7 | -0.3 | 3.1 | 4.5 | 1.2 |
| Unit labour costs | 3.0 | 0.3 | 3.1 | 5.0 | 1.2 | 1.9 | 1.7 |
| Current account balance (% GDP) | -5.9 | -0.5 | 2.1 | 0.8 | 1.1 | 1.7 | 1.7 |
| External funding capacity/needs (% GDP) | -5.2 | -0.1 | 2.6 | 1.1 | 1.7 | 1.8 | 1.9 |
| Fiscal balance (% GDP) ¹ | 0.4 | -6.3 | -2.9 | -11.0 | -7.1 | -5.2 | -3.9 |

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

■ Forecasts

Portuguese economy

| | Average 2000-2007 | Average 2008-2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|----------------------|----------------------|------------|-------------|------------|------------|------------|
| Macroeconomic aggregates | | | | | | | |
| Household consumption | 1.7 | 0.3 | 3.3 | -7.1 | 5.0 | 4.8 | 2.4 |
| Government consumption | 2.3 | -0.5 | 2.1 | 0.4 | 4.6 | 0.8 | 0.2 |
| Gross fixed capital formation | -0.3 | -1.2 | 5.4 | -2.7 | 4.4 | 6.2 | 8.0 |
| Capital goods | 3.2 | 2.7 | 1.6 | -6.2 | 9.2 | 5.7 | 8.1 |
| Construction | -1.5 | -3.5 | 7.7 | 1.6 | 1.5 | 4.5 | 4.3 |
| Domestic demand (vs. GDP Δ) | 1.3 | -0.2 | 3.0 | -5.6 | 5.1 | 4.5 | 3.2 |
| Exports of goods and services | 5.2 | 4.0 | 4.1 | -18.7 | 9.4 | 10.4 | 5.9 |
| Imports of goods and services | 3.6 | 2.5 | 5.0 | -12.2 | 11.0 | 8.7 | 6.8 |
| Gross domestic product | 1.5 | 0.3 | 2.7 | -8.4 | 4.9 | 4.9 | 2.6 |
| Other variables | | | | | | | |
| Employment | 0.4 | -0.6 | 1.2 | -1.9 | 2.7 | 1.5 | 0.6 |
| Unemployment rate (% of labour force) | 6.1 | 11.8 | 6.6 | 7.0 | 6.6 | 6.1 | 5.9 |
| Consumer price index | 3.0 | 1.2 | 0.3 | 0.0 | 1.3 | 2.2 | 1.7 |
| Current account balance (% GDP) | -9.2 | -3.2 | 0.4 | -1.2 | -1.1 | -1.0 | -0.4 |
| External funding capacity/needs (% GDP) | -7.7 | -1.9 | 1.2 | 0.1 | 0.5 | 1.3 | 1.9 |
| Fiscal balance (% GDP) | -4.6 | -5.5 | 0.1 | -5.8 | -4.3 | -2.9 | -1.5 |

■ Forecasts

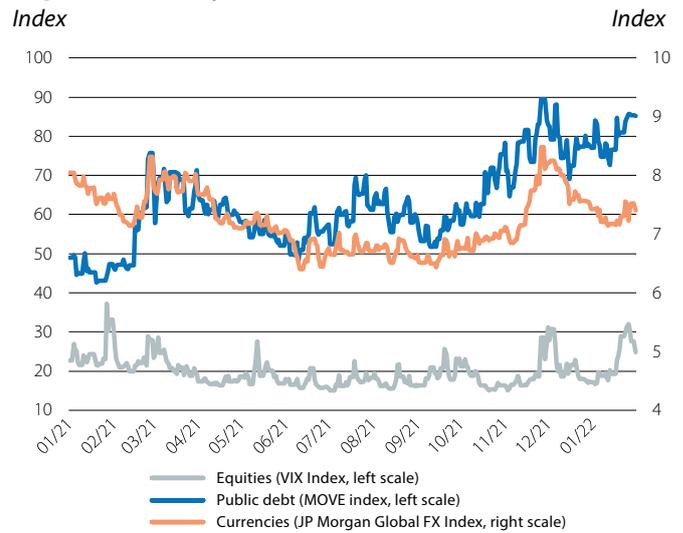
A tumultuous start of the year in the financial markets

Monetary policy normalization regains focus against Omicron. The start of the year has been marked by a realignment of risk factors among investors. On the one hand, fears about the possible impact of Omicron have diminished, and on the other hand, the debate about the persistence of the inflationary pressures and, above all, the withdrawal of monetary stimuli has gained traction. The risk of geopolitical confrontation in Ukraine has also increased. The result has been a widespread increase in financing costs and volatility, reflected in rising sovereign interest rates and a tightening of financial conditions. The international stock markets, meanwhile, have zigzagged in a downward trend, and currencies considered safe havens have tended to appreciate, while energy prices have risen. The tumultuous month of January sets the tone for what looks set to be a year of sharp movements in the markets, as the course of monetary policy accelerates its adjustment towards the new normal.

The Fed prepares the ground to begin the cycle of rate hikes. At its early meeting on 25-26 January, the Fed maintained the benchmark interest rate in the 0.00-0.25% range, but it made it very clear that, in the absence of surprises, it will implement the first rate hike in March. Having declared the goal of reaching full employment achieved, and in a context of rising inflation risk, the Fed chair Jerome Powell did not rule out the possibility of the rate hike cycle being more aggressive than previously announced, while outlining the initial guidelines on the strategy for the gradual reduction of the size of the balance sheet, the next step in the Fed's roadmap. Accordingly, the implicit rates in the money markets closed the month reflecting expectations of up to five 25-bp rate hikes this year, in contrast with the three hikes that were expected in December. The yield on US treasuries rose significantly (+28 bps to 1.79% for the 10-year bond) under a pattern marked by a flattening of the yield curve. The dollar also strengthened against the major currencies; against the euro, it closed the month trading at its lowest level since mid-2020.

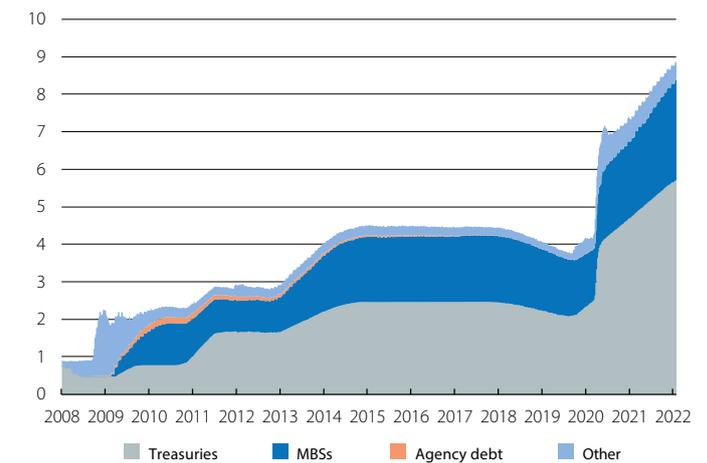
The ECB is also more concerned about inflation. With regard to the ECB, the rebound in inflation in recent months, and above all the potential risk of it persisting for longer than expected, is beginning to concern the more hawkish wing of the Governing Council. This divergence was reflected in the minutes of the December meeting, when several members expressed their reservations about some of the measures adopted, such as the decision to extend the reinvestment of assets under the PEPP until 2024, or even the decision to increase net purchases under the APP this year. However, no major changes are expected in the coming months. In an interview, the institution's president, Christine Lagarde, categorically rejected the possibility of early official rate hikes.

Implicit volatility in the financial markets



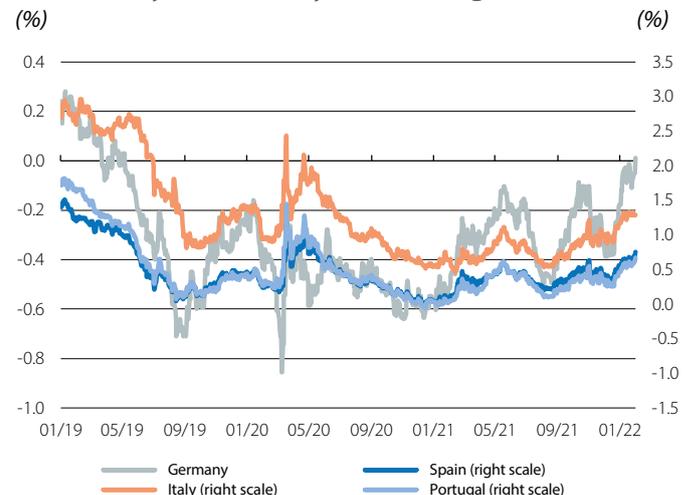
Source: CaixaBank Research, based on data from Bloomberg.

Composition of the Federal Reserve balance sheet (USD trillions)



Source: CaixaBank Research, based on data from Bloomberg and the Federal Reserve.

Euro area: yields on 10-year sovereign debt (%)



Source: CaixaBank Research, based on data from Bloomberg.

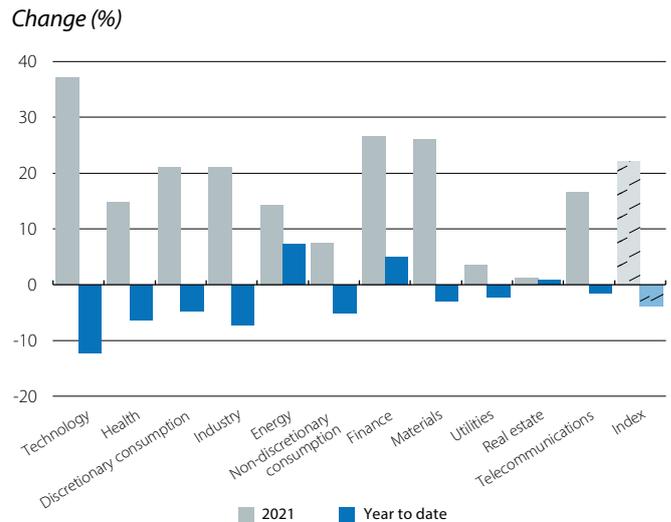
According to implicit rates in the money markets, meanwhile, investors are anticipating a 25-bp rise in the deposit facility rate within a year. Yields on sovereign debt, meanwhile, followed the pattern set by the US, with the 10-year German *bund* trading in positive territory for the first time in the last three years. Debt premiums in the southern countries were stable, even in Italy, despite uncertainty about the president's re-election process.

A month of ups and downs in the international stock markets. For equities, the realignment among investors of the risk factors has led to a shift in favour of the sectors most exposed to the business cycle and to the detriment of those with a high growth profile. This latter group most notably includes the tech sector, which plummeted, generating widespread risk aversion that ended up affecting the good performance of other sectors. Thus, in the year to date, the stock market indices have registered sharp declines, especially in the US. Another important factor has been the beginning of the business earnings season. While somewhat better than the analyst consensus expectations, the earnings reported to date are no match for those of the previous quarters, which far exceeded predictions. The outlook for this year is that the international stock markets will continue to perform well, albeit most likely at rates below those of 2021 (see the Focus «What goes up... must come down? The outlook for equities» in this same *Monthly Report*).

The oil price rises to its highest level since 2014. Following the upswing already seen in December, the price of a barrel of Brent continued on its upward trajectory in January, registering a cumulative increase of 17%. This rally is driven by factors on both the supply side, such as reports of breakdowns in certain regions and doubts among investors about the capacity of some countries to increase their production, as well as on the demand side, in the face of signs that the impact of Omicron will be lower than originally anticipated. However, the futures markets continue to indicate that the price will peak this quarter before gradually moderating during the course of the year, a pattern also expected for the price of gas. To a large extent, these projections will depend, among other factors, on the conflict surrounding Ukraine. An increase in tensions would result in a sharp rise in energy prices and, with it, further stress in global inflationary pressures.

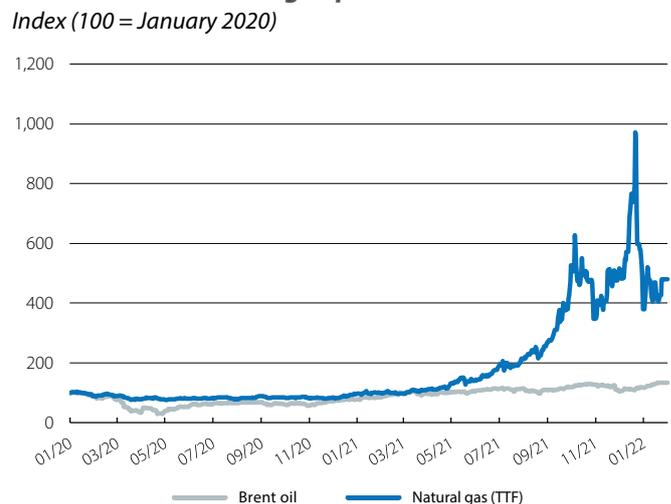
In emerging markets, China relaxes its monetary policy. In contrast with other emerging-market central banks, the People's Bank of China announced a further reduction in some of its benchmark interest rates, including a 10-bp cut in the rate applied to the medium-term lending facility, the first such reduction since April 2020. The measures come in response to the slowdown in growth, with the real estate sector hitting the brakes and due to the restrictive policies adopted to combat the health emergency. In Russia, the heightened geopolitical risk was reflected in a 4% depreciation in the rouble against the dollar, a 6% drop in the stock market, and a 102-bp increase in 10-year sovereign debt yields.

Sectors of the Eurostoxx 600



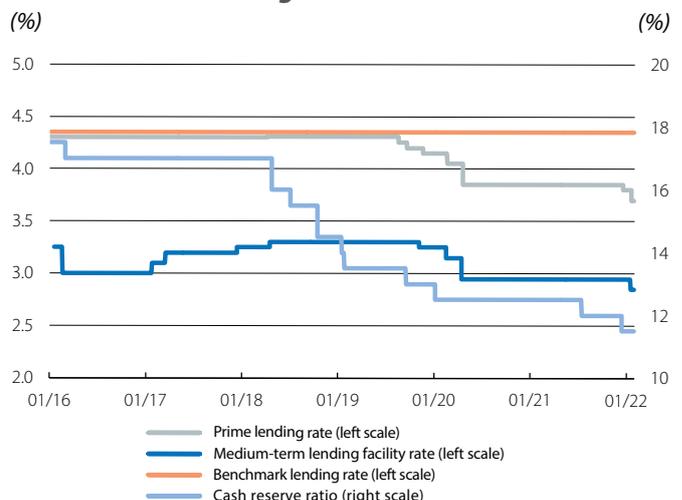
Source: CaixaBank Research, based on data from Bloomberg.

Brent oil and natural gas prices



Note: TTF natural gas is the benchmark gas price used in Europe. Source: CaixaBank Research, based on data from Bloomberg.

China: main interest rates and reserve ratio for wholesale banking



Source: CaixaBank Research, based on data from Bloomberg.

What goes up... must come down? The outlook for equities

The international stock markets have undoubtedly been one of the sectors that has best weathered the COVID-19 shock. During the first wave of infections, the stock market indices plummeted by some 30%-40%. Since then, while there have been ups and downs and differing performance depending on the sector and the market, the rate of recovery has been nothing short of spectacular. In the US, for instance, the stock market recovered its pre-COVID level just six months after the outbreak of the pandemic, while in the case of the aggregate level in Europe (EuroStoxx 50) this milestone was not reached until a year later. In both cases the recovery was much faster than in other crises¹, as well as compared to the recovery of the real economy (see first chart).²

As a result of this rapid recovery, equity valuations, which in some regions were already at historically high levels at the beginning of the pandemic, have risen even further and have soared beyond the levels considered consistent with the fundamentals according to some models. As a benchmark we use the CAPE (cyclically adjusted price-to-earnings) ratio, proposed by the economist and Nobel laureate Robert J. Shiller, which divides the total capitalisation of a stock index by the average earnings reported by its constituent companies over the past 10 years. A high CAPE ratio exceeding the historical average indicates that the price paid per share, or the aggregate index, reflects factors other than business performance, such as expectations of a future increase in earnings, which has repercussions for the interest rate at which they are discounted. Therefore, it may reflect overvaluation in the stock markets.

By country, the US stock market stands out, with a CAPE ratio well above the historical average and at levels not registered since the run-up to the dotcom bubble in the year 2000 (see second chart). In Europe, the CAPE ratio suggests that the stock market may be slightly overvalued in France and Italy, while it is below the historical average in Germany and Spain.

With the business cycle already well advanced and the outlook for corporate earnings affected by the possible persistence of inflationary pressures and the shift in monetary policy, we wonder: has the time come for the unexpected stock-market correction?

1. In the global financial crisis of 2007-2008, the S&P recovered to the pre-crisis level in 2012. In the European sovereign debt crisis in 2011-2012, the EuroStoxx recovered its pre-crisis level in two years.
 2. In terms of GDP, the US recovered the level of Q4 2019 in mid-2021. In the euro area, we estimate that this recovery will be reached in Q1 2022.

International stock markets

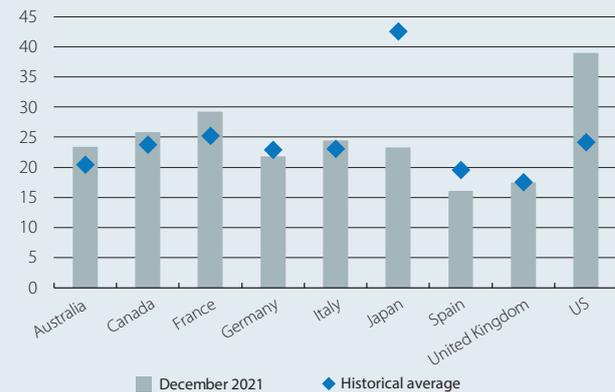
Level (100 = January 2020)



Source: CaixaBank Research, based on data from Bloomberg.

Adjusted CAPE ratio for the major international stock market indices

Ratio



Source: CaixaBank Research, based on data from Barclays.

Moderation rather than correction

According to Bloomberg's analyst consensus, it appears unlikely that such a correction will occur this year. For the S&P, the consensus projects an increase of around 5% to 10% by the year end. In Europe, the consensus also projects an increase of around 12% for the EuroStoxx, reflecting positive expectations for corporate earnings.

These forecasts exceed estimates from more conventional models, such as those which attempt to predict the target value of the stock market index on the basis of expected cash flows, expressed in net present value.³ For the S&P, for example, such a model would

3. This is done by taking estimates of EPS growth over the next few years and discounting them using 10-year sovereign rate forecasts and the implied equity risk premium.

suggest a return of less than 5% for both 2022 and 2023, notably below the 9% historical average. The high CAPE ratio would also be consistent with more modest gains in the equity markets.

However, it should be noted that such models have tended to underestimate stock market returns in recent years. Like the Bloomberg analyst consensus, we think this pattern is likely to be repeated this year for a variety of reasons.

Firstly, we expect global GDP to continue to expand at a solid pace in 2022, exceeding potential growth in most countries. To a large extent, we attribute this outlook to the strength of demand, which has been supported by strong job creation, the accumulation of savings and the adaptability that economic agents have shown in the face of the recurring shifts in the pandemic.

On the other hand, despite the ups and downs of recent weeks, investors started the year with a risk appetite similar to that observed on average in 2021. Furthermore, this has been in a context of negative real interest rates, a factor which should support equities. Thus, implicit volatility in the equity markets has remained relatively contained, even during the period of financial stress in late 2021.

Finally, despite the withdrawal of some of the stimulus, monetary policy will remain largely accommodative; the central banks will stay active in the bond markets while official interest rates will remain very low in historical terms. As for fiscal policy, its restrictive bias in 2022 primarily reflects the expiration of many of the benefits approved during the pandemic in 2020-2021, rather than fiscal consolidation measures such as potential tax hikes.

Overall, we think these factors will allow the major stock market indices to report gains this year, albeit most likely at rates below those registered during 2021, perhaps more in line with the historical trend. At the sectoral level, the more cyclical ones (such as energy and the financial sector) are expected to register their best returns this year, a pattern which could benefit the European indices more (compared to the US indices).

What could go wrong?

Developments in the pandemic remain one of the main risk factors for this year's equities outlook, not only because of what a further deterioration in the infection curve could mean for the recovery of demand, but also because of its possible impact on supply and, therefore, on inflation, the other major risk for this year. Indeed, the persistence of the bottlenecks and the inflationary pressures could accelerate the central banks' withdrawal of the monetary stimulus and, ultimately, could tighten financial conditions.

On this point, however, it is important to note that with the roll-out of the vaccines, the negative impact of each wave of COVID on the real economy and on the financial markets has been declining, as consumers and businesses have learnt to live with the virus.

Governments have also shown greater resistance to introducing very strict restrictions on movement. In addition, companies have managed to transfer part of their cost increases to their sale prices without affecting margins, at least so far. In fact, according to the analyst consensus, the companies of the S&P are expected to slightly increase their margins this year.

Finally, economic policymakers have been very reluctant to allow sustained stock-market declines or severe adjustments in credit conditions, keen to avoid a scenario in which the health crisis triggers a financial crisis. Indeed, despite the withdrawal, the central banks have left open the possibility of reintroducing the stimulus, if necessary, to mitigate the potential damage of a new negative shock or black swan.

Antonio Montilla

Interest rates (%)

| | 31-January | 31-December | Monthly change (bp) | Year-to-date (bp) | Year-on-year change (bp) |
|-------------------------------------|------------|-------------|---------------------|-------------------|--------------------------|
| Euro area | | | | | |
| ECB Refi | 0.00 | 0.00 | 0 | 0.0 | 0.0 |
| 3-month Euribor | -0.55 | -0.57 | 2 | 2.0 | -0.9 |
| 1-year Euribor | -0.45 | -0.50 | 5 | 4.8 | 5.8 |
| 1-year government bonds (Germany) | -0.67 | -0.64 | -3 | -2.5 | -1.2 |
| 2-year government bonds (Germany) | -0.53 | -0.62 | 9 | 9.2 | 19.5 |
| 10-year government bonds (Germany) | 0.01 | -0.18 | 19 | 18.8 | 52.7 |
| 10-year government bonds (Spain) | 0.75 | 0.57 | 18 | 18.1 | 65.1 |
| 10-year government bonds (Portugal) | 0.67 | 0.47 | 20 | 20.0 | 63.2 |
| US | | | | | |
| Fed funds (upper limit) | 0.25 | 0.25 | 0 | 0.0 | 0.0 |
| 3-month Libor | 0.31 | 0.21 | 10 | 10.0 | 11.3 |
| 12-month Libor | 0.96 | 0.58 | 38 | 37.9 | 65.7 |
| 1-year government bonds | 0.77 | 0.38 | 40 | 39.6 | 69.6 |
| 2-year government bonds | 1.18 | 0.73 | 45 | 44.7 | 107.1 |
| 10-year government bonds | 1.78 | 1.51 | 27 | 26.7 | 69.8 |

Spreads corporate bonds (bps)

| | 31-January | 31-December | Monthly change (bp) | Year-to-date (bp) | Year-on-year change (bp) |
|--------------------------------|------------|-------------|---------------------|-------------------|--------------------------|
| Itraxx Corporate | 59 | 48 | 11 | 11.0 | 7.3 |
| Itraxx Financials Senior | 67 | 55 | 12 | 12.2 | 4.8 |
| Itraxx Subordinated Financials | 126 | 108 | 18 | 18.4 | 8.7 |

Exchange rates

| | 31-January | 31-December | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|----------------------------|------------|-------------|--------------------|------------------|-------------------------|
| EUR/USD (dollars per euro) | 1.124 | 1.137 | -1.2 | -1.2 | -6.8 |
| EUR/JPY (yen per euro) | 129.330 | 130.900 | -1.2 | -1.2 | 2.2 |
| EUR/GBP (pounds per euro) | 0.835 | 0.841 | -0.7 | -0.7 | -5.4 |
| USD/JPY (yen per dollar) | 115.110 | 115.080 | 0.0 | 0.0 | 9.7 |

Commodities

| | 31-January | 31-December | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|---------------------|------------|-------------|--------------------|------------------|-------------------------|
| CRB Commodity Index | 582.9 | 578.3 | 0.8 | 0.8 | 27.1 |
| Brent (\$/barrel) | 91.2 | 77.8 | 17.3 | 17.3 | 61.9 |
| Gold (\$/ounce) | 1,797.2 | 1,829.2 | -1.8 | -1.8 | -3.4 |

Equity

| | 31-January | 31-December | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|--------------------------|------------|-------------|--------------------|------------------|-------------------------|
| S&P 500 (USA) | 4,515.6 | 4,766.2 | -5.3 | -5.3 | 19.7 |
| Eurostoxx 50 (euro area) | 4,174.6 | 4,298.4 | -2.9 | -2.9 | 18.2 |
| Ibex 35 (Spain) | 8,612.8 | 8,713.8 | -1.2 | -1.2 | 10.4 |
| PSI 20 (Portugal) | 5,564.4 | 5,569.5 | -0.1 | -0.1 | 16.2 |
| Nikkei 225 (Japan) | 27,002.0 | 28,791.7 | -6.2 | -6.2 | -3.9 |
| MSCI Emerging | 1,208.2 | 1,232.0 | -1.9 | -1.9 | -11.2 |

The global economy under stress

Advanced economies gained strength in Q4, in the face of a Q1 which looks set to be thorny. The US economy grew by 1.7% quarter-on-quarter in Q4 2021, a significant acceleration compared to the previous quarter's growth (0.6%). In 2021 as a whole, US GDP thus grew by 5.7%, having shrunk by 3.4% in 2020 due to the pandemic. The euro area economy, meanwhile, grew by 0.3% quarter-on-quarter in Q4 (5.2% for the year as a whole), thus recovering the level of Q4 2019. However, the aggregate figure for the euro area hides significant disparities between countries. France consolidated its position in Q4 as the driver of the recovery in the euro area, growing by 0.7% quarter-on-quarter (compared to 3.1% in Q3). This places the country's growth at 7.0% in 2021 as a whole, following the historic 8.0% fall in 2020. In addition to the strong performance of the French economy, Spain also registered significant quarter-on-quarter growth of 2.0%, while Italy registered 0.6% growth, thus consolidating the recovery of some of the economies that were hardest hit by the pandemic in 2020. On the other hand, the German economy was the major absentee in this phase of buoyant economic recovery in the last quarter of 2021. The German engine has shown signs of weakness, with GDP shrinking by 0.7% quarter-on-quarter in Q4 2021, having registered 1.7% growth in Q3. In 2021 as a whole, the German economy grew by a modest 2.8%, following a drop of 4.9% in 2020.

However, the economic indicators for Q1 2022 indicate a moderation of growth. The worsening of the COVID-19 infection curve does not leave the global economy immune. January's composite PMI flash indicator dropped to 50.8 points in the US (57.0 in December), the lowest figure in the last 18 months, affected by declines in both the manufacturing and the services indices. Across the Atlantic, the composite PMI also fell in the euro area, to 52.4 points (versus 53.3 points in December). The exception to this trend came, surprisingly, from Germany, where the composite PMI rose to a notable 54.3 points (49.9 in December), although the aggregate decline in the European bloc as a whole could not be avoided. The European Commission's sentiment index confirms this trend, falling to 112.7 points for the euro area as a whole (113.8 in the previous month). In this context, the downward revision of the IMF's global growth forecasts comes as no surprise. In particular, following a projected advance in the global economy of 5.9% in 2021, the Fund now expects growth to moderate to 4.4% for 2022 as a whole (-0.5 pps compared to October's forecasts). This is a very similar outlook to CaixaBank Research's forecasts (4.2% in 2022). The arguments supporting the revision of the IMF's projections for 2022 include the persistence of inflationary tensions, the supply chain problems and the prolongation of the pandemic. The international institution's downward revision has been particularly significant in the case of advanced economies,

US: GDP

Change (%)



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

Euro area: GDP

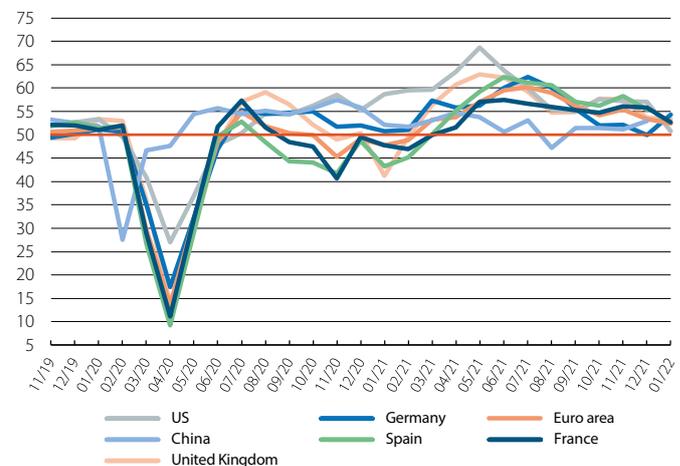
Change (%)



Source: CaixaBank Research, based on data from Eurostat.

Global: composite PMI by country

Level



Note: The January PMI are flash estimates.

Source: CaixaBank Research, based on data from Markit.

which are now projected to grow by 3.9% in 2022 (–0.6 pps compared to October’s forecasts). In the US the revision was –1.2 pps compared to the October forecasts, placing the US economy’s growth at 4.0% in 2022. The revision for the euro area has been somewhat smaller, placing the forecast for this year at 3.8% (–0.4 pps). The growth forecast for emerging economies is 4.8 % (–0.3 pps compared to October).

No let up in inflation for advanced economies. US inflation ended the year at 7%, the highest level in almost 40 years, while core inflation continued to rise to 5.5%. With price increases for a large portion of the components, the risks of more persistent inflation are by no means negligible, particularly given the potential impact the Omicron variant could have on the global economy. This impact could come in the form of significant supply constraints, with possible factory or port closures in Asia, an increase in absenteeism in countries with a greater number of infections, or companies in many sectors having difficulties in filling job vacancies (see the Focus «[The Great Resignation: paradigm shift in the US labour market?](#)» in this same *Monthly Report*). In this regard, the Fed has already taken steps to address this matter, indicating that it will begin the cycle of rate hikes in March and reduce the size of its balance sheet in 2022 (see the [Financial Markets section](#)). In the euro area, inflation reached 5.1% in January, and several countries have seen a substantial increase in their core inflation over the past few months. Thus, we believe that inflation will remain high for much of 2022, but will end the year below 2%. The major unknown, which is drawing the attention of the ECB and analysts, is what will happen with wages. If they grow by more than anticipated, this could accelerate the ECB’s monetary policy normalisation process and lead it to bring forward the first rate hike.

Tension in Eastern Europe. In addition to generating a major source of short-term geopolitical uncertainty, a possible Russian intervention in Ukraine would produce significant economic side-effects, particularly for the European economy. While high-level meetings between Russia, Ukraine and NATO countries are ongoing, the militarisation of the region and the continuous threats of economic sanctions also continue. In the face of these geopolitical tensions, there has been some instability in the financial markets and both countries’ currencies have depreciated. Although our central scenario remains one of de-escalation of the conflict in the short term through diplomatic channels, alternative scenarios such as a prolongation of the tensions for several months cannot be ruled out. This would lead to a rebound in gas prices to the highs of December (though with no pressing supply problems), which would prolong the inflationary tensions in Europe.

The Chinese economy slows, under pressure from multiple sides. Chinese GDP grew by 4.0% year-on-year in Q4 2021, the lowest growth this century besides 2020. In 2021 as a whole, China’s GDP grew by 8.1%, a figure driven by the strong

US and euro area: CPI

Year-on-year change (%)



Notes: The January data for the euro area correspond to the flash estimate. For the US, the data are up to December.
Source: CaixaBank Research, based on data from the Bureau of Labor Statistics and Eurostat.

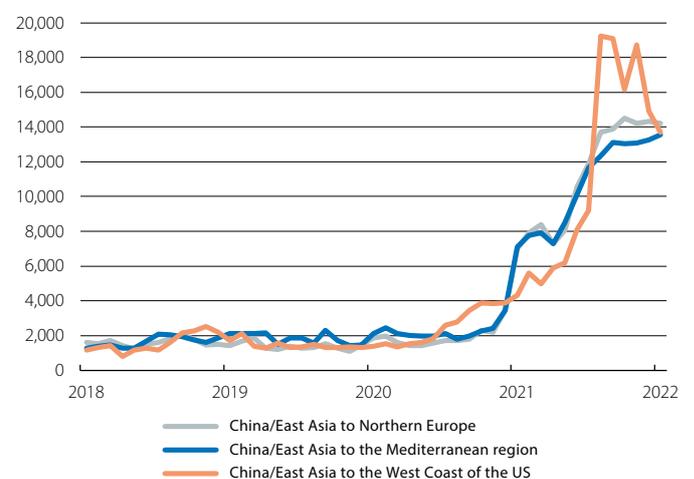
Global: vaccination, restrictive measures and mortality

| | Date of latest data | Doses delivered | % of population fully vaccinated | COVID-19 Stringency Index* (January 2022, 100 = strictest) | 14-day mortality |
|----------------|---------------------|--------------------|----------------------------------|--|------------------|
| Portugal | 27-Jan. | 21,249,010 | 90 | 36 | 5.3 |
| Spain | 26-Jan. | 89,508,239 | 82 | 43 | 4.6 |
| Canada | 27-Jan. | 77,110,756 | 79 | 78 | 5.9 |
| Italy | 27-Jan. | 126,038,452 | 76 | 77 | 8.2 |
| France | 26-Jan. | 135,520,401 | 76 | 70 | 5.4 |
| Sweden | 27-Jan. | 19,153,904 | 74 | 51 | 3.0 |
| Germany | 26-Jan. | 163,563,859 | 73 | 84 | 2.6 |
| EU | 27-Jan. | 814,395,251 | 71 | | 6.1 |
| United Kingdom | 26-Jan. | 137,671,500 | 71 | 47 | 5.6 |
| Greece | 27-Jan. | 18,971,805 | 70 | 78 | 12.8 |
| US | 27-Jan. | 536,370,947 | 63 | 51 | 9.0 |
| Poland | 26-Jan. | 51,119,917 | 57 | 48 | 8.5 |
| Russia | 26-Jan. | 152,916,877 | 48 | 50 | 6.5 |

Note: * The Stringency Index (developed by Oxford University) records the strictness of lockdown policies.
Source: CaixaBank Research, based on data from the Spanish Ministry of Health and Our World in Data - Oxford University.

Global: cost of shipping a container

(Dollars for a 40-foot container)



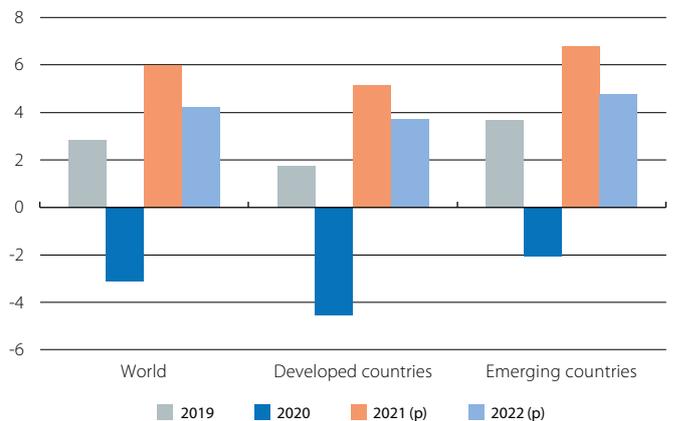
Source: CaixaBank Research, based on data from Freightos (via Refinitiv).

growth achieved in Q1 (with a rebound of 18.3%). However, a slowdown seems inevitable beginning in 2022, given the combined effects of the demographic factor, the onset of a real estate crisis and the maintenance of a rigid zero-COVID policy. According to our latest forecasts, the Chinese economy will see its growth rate slip to slightly below 5% in 2022. Indeed, the latest available economic activity data confirm this moderation (e.g. December retail sales or January PMI). In addition, the new outbreaks in several cities across the country and the subsequent restrictive measures imposed will continue to have a negative impact on economic activity. These factors are compounded by the sharp slowdown in the real estate sector, to which the People’s Bank of China has begun to respond with rate cuts (see the [Financial Markets section](#)). On the fiscal side, the Chinese authorities have announced a faster deployment of infrastructure spending and, at the local level, they are promoting measures to facilitate buyers’ access to the housing market.

The time for monetary normalisation has come in emerging economies. The economic outlook for emerging economies will, among other factors, depend on the Fed. Higher-than-expected inflation in advanced economies, coupled with more rapid rate hikes, will lead to a tightening of the macro-financial conditions in emerging economies. Russia and Brazil in particular could find themselves in a delicate position. In the event of an escalation of the conflict with Ukraine and the adoption of tougher sanctions, Russia’s economic outlook will be particularly affected. On the other hand, Brazil is facing the prospect of high inflation in an environment of high levels of indebtedness, which could lead to further rate hikes as well as hindering domestic demand.

Global: GDP

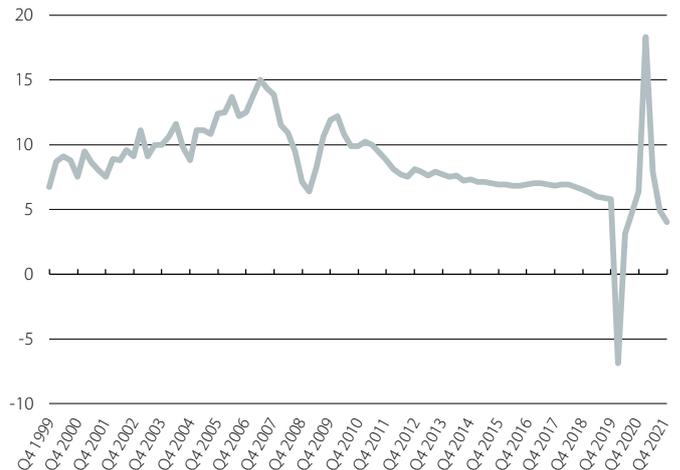
Year-on-year change (%)



Notes: The aggregates are calculated including only the major developed and emerging economies. In all cases, the aggregates are calculated at market prices and not in terms of purchasing power parity. (f) forecasts.
Source: CaixaBank Research, based on internal CaixaBank data.

China: GDP

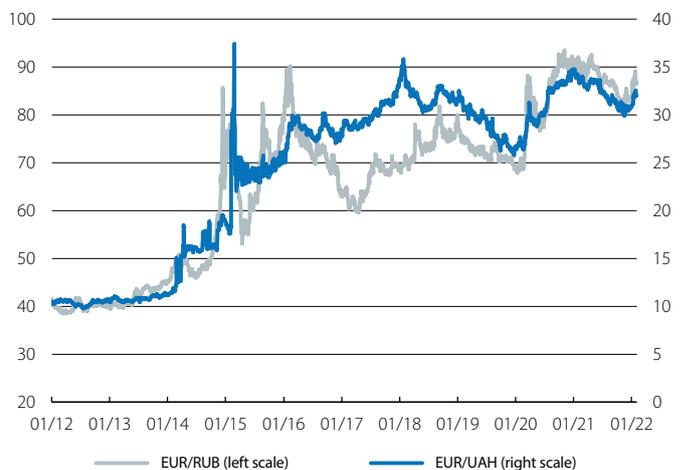
Year-on-year change (%)



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

Russia and Ukraine: exchange rate

Spot price of the rouble and hryvnia against the euro



Source: CaixaBank Research, based on data from Refinitiv.

The Great Resignation: paradigm shift in the US labour market?

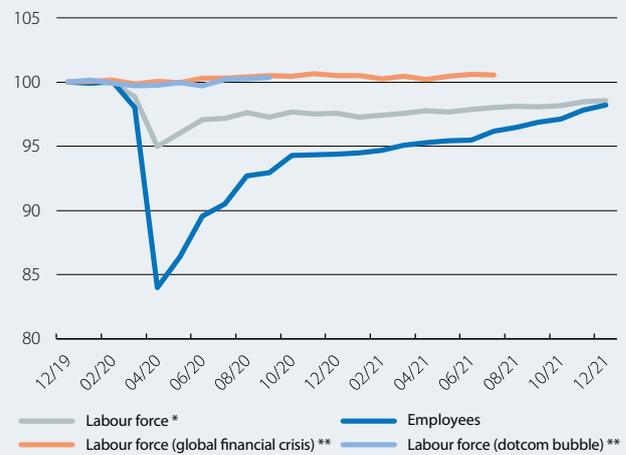
For months now, analysts of the US economy have been debating the labour market's difficulty in returning to pre-pandemic levels, despite GDP having done so back in Q2 2021. It is surprising that one of the world's most flexible labour markets is taking so long to regain normality, especially when compared to what is going on in countries such as Spain, where in theory there is much less flexibility. The question is whether we could be looking at structural changes or rather, as seems to be the case in other areas of the economy, these are merely temporary mismatches between supply and demand which ought to correct themselves over time.

For starters, it is surprising that at the end of 2021 the participation rate was still 1.5 points below February 2020 levels (at 61.9% of the working-age population), having reached a low in April 2020 (3.2 pps less than in February of the same year). However, in the previous three economic crises, the labour force barely registered any change at all (see first chart). Today, in contrast, this shrinking workforce has resulted in some 3 million fewer employees at this point in the recovery.¹

In addition to this change in the behaviour of the labour force, a new phenomenon has irrupted in the sphere of work: the Great Resignation. This new development in the labour market is being reflected in the high number of people who are choosing to quit their jobs: more than 4 million a month, compared to an average of just over 3 million in the years prior to the pandemic (see second chart). This is a phenomenon not seen in previous crises.² Although most of those quitting do so with the intention of looking for a new job (with better conditions), in some cases the resignation leads to a more definitive withdrawal from the labour force. Hence, the two phenomena – resignations and withdrawals from the labour force – are closely related and are leading to an increase in the number of job vacancies to levels not seen in recent years, with over 10 million job openings per month on average in the second half of 2021 (compared to around 7 million before the pandemic). These uncovered job positions can be found in all sectors and for all qualification requirements. In short, the rigidity of the supply of labour in the face of rising demand following the recovery of mobility

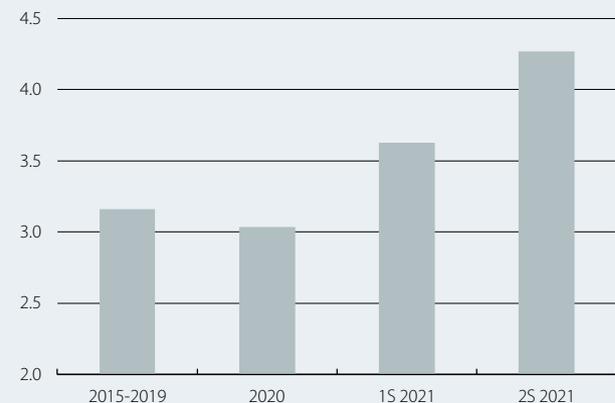
1. The labour force is the sum of the employed and unemployed. In December 2021, there were 3.5 million fewer people employed than in February 2020 (2.3% less), or 2.9 million if we consider both non-agricultural and agricultural workers.
 2. The quit rate was around 3% in H2 2021, compared to 2.2% in the pre-pandemic period. In contrast, in the previous two economic crises (the global financial crisis and the crisis triggered by the dotcom bubble), this rate did not rise during the economic recovery – on the contrary, it declined slightly.

US: labour market
 Index (100 = December 2019)



Notes: * The labour force is the sum of the employed and unemployed. ** Change in the labour force in the two previous economic crises. In the global financial crisis, 100 corresponds to November 2007, while in the dotcom bubble crisis it corresponds to February 2001.
Source: CaixaBank Research, based on data from the BLS (via Refinitiv).

US: monthly job resignations
 (Millions)



Source: CaixaBank Research, based on data from the BLS (via Refinitiv).

reflects problems that were rarely seen in a labour market as efficient as that of the US.

Circumstantial factors or paradigm shift?

What could be behind this differential behaviour of the labour force in this crisis? It is a combination of demographic, economic and even sociological factors. We have already analysed some of these reasons in previous articles:³ (i) family-related limitations, in the face of school closures for many months; (ii) the very generous unemployment benefits and other public transfers at the

3. See the Focus «[US: \(in\)complete recovery of the labour market](#)» in the MR07/2021.

height of the pandemic; (iii) the early retirement of baby boomers,⁴ and (iv) the wealth effect resulting from price increases in the real estate market and the good performance of the stock markets.

This phenomenon of more (and earlier) retirements is a structural factor that could continue to weigh on the labour market in the coming quarters. The effect of the generous benefits and other transfers, meanwhile, will be gradually diluted and the rally in real estate and financial asset prices ought to moderate, especially if the shift in monetary policy is confirmed. However, there are other, sociological factors, such as people re-evaluating the balance of their personal and professional lives, which may also be playing an important role in these changes in the supply of labour, and predicting how long these phenomena will persist is more difficult.

Following a shock such as a pandemic, it is not uncommon for many people to have changed their scale of values. In the US, where work is a central part of people's lives (Americans work more hours per week than people in any other advanced country) and where there is still a high prevalence of precarious work,⁵ it is less surprising to see people reassessing their professional lives. This would fit both with the change that has occurred in the labour force and with the high percentage of monthly resignations.

We could even be bearing witness to a paradigm shift in the country's labour market, with a heightened «class awareness» among American workers. For instance, in a recent survey conducted by Gallup, 68% of workers approved the role of unions, the highest percentage in the last 57 years. But it is still too early to try to discern which of these changes could be diluted once we leave the pandemic behind us and which could be more lasting. As such, the transitory hypothesis will also be tested in the labour market in the coming months.

For the time being, as expected, the Great Resignation and its effect on the increase in job vacancies is leading to a rise in wages. The quit rate at the end of 2021 (3.2%) would be consistent with average wage increases even slightly higher than those we are currently seeing, at 5.5% (see third chart). Such wage rises will tend to prolong the inflationary pressures in the US and, combined with other factors, they have led to a major shift in monetary policy in the country.

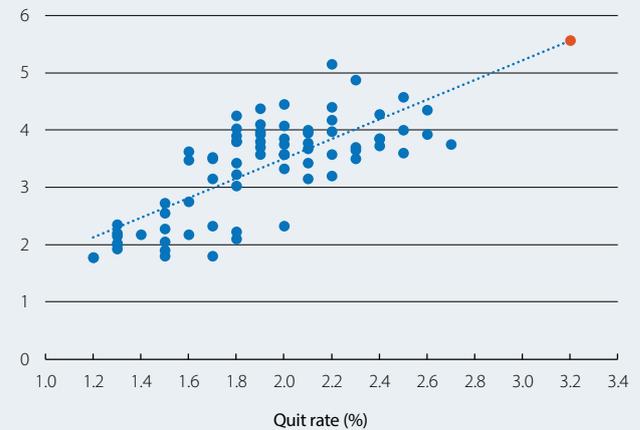
Clàudia Canals and José Ramón Díez

4. According to a recent study by the St. Louis Fed, the number of baby boomers who retired in 2020 and the first half of 2021 was 2.4 million more than expected. See M. Faria-e-Castro (2021). «The COVID Retirement Boom». *Economic Synopses*, (25), 1-2.

5. See Arne L. Kalleberg (2011). «Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s-2000s». Russell Sage Foundation.

US: quit rate vs. wage growth

Average wage growth in the 4 quarters posterior to quit rate, year-on-year change (%)



Notes: Quarterly data from Q1 2001 to Q4 2019 (pre-pandemic). The red dot is the wage growth estimate based on the average quit rate as of the end of 2021.

Source: CaixaBank Research, based on data from the BLS and the Atlanta Fed (via Refinitiv).

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

UNITED STATES

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 10/21 | 11/21 | 12/21 |
|---|-------|-------|---------|---------|---------|---------|-------|-------|---------|
| Activity | | | | | | | | | |
| Real GDP | -3.4 | 5.7 | 0.5 | 12.2 | 4.9 | 5.5 | - | - | - |
| Retail sales (excluding cars and petrol) | 2.1 | 16.7 | 11.9 | 26.2 | 13.7 | 15.9 | 14.9 | 16.3 | 16.5 |
| Consumer confidence (value) | 101.0 | 112.7 | 99.1 | 122.1 | 116.7 | 112.9 | 111.6 | 111.9 | 115.2 |
| Industrial production | -7.2 | 5.5 | -1.6 | 14.7 | 5.5 | 4.5 | 4.8 | 5.0 | 3.7 |
| Manufacturing activity index (ISM) (value) | 52.5 | 60.6 | 61.3 | 61.0 | 60.0 | 60.1 | 60.8 | 60.6 | 58.8 |
| Housing starts (thousands) | 1,396 | 1,598 | 1,599 | 1,588 | 1,562 | 1,644 | 1,552 | 1,678 | 1,702.0 |
| Case-Shiller home price index (value) | 228 | ... | 249 | 262 | 274 | ... | 279 | 283 | ... |
| Unemployment rate (% lab. force) | 8.1 | 5.4 | 6.2 | 5.9 | 5.1 | 4.2 | 4.6 | 4.2 | 3.9 |
| Employment-population ratio (% pop. > 16 years) | 56.8 | 58.4 | 57.6 | 58.0 | 58.6 | 59.2 | 58.9 | 59.3 | 59.5 |
| Trade balance ¹ (% GDP) | -3.2 | ... | -3.6 | -3.6 | -3.7 | ... | -3.6 | -3.7 | ... |
| Prices | | | | | | | | | |
| Headline inflation | 1.2 | 4.7 | 1.9 | 4.8 | 5.3 | 6.7 | 6.2 | 6.8 | 7.0 |
| Core inflation | 1.7 | 3.6 | 1.4 | 3.7 | 4.1 | 5.0 | 4.6 | 4.9 | 5.5 |

JAPAN

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 10/21 | 11/21 | 12/21 |
|--|-------|------|---------|---------|---------|---------|-------|-------|-------|
| Activity | | | | | | | | | |
| Real GDP | -4.5 | ... | -1.8 | 7.3 | 1.1 | ... | - | - | - |
| Consumer confidence (value) | 31.1 | 36.3 | 33.3 | 35.4 | 37.3 | 39.2 | 39.2 | 39.2 | 39.1 |
| Industrial production | -10.6 | 5.8 | -1.5 | 19.9 | 5.9 | 1.2 | -2.6 | 3.5 | 2.7 |
| Business activity index (Tankan) (value) | -19.8 | 13.8 | 5.0 | 14.0 | 18.0 | 18.0 | - | - | - |
| Unemployment rate (% lab. force) | 2.8 | ... | 2.8 | 2.9 | 2.8 | ... | 2.7 | 2.8 | ... |
| Trade balance ¹ (% GDP) | 0.1 | -0.4 | 0.2 | 0.7 | 0.3 | -0.4 | 0.2 | -0.1 | -0.4 |
| Prices | | | | | | | | | |
| Headline inflation | 0.0 | -0.2 | -0.5 | -0.7 | -0.2 | 0.5 | 0.1 | 0.6 | 0.8 |
| Core inflation | 0.2 | -0.5 | 0.0 | -0.9 | -0.5 | -0.7 | -0.7 | -0.7 | -0.8 |

CHINA

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 10/21 | 11/21 | 12/21 |
|-------------------------------------|------|------|---------|---------|---------|---------|-------|-------|-------|
| Activity | | | | | | | | | |
| Real GDP | 2.2 | 8.1 | 18.3 | 7.9 | 4.9 | 4.0 | - | - | - |
| Retail sales | -2.9 | 12.4 | 34.0 | 14.1 | 5.1 | 3.5 | 4.9 | 3.9 | 1.7 |
| Industrial production | 3.4 | 9.3 | 24.6 | 9.0 | 4.9 | 3.9 | 3.5 | 3.8 | 4.3 |
| PMI manufacturing (value) | 49.9 | 50.5 | 51.3 | 51.0 | 50.0 | 49.9 | 49.2 | 50.1 | 50.3 |
| Foreign sector | | | | | | | | | |
| Trade balance ^{1,2} | 524 | 680 | 621 | 605 | 636 | 680 | 663 | 661 | 680 |
| Exports | 3.6 | 30.0 | 48.9 | 30.7 | 24.4 | 23.1 | 27.1 | 22.0 | 20.8 |
| Imports | -0.6 | 30.1 | 29.4 | 44.0 | 25.6 | 23.7 | 20.4 | 31.4 | 19.5 |
| Prices | | | | | | | | | |
| Headline inflation | 2.5 | 0.9 | 0.0 | 1.1 | 0.8 | 1.8 | 1.5 | 2.3 | 1.5 |
| Official interest rate ³ | 3.9 | 3.8 | 3.9 | 3.9 | 3.9 | 3.8 | 3.9 | 3.9 | 3.8 |
| Renminbi per dollar | 6.9 | 6.5 | 6.5 | 6.5 | 6.5 | 6.4 | 6.4 | 6.4 | 6.4 |

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 Refinitiv.

EURO AREA

Activity and employment indicators

Values, unless otherwise specified

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---|-------|-------|---------|---------|---------|---------|-------|-------|-------|
| Retail sales (year-on-year change) | -0.9 | ... | 2.6 | 12.7 | 2.5 | ... | 7.8 | ... | ... |
| Industrial production (year-on-year change) | -7.9 | ... | 4.8 | 24.2 | 6.1 | ... | -1.5 | ... | ... |
| Consumer confidence | -14.3 | -7.6 | -13.8 | -5.5 | -4.6 | -6.7 | -6.8 | -8.4 | -8.5 |
| Economic sentiment | 88.0 | 110.1 | 94.6 | 113.2 | 116.8 | 115.7 | 116.2 | 113.8 | 112.7 |
| Manufacturing PMI | 48.6 | 60.2 | 58.4 | 63.1 | 60.9 | 58.2 | 58.4 | 58.0 | 59.0 |
| Services PMI | 42.5 | 53.6 | 46.9 | 54.7 | 58.4 | 54.5 | 55.9 | 53.1 | 51.2 |
| Labour market | | | | | | | | | |
| Employment (people) (year-on-year change) | -1.5 | ... | -1.7 | 2.0 | 2.0 | ... | ... | ... | - |
| Unemployment rate (% labour force) | 7.9 | ... | 8.1 | 8.0 | 7.5 | ... | 7.2 | ... | ... |
| Germany (% labour force) | 3.9 | ... | 3.9 | 3.6 | 3.4 | ... | 3.2 | ... | ... |
| France (% labour force) | 8.0 | ... | 8.0 | 8.2 | 7.9 | ... | 7.5 | ... | ... |
| Italy (% labour force) | 9.3 | ... | 10.1 | 9.8 | 9.2 | ... | 9.2 | ... | ... |
| Real GDP (year-on-year change) | -6.5 | 5.4 | -1.1 | 14.4 | 3.9 | 4.6 | - | - | - |
| Germany (year-on-year change) | -4.9 | 3.0 | -2.8 | 10.4 | 2.9 | 1.4 | - | - | - |
| France (year-on-year change) | -8.0 | 7.4 | 1.7 | 19.0 | 3.5 | 5.4 | - | - | - |
| Italy (year-on-year change) | -9.0 | 6.8 | -0.3 | 17.3 | 4.0 | 6.4 | - | - | - |

Prices

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---------|------|------|---------|---------|---------|---------|-------|-------|-------|
| General | 0.3 | 2.6 | 1.1 | 1.8 | 2.8 | 4.6 | 4.9 | 5.0 | ... |
| Core | 0.7 | 1.5 | 1.2 | 0.9 | 1.4 | 2.4 | 2.6 | 2.6 | ... |

Foreign sector

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--|------|------|---------|---------|---------|---------|-------|-------|-------|
| Current balance | 2.1 | ... | 2.8 | 3.1 | 3.1 | ... | 5.7 | ... | ... |
| Germany | 7.0 | ... | 7.2 | 7.7 | 7.6 | ... | 7.0 | ... | ... |
| France | -1.9 | ... | -1.8 | -1.6 | -1.2 | ... | -0.6 | ... | ... |
| Italy | 3.8 | ... | 3.8 | 4.3 | 4.2 | ... | 1.7 | ... | ... |
| Nominal effective exchange rate¹ (value) | 93.8 | 94.2 | 95.3 | 94.9 | 93.9 | 92.7 | 92.5 | 92.7 | ... |

Credit and deposits of non-financial sectors

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---|------|------|---------|---------|---------|---------|-------|-------|-------|
| Private sector financing | | | | | | | | | |
| Credit to non-financial firms ² | 6.3 | 3.4 | 6.4 | 2.3 | 1.8 | 3.2 | 2.9 | 4.2 | ... |
| Credit to households ^{2,3} | 3.2 | 3.8 | 3.1 | 3.9 | 4.1 | 4.1 | 4.2 | 4.1 | ... |
| Interest rate on loans to non-financial firms ⁴ (%) | 1.2 | ... | 1.1 | 1.2 | 1.3 | ... | 1.1 | ... | ... |
| Interest rate on loans to households for house purchases ⁵ (%) | 1.4 | ... | 1.3 | 1.3 | 1.3 | ... | 1.3 | ... | ... |
| Deposits | | | | | | | | | |
| On demand deposits | 12.9 | 12.6 | 16.1 | 12.4 | 11.4 | 10.5 | 10.3 | 10.1 | ... |
| Other short-term deposits | 0.6 | -0.8 | 1.0 | -0.6 | -2.0 | -1.5 | -1.4 | -1.5 | ... |
| Marketable instruments | 8.1 | 11.5 | 13.8 | 12.2 | 10.2 | 9.9 | 12.2 | 6.4 | ... |
| Interest rate on deposits up to 1 year from households (%) | 0.2 | ... | 0.2 | 0.2 | 0.2 | ... | 0.2 | ... | ... |

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

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

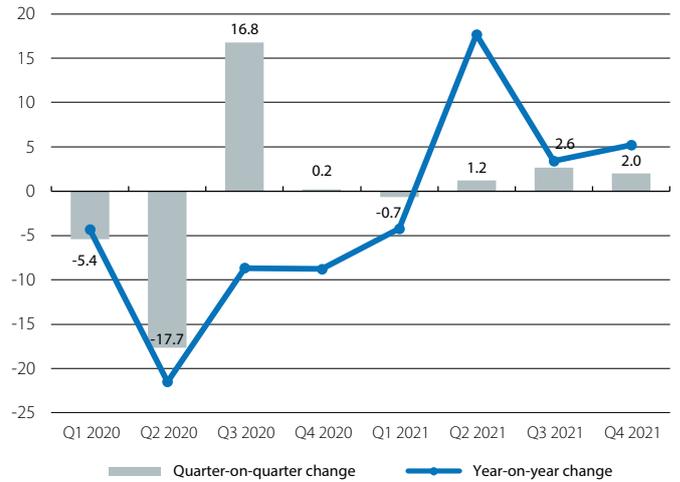
The Spanish economy remains steadfast in the face of the onslaught from the new wave of infections

GDP grew by 5.0% in 2021 after showing a good tone in the closing stages of the year. Economic activity grew by 2.0% quarter-on-quarter in Q4 2021, down from the previous quarter (2.6%), but above CaixaBank Research's forecast (1.4%). In year-on-year terms the growth stood at 5.2%, placing GDP 4.0% below the pre-pandemic level (Q4 2019). By component of demand, the strong quarterly increase is explained by the growth in investment and exports. Specifically, investment grew by 4.9% quarter-on-quarter, driven mostly by investment in equipment. The change in inventories also made a significant positive contribution, potentially reflecting companies' preference to accumulate inventories as a way to deal with the supply chain difficulties. Exports, meanwhile, grew by a significant 6.5%, thanks to the very strong performance of services (33%). This places them just 5.1% below the level of Q4 2019, compared to 42.8% just two quarters ago. The recovery of the tourism sector is no doubt closely linked to the good performance of this component. In contrast, private consumption disappointed, registering a drop of 1.2% on a quarter-on-quarter basis, weighed down by the epidemiological context and high inflation. The strength of the GDP figure for Q4 2021 is likely to lead us to revise up our 2022 GDP growth forecast, which currently stands at 5.5%.

The sixth wave of infections seems to have peaked. The number of infections in Spain moderated slightly during the last week, although it still remains very high, at 3,195 infections per 100,000 inhabitants in 14 days (at this rate, every 14 days 3.2% of the population gets infected). Despite the high infection rate, and thanks to the extensive reach of the vaccines among the population (91% of the population over 5 years of age has received a full dose and 81% of the population over 50 has received a booster dose), the pressure on hospitals remains below that of previous waves. For instance, the number of COVID patients in ICU beds this January was 28% and 51% below the November 2020 and February 2021 figures, respectively. The stabilisation of the infection rate, the contained levels of pressure on the health system and the progress in the booster dose campaign suggest that it will be possible to overcome the sixth wave without having to resort to sweeping restrictive measures. Thus, while it will certainly have some effect on economic activity – whether through heightened uncertainty, limitations on international mobility flows or higher levels of absenteeism due to sick leave – the impact will be moderate. Furthermore, it should not lead to a decline in GDP in Q1 of the year, and the revival of the economic recovery process should be rapid as soon as the epidemiological situation shows clear signs of improvement.

The latest indicators, although still scarce, show that economic activity has resisted the onslaught of the new wave of infections in the opening weeks of 2022. In particular, the

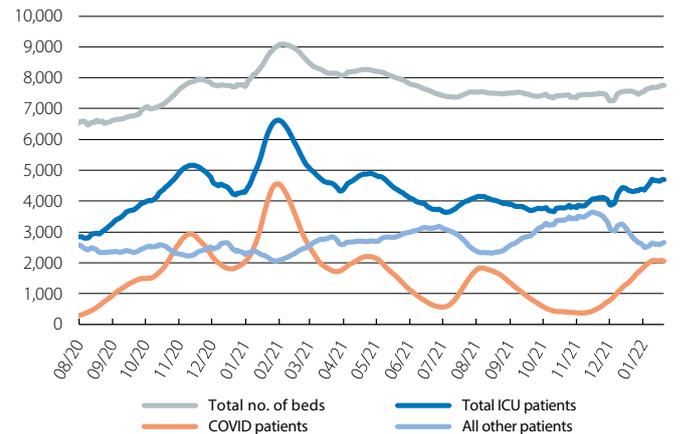
Spain: GDP Change (%)



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

Spain: occupation of ICU beds by patients with and without COVID-19

Total number of ICU beds and patients admitted

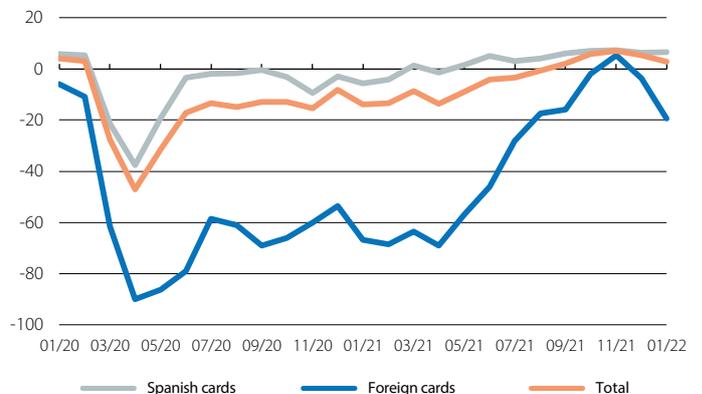


Note: Data updated as of 26 January 2022.

Source: CaixaBank Research, based on data from the Ministry of Health.

Spain: CaixaBank consumption indicator

Change versus 2019 (%)



Notes: Expenditure and cash withdrawals carried out with cards issued by CaixaBank and foreign expenditure registered on CaixaBank POS terminals. In the case of foreign cards, cash withdrawals at CaixaBank ATMs are also included. Customers and POS terminals that originate from or are shared with Bankia are excluded. The data for January includes only the first three weeks of the month.

Source: CaixaBank Research, based on internal CaixaBank data.

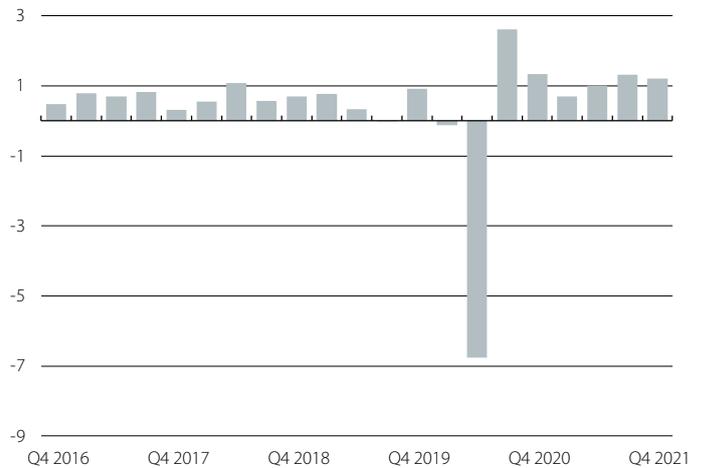
manufacturing PMI for January remained at 56.2 points, the same figure as the prior month and well above the no-change threshold (50 points). The CaixaBank consumption indicator, meanwhile, showed year-on-year growth of around 13% during the first three weeks of January, exceeding the year-on-year change of December 2021 (9.5%). Finally, social security affiliation increased in January in seasonally adjusted terms by 71,948 people.

The Spanish labour market was in good health in 2021, following the sharp deterioration suffered the previous year. According to the LFS, employment ended 2021 with an increase of 841,000 people, the number of unemployed people fell by 616,000 and the unemployment rate dropped to 13.3% from the 16.1% at the end of 2020. This intense recovery has allowed the labour market to exceed the pre-pandemic figures: there are now 218,000 more people in work and 88,000 fewer unemployed than in Q4 2019. Focusing on the data for Q4 2021, the results were positive, although they confirm a slight deceleration. In seasonally adjusted terms, the quarterly growth in employment moderated to 1.2% from 1.3% in Q3 2021, and the number of hours worked rose at a year-on-year rate of 2.5%, compared to 5.1% in the previous quarter. This poor result in the number of hours worked is partly due to the increase in the number of employed people who did not work in the week in question, being 2.6% higher than the previous year.

Inflation remains high and there are already signs of contagion to the rest of the CPI components. Headline inflation stood at 6.0% in January (6.5% in December), according to the National Statistics Institute's flash indicator. This marks a slowdown in the rising trend of recent months, although it remains at historically high levels. This moderation is due to the base effect of the electricity price rally of January 2021. Inflation is expected to pick up again in February, as this effect is undone. Core inflation, meanwhile, continued to climb and reached 2.4% (2.1% in December). This rise suggests that the high inflation is spreading to the other components of the consumer price index. As an example, the inflation data split by CPI component for the month of December – the latest available at this level of detail – show that inflation is above 2% in 55% of the components that make up the index, and above 5% in 23% of them. In September, these percentages were 30% and 12%, respectively (see the Focus on «[The second-round effects of the inflationary shock](#)» in this same *Monthly Report*).

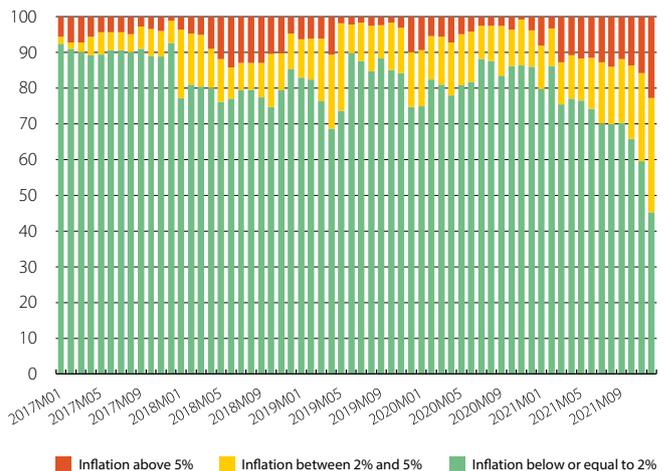
The improvement in tourism revenues allows the current account surplus to grow. For the year to date to November, the current account balance showed a surplus of 9,735 million euros. This is 16.9% more than in the same period of 2020, but still a far cry from the figures for 2019 (24,425 million). The improvement in the current account balance is mainly explained by the surplus in the tourism balance, which rose by 114% year-on-year to 18,173 million, although it remained well below the figure for 2019 (44,524 million). In contrast, the trade deficit increased by 68.7% year-on-year to 20,836 million. The increase in the deficit is due to a sharp deterioration in the energy deficit of 59% year-on-year, bringing it to 24,441 million. This reflects the increase in the prices of oil and gas, which has been slightly offset by a small improvement in the surplus of the non-energy component (18.9% year-on-year, bringing it to 3,575 million).

Spain: employment (seasonally adjusted data)
Quarter-on-quarter change (%)



Source: CaixaBank Research, based on data from the National Statistics Institute (Labour Force Survey).

Spain: inflation traffic lights
(% of the CPI components)



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

Spain: foreign trade in goods *

Year-on-year change in the 12-month cumulative balance (%)



Notes: * Nominal data, series not seasonally adjusted. Excludes energy.
Source: CaixaBank Research, based on data from the Customs Department.

The second-round effects of the inflationary shock

Inflation began 2021 at 0.5% and ended the year at 6.5%. This sharp rise, which has brought inflation to its highest level since 1992, has raised doubts about whether we are experiencing a transitory rebound (and will return to less concerning levels in 2022) or if we will experience more persistent inflationary pressures.

On one hand, the main factors driving the current rally (energy prices, base effects and bottlenecks caused by the surge in demand) are mostly transitory in nature, which should favour a gradual moderation of inflation in 2022. On the other hand, high prices in energy and other inputs also push up the prices of other products if sellers pass on part of their cost increase to buyers. If these «second-round effects» are sufficiently severe and persistent (the longer the current inflation levels are maintained, the more likely that this will be the case), then the inflation shock could become much more persistent and even outlast the hypothetical moderation of energy prices and other inputs. A rise in prices across the board is also more likely to impact wages, which is another type of second-round effect that would contribute to prolonging the pressure on prices.

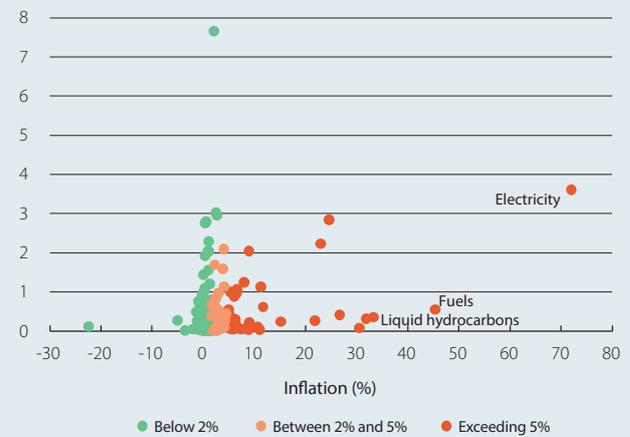
In this regard, it is key to understand whether the high inflation rates are spreading to the rest of the components of the Consumer Price Index (CPI) or whether, on the contrary, they are concentrated in just a few components essentially within the energy segment. To this end, we performed a detailed analysis of the 221 subclasses that constitute the CPI goods basket and how their distribution¹ has evolved since 2018.

In December, 45% of the CPI goods basket (vs. 59% in November and 80% in January 2021) registered inflation rates below 2%; 32% of the CPI basket (vs. 25% in November and 12% in January 2021) had inflation rates between 2% and 5%, while 23% (vs. 16% in November and 8% in January 2021) had inflation rates exceeding 5%. The highest inflation rates are concentrated within a relatively small group of subclasses, and the three items with the highest levels of inflation do indeed belong to the energy component. Even so, there are several items within the food sector that also show very high inflation rates. In fact, 21 of the 39 subclasses with inflation above 5% belong to the food sector (most notably other edible oils and olive oil, with rates of 30.5% and 26.7%, respectively). Being an energy-dependent sector, with high pressure on profit margins and relatively inelastic demand, the food sector is most likely passing on much of its increase in costs to the final consumer. Although the current situation is concerning, it cannot be said to be

1. We analysed the distribution of inflation in the 221 subclasses, weighted based on their relative importance in the CPI.

Spain: inflation in the CPI basket, by subclass

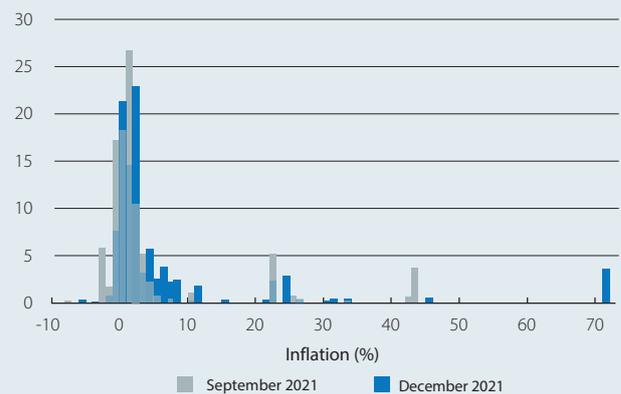
Relative weight in the CPI (%)



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

Spain: distribution of CPI inflation (December vs. September)

Frequency (%)



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

alarming: with the exception of the food sector, the impact of second-round effects on the final consumer is proving to be relatively contained so far.

That said, if we look at the trend shown by the data, the message changes: the situation has deteriorated considerably since September. Comparing the distribution of inflation between September and December (see second chart), we can see that it has shifted clearly to the right. This indicates that a large portion of the subclasses that comprise the CPI have registered significant increases in their respective inflation rates.

The evolution of the 25th percentile, the median and the 75th percentile of the CPI inflation distribution over time offers us another perspective (see third chart).

Up to September, the median remained at similar levels to 2018. This is because the surge in inflation was caused by energy-related items (mainly electricity), which have a low weight in the CPI basket but very high inflation rates (thus affecting the mean but not the median).

In contrast, since September both the median (2.0% vs. 1.2% in September) and the 25th and 75th percentiles have picked up. The most striking surge is in the 75th percentile: 25% of the CPI basket registered an inflation rate above 4.1% in December (compared to 2.1% in September). Will we see more pronounced second-round effects which will, in turn, generate persistent inflationary tensions? Not necessarily, but it will be key for the pressures on energy prices and other transitory effects to subside over the coming months, as the high inflation rates have already begun to spread.

Màxim Ventura

Spain: evolution of the CPI inflation percentiles

Year-on-year change (%)



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

Supply chains: no escalation in the disruptions

The European Commission has published the results of its quarterly survey on the industrial sector. This survey covers a wide range of questions, but in this article we will focus on the messages emanating from the question on the main factors that are limiting manufacturing companies' production capacity.

Shortages of materials and equipment, together with access to labour, are the major obstacles for manufacturing production

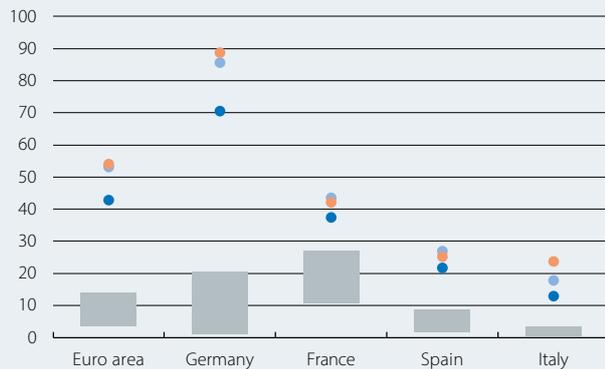
In the last three iterations of the survey, the main limiting factor for production has been the shortage of materials and/or equipment. This is shown in the first chart, which presents the results of the survey for the manufacturing sector as a whole in an international comparison. This first message is consistent with the disruptions that global supply chains are currently experiencing.¹ While significant differences are observed between countries (Germany is experiencing far greater problems than the rest), in all cases the percentage of firms that affirm they are

experiencing supply problems is well above the usual historical range. In Spain, 25% of firms cite the shortage of materials and/or equipment as a factor limiting their production capacity. This is a high figure, given that according to the historical data only 2% to 7% of firms usually mention it as a limiting factor. Access to labour, although to a lesser extent, also appears to be a factor limiting the sector's production capacity. In contrast, demand-related or financial factors do not pose a significant limitation for production right now.

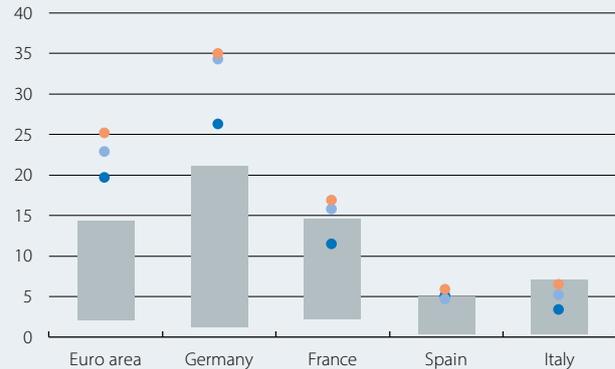
The shortage of materials has not worsened, and is concentrated in a few sectors in the case of Spain

Secondly, we note that the severity of the shortage of materials and/or equipment has not deteriorated in the last quarter: the results of the latest survey in January are very similar to those of the October survey in all countries, except perhaps Italy. The percentage of Spanish firms that cite the shortage of materials and/or equipment as a factor

Limiting factors in manufacturing production: shortage of materials or equipment
(% of companies)



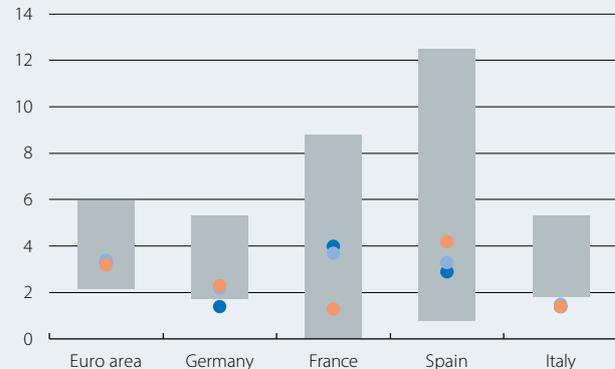
Limiting factors in manufacturing production: access to labour
(% of companies)



Limiting factors in manufacturing production: demand
(% of companies)



Limiting factors in manufacturing production: financial factors
(% of companies)



Notes: The grey bars show the usual historical range of the percentage of companies that cite the particular factor in question as a limiting factor for their production. The historical range is calculated using data for the period between Q1 1995 and Q1 2021.
Source: CaixaBank Research, based on data from the survey by the European Commission.

1. See, for example, the article «Bottlenecks: from the causes to how long they will last» in the Dossier of the MR12/2021.

Limiting factors in manufacturing production: shortage of materials or equipment

(% of companies within each industry)

| | Euro area | Germany | France | Spain | Italy |
|---|-----------|-----------|-----------|-----------|-----------|
| Food industry | 33 | 67 | 35 | 5 | 6 |
| Beverage production | 22 | 20 | 25 | 25 | 13 |
| Tobacco industry | | | | 0 | 0 |
| Textile industry | 31 | 72 | 38 | 11 | 8 |
| Clothing production | 15 | 58 | 11 | 1 | 8 |
| Leather and footwear industry | 9 | 54 | 2 | 14 | 5 |
| Wood and cork industry, except furniture; basketry and plaiting | 38 | 49 | 81 | 11 | 17 |
| Paper industry | 49 | 79 | 47 | 39 | 23 |
| Graphic arts and reproduction of recorded media | 48 | 93 | 39 | 24 | 16 |
| Oil refining and coking | 29 | 87 | 4 | 0 | 6 |
| Chemicals industry | 46 | 75 | 37 | 19 | 32 |
| Manufacture of pharmaceutical products | 42 | 52 | 10 | 4 | 8 |
| Manufacture of rubber and plastic products | 56 | 94 | 58 | 17 | 20 |
| Manufacture of other non-metallic mineral products | 32 | 55 | 28 | 25 | 9 |
| Metallurgy; manufacture of iron, steel and ferro-alloy products | 33 | 54 | 31 | 9 | 9 |
| Manufacture of metal products, except machinery and equipment | 45 | 77 | 50 | 43 | 15 |
| Manufacture of computer, electronic and optical products | 73 | 100 | 63 | 53 | 30 |
| Manufacture of electrical equipment | 85 | 100 | 80 | 55 | 33 |
| Manufacture of machinery and equipment N.E.C. | 81 | 98 | 75 | 18 | 31 |
| Manufacture of motor vehicles, trailers and semi-trailers | 79 | 91 | 81 | 65 | 33 |
| Manufacture of other transportation equipment | 35 | | 14 | 14 | 14 |
| Manufacture of furniture | 53 | 77 | 63 | 8 | 27 |
| Other manufacturing industries | 52 | 98 | 20 | 14 | 8 |
| Repair and installation of machinery and equipment | 57 | | 44 | 58 | 14 |
| Total manufacturing | 54 | 89 | 42 | 25 | 24 |

■ Value < Sector average

□ Sector average < Value < Sector average + 3 standard dev.

■ Value > Sector average + 3 standard dev.

■ Value > Sector average + 3 standard dev. and Value > Total manufacturing value

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

limiting their production capacity is 25% in January 2022, a high but stable figure compared to the previous quarter (27%). Thus, the problem does not appear to have got any worse since October 2021.

As we drill down by sector, we see that in Germany the shortage is widespread. There are even some sectors, such as the manufacture of computer, electronic and optical products, and the manufacture of electrical equipment, in which all the companies surveyed report shortages. The case of Spain is less severe. The shortage problems are not widespread but rather are concentrated in certain sectors, mainly in the paper industry, the manufacture of metal and electronic products, and the automotive industry. The attached table shows the results of the survey, shaded according to the severity of the problems in each sector (see legend).²

How will this problem affect Spain's economic recovery?

For the time being, the data suggest that, while the difficulties that supply chains are experiencing may slow the pace of the recovery, they do not seem to be causing it to derail. This is illustrated by the GDP figure for Q4 2021,

which showed high growth (2% quarter-on-quarter), driven largely by investment in capital goods, in a context of high supply shortages. Also, as the social security affiliation data show, employment continued to grow at a steady pace in January.³ The affiliation data even remained healthy in the sector hardest hit by the shortages of materials, namely industry, where the figure grew by 2.7% year-on-year, surpassing the year-on-year growth of Q4 2021 (2.3%). On the other hand, although slightly behind the curve, the manufacturing sector's production rate grew by 0.6% in the second half of 2021 compared to the first half, precisely as the bottlenecks intensified.⁴ This growth may be somewhat timid, but it is growth nonetheless. Thus, all the indicators appear to suggest that the recovery will continue in Q1 2022, albeit at a more moderate pace than in the previous quarter due to the impact of the sixth wave of infections.

However, the distortions in supply chains are pushing up production prices. This is a trend that could exacerbate one of the biggest risks in the current environment, namely that of inflationary pressures in consumer prices. And this could have detrimental implications for growth.

Oriol Carreras

2. There are sectors in some countries that are not reported in the survey. These cells are left blank and without a number.

3. See the Brief Note at www.caixabankresearch.com.

4. Data available up to November 2021.

Activity and employment indicators

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--|-------|-------|---------|---------|---------|---------|-------|-------|-------|
| Industry | | | | | | | | | |
| Industrial production index | -9.4 | ... | 3.0 | 27.9 | 1.7 | ... | 4.8 | ... | ... |
| Indicator of confidence in industry (value) | -14.0 | 0.4 | -7.3 | 2.5 | 2.1 | 4.4 | 2.4 | 5.3 | 6.1 |
| Manufacturing PMI (value) | 47.5 | 57.0 | 53.0 | 59.2 | 58.9 | 56.9 | 57.1 | 56.2 | ... |
| Construction | | | | | | | | | |
| Building permits (cumulative over 12 months) | -12.8 | ... | -19.1 | -1.8 | 15.0 | ... | 22.8 | ... | ... |
| House sales (cumulative over 12 months) | -12.5 | ... | -17.3 | 0.6 | 22.2 | ... | 32.2 | ... | ... |
| House prices | 2.1 | ... | 0.9 | 3.3 | 4.2 | ... | ... | ... | ... |
| Services | | | | | | | | | |
| Foreign tourists (cumulative over 12 months) | -36.9 | ... | -85.5 | -81.3 | -52.7 | ... | 27.6 | ... | ... |
| Services PMI (value) | 40.3 | 55.0 | 44.3 | 58.8 | 59.6 | 57.4 | 59.8 | 55.8 | ... |
| Consumption | | | | | | | | | |
| Retail sales | -7.1 | 5.1 | -0.4 | 20.4 | -0.3 | 0.6 | 5.1 | -2.3 | ... |
| Car registrations | -29.3 | 158.0 | 12.7 | 661.0 | -24.5 | -17.1 | -12.3 | -18.7 | ... |
| Consumer confidence index (value) | -22.8 | -13.3 | -22.1 | -11.1 | -9.1 | -10.8 | -12.5 | -13.1 | -12.0 |
| Labour market | | | | | | | | | |
| Employment ¹ | -2.9 | 3.0 | -2.4 | 5.7 | 4.5 | 4.3 | ... | ... | ... |
| Unemployment rate (% labour force) | 15.5 | 14.8 | 16.0 | 15.3 | 14.6 | 13.3 | ... | ... | ... |
| Registered as employed with Social Security ² | -2.0 | 2.5 | -1.4 | 3.9 | 3.8 | 3.9 | 3.8 | 4.1 | ... |
| GDP | -10.8 | 5.0 | -4.3 | 17.7 | 3.4 | 5.2 | - | - | - |

Prices

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---------|------|------|---------|---------|---------|---------|-------|-------|-------|
| General | -0.3 | 3.1 | 0.6 | 2.6 | 3.4 | 5.8 | 5.5 | 6.6 | 6.0 |
| Core | 0.7 | 0.8 | 0.4 | 0.1 | 0.8 | 1.7 | 1.7 | 2.1 | 2.4 |

Foreign sector

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--|-------|------|---------|---------|---------|---------|-------|-------|-------|
| Trade of goods | | | | | | | | | |
| Exports (year-on-year change, cumulative over 12 months) | -10.0 | ... | -8.1 | 8.7 | 15.2 | ... | 19.5 | ... | ... |
| Imports (year-on-year change, cumulative over 12 months) | -14.7 | ... | -14.0 | 3.3 | 13.5 | ... | 21.1 | ... | ... |
| Current balance | 9.3 | ... | 8.3 | 9.4 | 11.6 | ... | 10.7 | ... | ... |
| Goods and services | 16.5 | ... | 16.0 | 17.0 | 19.7 | ... | 19.4 | ... | ... |
| Primary and secondary income | -7.3 | ... | -7.6 | -7.7 | -8.2 | ... | -8.8 | ... | ... |
| Net lending (+) / borrowing (-) capacity | 13.7 | ... | 12.7 | 15.7 | 19.7 | ... | 19.7 | ... | ... |

Credit and deposits in non-financial sectors³

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--------------------------------------|-------|------|---------|---------|---------|---------|-------|-------|-------|
| Deposits | | | | | | | | | |
| Household and company deposits | 7.5 | ... | 8.9 | 4.9 | 4.8 | 5.8 | 5.7 | 6.6 | ... |
| Sight and savings | 12.3 | ... | 14.1 | 9.2 | 8.9 | 9.2 | 9.0 | 9.8 | ... |
| Term and notice | -16.5 | ... | -20.4 | -23.5 | -26.0 | -27.6 | -27.9 | -27.8 | ... |
| General government deposits | 1.0 | ... | 11.2 | 16.3 | 15.1 | 19.5 | 18.1 | 20.3 | ... |
| TOTAL | 7.1 | ... | 9.1 | 5.5 | 5.5 | 6.7 | 6.6 | 7.4 | ... |
| Outstanding balance of credit | | | | | | | | | |
| Private sector | 1.2 | ... | 2.3 | -0.4 | -0.7 | -0.2 | -0.3 | 0.3 | ... |
| Non-financial firms | 4.9 | ... | 7.8 | -0.7 | -1.9 | -1.0 | -1.2 | 0.2 | ... |
| Households - housing | -1.8 | ... | -1.0 | 0.0 | 0.6 | 1.0 | 1.1 | 1.1 | ... |
| Households - other purposes | 0.8 | ... | -1.8 | -0.7 | -1.2 | -1.4 | -1.6 | -1.7 | ... |
| General government | 3.0 | ... | 9.5 | 17.4 | 22.7 | 11.5 | 12.4 | 5.5 | ... |
| TOTAL | 1.3 | ... | 2.7 | 0.6 | 0.7 | 0.5 | 0.5 | 0.6 | ... |
| NPL ratio (%)⁴ | 4.5 | ... | 4.5 | 4.5 | 4.4 | ... | 4.3 | ... | ... |

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

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

Portugal's GDP growth reached almost 5% in 2021

GDP growth in Q4 2021 was higher than expected. The first estimate indicates that GDP grew by 1.6% quarter-on-quarter and by 5.8% year-on-year in Q4 2021, bringing growth in 2021 as a whole to 4.9%. The last quarter's good result will have been supported by the buoyancy of consumption, driven by savings accumulated during the lockdowns and the good performance of exports of goods and tourism services. For 2022, the only information available is that related to the sentiment of economic agents, which shows mixed signals. The industrial and services sectors are more cautious in early 2022, while in the cases of construction and trade, confidence has improved. Similarly, households are more optimistic at the beginning of the year, helping consumption to remain one of the major drivers of growth. Meanwhile, the pandemic appears to be entering a new phase. Although the number of new cases hit successive records in January, the pressure on hospitals is much more moderate than in previous waves of infections, with the level of ICU occupation associated with COVID patients standing at around 15% of the national health system's capacity. Also, the fatality rate appears to have improved, as although the number of deaths is on the rise, the figure represents just 20% of the level recorded a year ago.

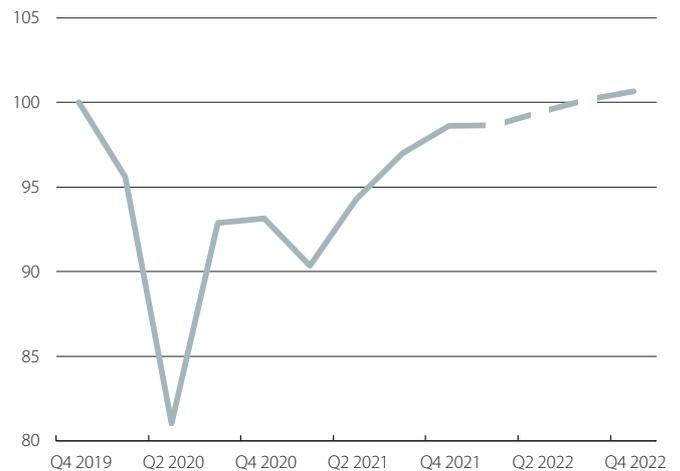
Inflation accelerates in early 2022. At a time when business surveys in the consumer goods industry are indicating record three-month price expectations, January's flash indicator for inflation confirmed this trend with a 6-decimal-point rise, bringing it to 3.3%. The energy component continues to apply upward pressure, owing to base effects, the rise in geopolitical tensions surrounding Ukraine, which have been reflected in the price of Brent oil, as well as the fact that the rising energy prices are affecting the final price of other products. 2021 ended with average annual inflation of 1.3%. Since July, the transportation component, which includes fuel for road vehicles, has been showing inflation persistently above 5% (reaching as high as 8.8% in November). However, it was in December that a greater number of components registered inflation above 2%, pushing the overall inflation figure to 2.7%.

Tourism remains on the path to recovery. The national tourism data available for the end of 2021 confirm a better recovery path than we had projected. Indeed, last year's overall number of hotel stays reached 54% of the pre-pandemic level (slightly above the 50% predicted by CaixaBank Research). The major driver of the recovery was resident tourists, down just 20% compared to 2019, while in the case of non-residents this gap was still 64%. In fact, in regions such as the Algarve and Madeira, the number of overnight stays by resident tourists already exceeded the levels of 2019.

Deficit below 4% in 2021? The budget deficit fell in 2021 to 4.2% of GDP (in cash terms), substantially below the 5.8%

Portugal: evolution of GDP

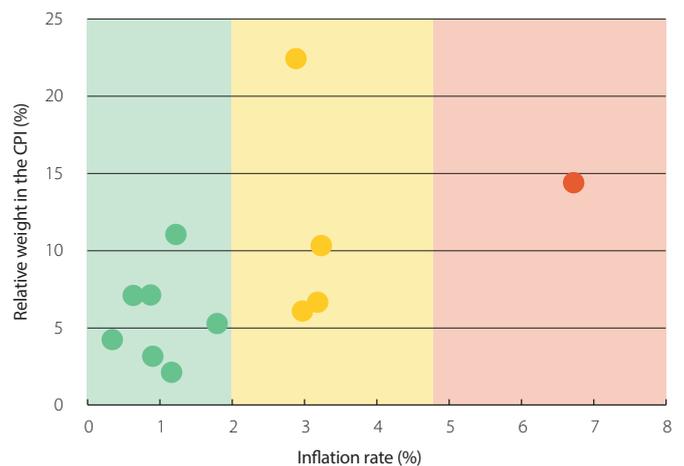
Index (100 = Q4 2019)



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

Portugal: CPI as of December 2021

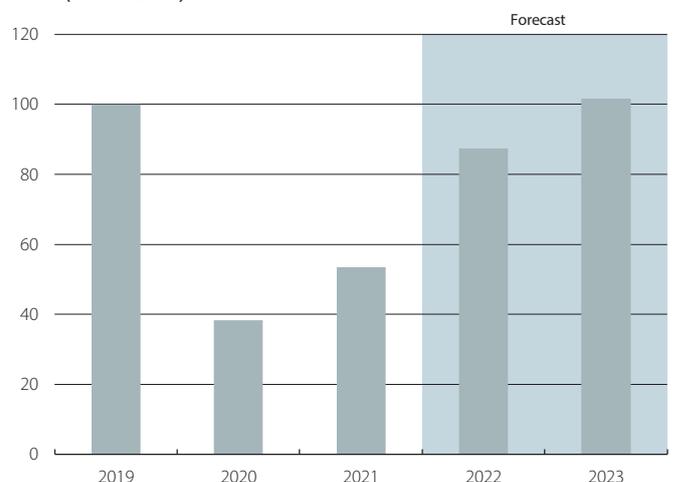
Distribution by component



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

Portugal: number of tourists in hotel accommodation establishments

Index (100 = 2019)



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

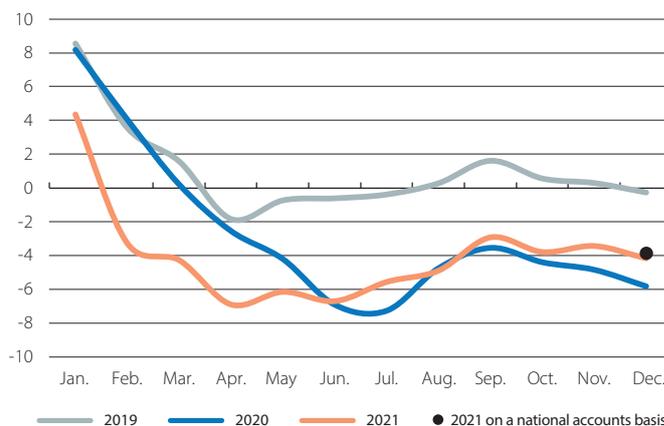
registered in 2020 or the government’s latest estimate (4.7%). The deficit in official terms (i.e. in terms of national accounting) may have fallen below 4.0% of GDP, lower than CaixaBank Research’s forecast (-4.3% of GDP). Revenue growth (9.3%) has exceeded expenditure growth (5.2%), a trend favoured by the increased revenues from personal income tax, VAT and social security contributions, in addition to revenues from the 5G auction, European funds and CGD dividends. Expenditure, meanwhile, increased mainly due to the growth in staff costs, current transfers, and the investment in and acquisition of goods and services (including the purchase of vaccines and COVID-19 tests). Overall, COVID-related measures will have amounted to around 2.6% of GDP in 2021, which is more than in 2020 (2.3%). On the other hand, it should be noted that the Socialist Party won the legislative elections on 30 January with an absolute majority, which guarantees a stable outlook for the next four years. The process of drawing up and presenting the 2022 State Budget Proposal (due to enter into force in April or May) is expected to be quick, considering that the proposal previously rejected in October will be presented again, albeit adjusted to take account of the latest economic data.

The funding needs not covered by ECB purchases increase compared to 2020 and 2021, but remain below the levels of 2018 and 2019.

More specifically, in 2022 the state’s funding needs in order to cover the budget deficit and medium- and long-term debt maturities are estimated at 24.3 billion euros. To meet these needs, the Treasury expects to issue 17.7 billion euros in bonds. The remainder will be funded by short-term debt, European funds and the use of Treasury deposits (13 billion euros). While the funding requirements still exceed those of 2018 and 2019, there are already indications that the consolidation of the public accounts will soon be recovered (having been interrupted during the pandemic). This is a key milestone for building market confidence in a year in which the ECB will begin to withdraw the monetary stimulus. Our estimates suggest that the ECB’s bond purchases in 2022 will be reduced to around 10 billion euros, or about half the level of 2020 and 2021, covering just over 40% of the year’s funding needs (well below the 85% and 90% of 2020 and 2021, respectively, but still above the coverage levels of 2018 and 2019).

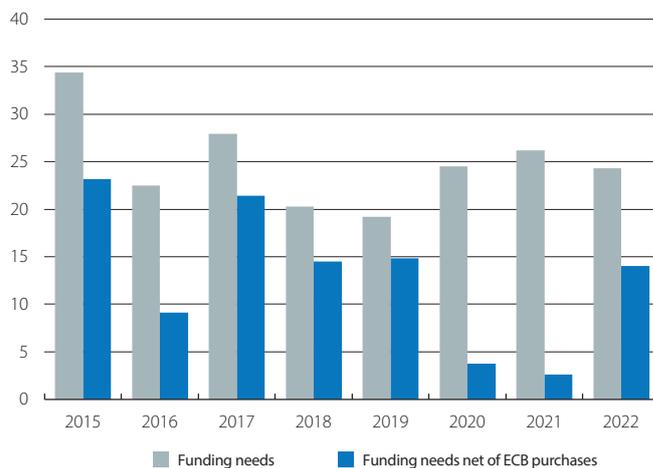
Loans to the non-financial private sector end the year on the rise. In December, the stock of loans increased by 2.9% year-on-year, driven by both companies (2.2% year-on-year) and individuals (3.3% year-on-year). Housing credit was particularly robust, growing by 3.3% year-on-year, due to the strength of new lending transactions (at the time of writing this article, it has been published that new lending up to November increased by 38% year-on-year).

Portugal: general government budget balance * (% of GDP)



Note: * Public accounting.
Source: CaixaBank Research, based on data from the DGO.

Portugal: funding needs (EUR billions)



Note: Does not include short-term debt.
Source: CaixaBank Research, based on data from the Portuguese Treasury and Debt Management Agency (IGCP) and the ECB.

Portugal: stock of loans to companies and individuals

Year-on-year rate of change (%)



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

Activity and employment indicators

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--|-------------|------------|-------------|-------------|------------|------------|----------|----------|----------|
| Coincident economic activity index | -5.4 | 1.7 | -2.5 | 1.7 | 3.8 | 3.6 | 3.6 | 3.6 | ... |
| Industry | | | | | | | | | |
| Industrial production index | -6.9 | ... | -0.8 | 25.0 | -4.7 | ... | 0.2 | ... | ... |
| Confidence indicator in industry (<i>value</i>) | -15.8 | -5.7 | -13.6 | -5.0 | -1.5 | -2.7 | -2.7 | -2.1 | -1.5 |
| Construction | | | | | | | | | |
| Building permits - new housing (number of homes) | 0.7 | ... | 47.9 | -28.7 | -2.4 | ... | 0.2 | ... | ... |
| House sales | -5.7 | ... | 0.5 | 58.3 | 25.1 | ... | - | - | - |
| House prices (<i>euro / m² - valuation</i>) | 8.3 | 8.6 | 6.2 | 8.5 | 8.7 | 11.0 | 11.2 | 11.2 | ... |
| Services | | | | | | | | | |
| Foreign tourists (<i>cumulative over 12 months</i>) | -76.2 | 52.1 | -86.7 | -74.2 | -38.7 | 52.1 | 21.2 | 52.1 | ... |
| Confidence indicator in services (<i>value</i>) | -21.6 | -2.9 | -19.1 | -9.9 | 5.5 | 11.9 | 11.8 | 14.0 | 10.7 |
| Consumption | | | | | | | | | |
| Retail sales | -3.0 | 4.5 | -7.5 | 16.0 | 2.8 | 6.6 | 10.3 | 6.5 | ... |
| Coincident indicator for private consumption | -6.1 | 4.1 | -1.0 | 4.4 | 6.9 | 6.1 | 6.1 | 5.5 | ... |
| Consumer confidence index (<i>value</i>) | -22.4 | -17.2 | -24.4 | -17.3 | -13.6 | -13.5 | -13.3 | -16.4 | -18.7 |
| Labour market | | | | | | | | | |
| Employment | -1.9 | 2.6 | -1.3 | 4.5 | 4.7 | ... | 3.1 | 3.6 | ... |
| Unemployment rate (<i>% labour force</i>) | 7.0 | 6.6 | 7.1 | 6.7 | 6.1 | ... | 6.3 | 5.9 | ... |
| GDP | -8.4 | 4.9 | -5.7 | 16.1 | 4.2 | 5.8 | - | - | - |

Prices

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---------|------|------|---------|---------|---------|---------|-------|-------|-------|
| General | 0.0 | 1.3 | 0.4 | 0.8 | 1.5 | 2.4 | 2.6 | 2.7 | 3.3 |
| Core | 0.0 | 0.8 | 0.5 | 0.2 | 0.9 | 1.5 | 1.7 | 1.8 | 2.5 |

Foreign sector

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|---|-------------|------------|-------------|-------------|-------------|------------|-------------|------------|------------|
| Trade of goods | | | | | | | | | |
| Exports (<i>year-on-year change, cumulative over 12 months</i>) | -10.3 | ... | -8.0 | 9.5 | 13.4 | ... | 15.5 | ... | ... |
| Imports (<i>year-on-year change, cumulative over 12 months</i>) | -14.8 | ... | -15.7 | 1.8 | 10.2 | ... | 17.3 | ... | ... |
| Current balance | -2.2 | ... | -2.1 | -1.5 | -1.9 | ... | -2.6 | ... | ... |
| Goods and services | -3.6 | ... | -3.5 | -3.8 | -4.2 | ... | -5.1 | ... | ... |
| Primary and secondary income | 1.3 | ... | 1.4 | 2.3 | 2.3 | ... | 2.5 | ... | ... |
| Net lending (+) / borrowing (-) capacity | 0.0 | ... | 0.1 | 0.5 | 1.2 | ... | 0.6 | ... | ... |

Credit and deposits in non-financial sectors

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

| | 2020 | 2021 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | 11/21 | 12/21 | 01/22 |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Deposits¹ | | | | | | | | | |
| Household and company deposits | 10.0 | 9.3 | 10.5 | 8.6 | 8.7 | 9.3 | 9.2 | 9.3 | ... |
| Sight and savings | 18.8 | 16.3 | 18.5 | 15.3 | 15.5 | 16.3 | 16.7 | 16.3 | ... |
| Term and notice | 1.2 | 1.2 | 2.1 | 1.0 | 1.0 | 1.2 | 0.7 | 1.2 | ... |
| General government deposits | -21.0 | -4.1 | -23.6 | -15.0 | -5.2 | -4.1 | -7.8 | -4.1 | ... |
| TOTAL | 8.9 | 9.0 | 9.2 | 7.7 | 8.2 | 9.0 | 8.7 | 9.0 | ... |
| Outstanding balance of credit¹ | | | | | | | | | |
| Private sector | 4.6 | 2.9 | 5.1 | 4.4 | 4.2 | 2.9 | 4.1 | 2.9 | ... |
| Non-financial firms | 10.5 | 2.2 | 11.0 | 7.2 | 5.8 | 2.2 | 5.5 | 2.2 | ... |
| Households - housing | 2.1 | 3.3 | 2.7 | 2.6 | 3.3 | 3.3 | 3.2 | 3.3 | ... |
| Households - other purposes | -1.1 | 3.1 | -1.2 | 3.0 | 3.2 | 3.1 | 3.3 | 3.1 | ... |
| General government | -4.2 | 3.8 | -5.1 | 4.5 | 4.1 | 3.8 | 4.4 | 3.8 | ... |
| TOTAL | 4.2 | 2.9 | 4.7 | 4.4 | 4.2 | 2.9 | 4.1 | 2.9 | ... |
| NPL ratio (%)² | 4.9 | ... | 4.6 | 4.3 | 4.0 | - | - | - | - |

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 Refinitiv.

The global demand for technological goods: change of trend?

At the height of the pandemic we observed a change in consumption patterns. With major restrictions imposed on more social leisure pursuits, increased teleworking, remote education and new online services, the consumption of technological goods (such as electronics) withstood the crash in consumption during the spring of 2020. This resistance in 2020, coupled with the growth in 2021, raises the question of whether we are facing a change of trend in the consumption of technological goods, or whether, on the contrary, the end of the pandemic and the return to «social normality» will bring about a return to the previous consumption patterns.

Resistance and increased demand for technology in times of pandemic

In 2020, the global trade in high-tech goods contracted by just 1%, compared to a fall in the case of all manufactured goods of 8%, demonstrating their resistance in a year marked by the pandemic.¹ In general, trade flows of technological goods are a good proxy for the demand for this type of goods, since they are highly tradable. Imports into the US, the world's largest consumer market, is a proxy for global demand.²

If we look at high-tech US imports, we see that they contracted by slightly less than 1% in 2020, compared to -6.3% in the case of manufacturing imports in total, a pattern very much in line with the aforementioned global flows.³ It should be noted that this disparity between the trend in technological goods and total manufactured goods in 2020 represented a substantial shift from the historical trend in these two types of trade flows in the US, which had shown very even growth rates since the year 2000 (see first chart).

At this point, the next step would be to analyse whether this shift in 2020, towards a clear increase in demand for technological goods versus other types of goods and services, continued during the course of 2021. In this regard, and according to preliminary data from the World Intellectual Property Organization (WIPO), it appears that during the early part of 2021 this was indeed the case. High-tech US imports continued to show significant growth in 2021 too. In fact, at the end of 2021 they stood clearly above the 2019 average, although in that same period imports of other goods almost completely closed the gap that had opened in 2020 with respect to imports of technological goods (see second chart).

US: imports of manufactured goods

Level (monthly average 100 = 2019) *



Notes: * Monthly data in nominal terms. Seasonally adjusted series.

Source: CaixaBank Research, based on data from the US Census Bureau.

really been a change of trend in the demand for this type of technological goods. Nevertheless, we can assess some of the factors that could potentially cause the increased demand for this type of goods to persist.

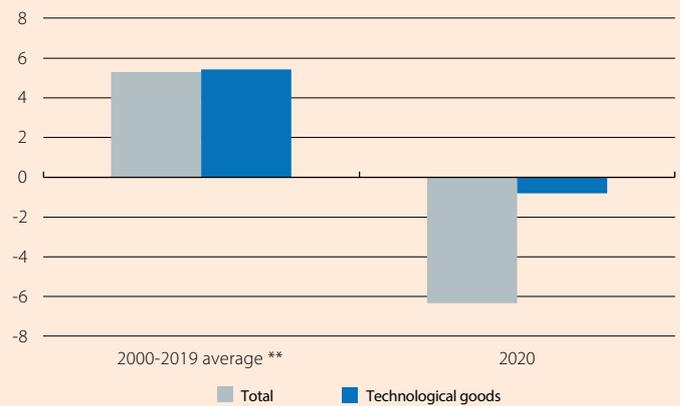
1. In nominal terms (US dollars) and according to data from the World Intellectual Property Organization and the World Trade Organization.

2. A proxy is a variable which reliably approximates another variable that is more difficult to obtain. The exports of major producers of technological goods, such as China or Taiwan (for semiconductors), can be used as a proxy for supply, as we do in the [last article of this same Dossier](#).

3. Advanced Technology Products classification, based on data from the US Census Bureau.

US: imports of manufactured goods

Annual growth (%) *



Notes: * In nominal terms. ** Does not include the years 2009-2011, which coincide with the great fall and recovery of international trade as a result of the global financial crisis.

Source: CaixaBank Research, based on data from the US Census Bureau.

However, the exceptional disruptions observed in the global supply chains since last summer make US technological imports less reliable as a proxy for the strength of their demand during much of 2021 and even 2022. It is precisely goods that are highly tradable and integrated into global value chains, such as technological products, that these disruptions have affected the most. Thus, the growth rate of these US imports would have been higher in the absence of the bottlenecks that have affected supply (the lack of chips, for example).

We will therefore have to wait a few years, once the mismatches between supply and demand have been resolved and the pandemic has receded, in order to see whether there has

Factors supporting the boom in the demand for technology

There are a number of factors that may cause the increased relative demand for technological goods observed during the pandemic to persist. Let us take a look at some of them (see third chart).

Firstly, an increase in teleworking or hybrid working environments should support greater consumption of technological goods. Many of us, as workers, will have two usual working spaces: the classic office and a new space in the warmth of our own homes. In this context, while some electronic goods will be transported from our homes to the office and vice versa, others will be duplicated in both environments, which will inevitably lead to higher demand.

How common teleworking will be and, consequently, to what extent this factor will support the boom in technological goods still remains to be seen. The pandemic has not yet receded, so the current teleworking figures could moderate. Also, many companies are just now beginning to negotiate with workers on the new working arrangements for the future. That said, some recent surveys can help to shed some light on this matter. In particular, a highly representative survey of UK companies estimates that the country's workers will shift from a total of 7% of hours worked from home before the pandemic to 20% in the future (a clear paradigm shift).⁴

Similarly, a new analysis by Nicholas Bloom (an expert in teleworking from Stanford University) and other co-authors identifies five reasons why teleworking has come to stay.⁵ Firstly, the surveys conducted within the framework of the study show that the teleworking experiment triggered by the COVID-19 crisis has yielded better results than expected. Secondly, during the pandemic, workers and companies made significant investments in physical and human capital that will facilitate the use of teleworking in the future. Also, and closely linked to the first factor, some of the stigma which historically accompanied teleworking has been reduced: the fear that workers would avoid doing their full hours when working remotely. Fourthly, the desire to avoid overcrowded spaces for fear of the pandemic will persist for some time to come. Finally, the technological innovations that enable teleworking will also facilitate its greater use in the future.

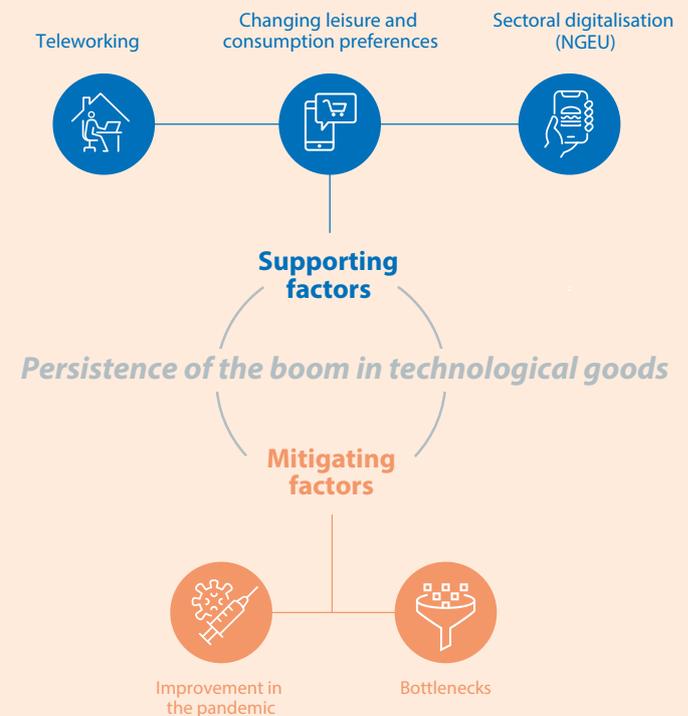
Changes in leisure, entertainment and consumption preferences are a second factor that will impact the demand for technology. In particular, although more social forms of leisure and entertainment are already recovering thanks to the vaccines, they could lose some ground to digital entertainment, such as that related to streaming services. On this note, and according to a survey by Deloitte, people who work remotely have a greater propensity to opt for this type of service, as well as for making more purchases online.

Finally, digitalisation in sectors such as education and health will also support this trend of increased demand for technological goods. Having more resilient education and health sectors requires a more hybrid model in the way in which they operate. The pandemic took millions of students out of the classroom, and without the support of digital tools they would not have been able to continue their studies. Similarly, the health sector, immersed in the fight against COVID-19, also decided to minimise the most routine medical visits, which helped provide a boost to telemedicine. To this end, we see that many countries are pushing for greater digitalisation in these two sectors. For instance, Germany will devote just over 25% of the digitalisation investments under the Next Generation EU programme to its healthcare system, and in the US the Biden administration has already made significant investments to boost access to telemedicine and is planning new projects under the Build Back Better Plan. Also, investments in digital health startups around the world nearly doubled in 2021, and portable medical devices could also double in the next three years.

In short, the COVID-19 pandemic could prove to be a major catalyst in bringing about a paradigm shift in consumption in which the demand for technological goods becomes greater. Although it is still early for such statements, the first available data, as well as the recent trends in teleworking and sectoral digitalisation, point in this direction.

Clàudia Canals and Oriol Carreras

Technological goods



Source: CaixaBank Research.

4. Decision Maker Panel survey.

5. See J.M. Barrero, N. Bloom and S.J. Davis (2021). «Why working from home will stick». National Bureau of Economic Research, nº w28731. Based on a survey of US citizens.

The demand in Spain for technological goods: what the future holds

As a result of teleworking, remote education and the restrictions imposed on more social forms of entertainment, we have witnessed an increase in the consumption of technological goods compared to other categories of consumption. While in the first article of this Dossier we analysed the global demand for these goods during the pandemic and its possible persistence in the post-COVID world, in this article we focus on the case of Spain.

What our internal data reveal about Spanish consumers

How did Spanish consumers behave during the pandemic in terms of demand for technological goods? To answer this question, we analysed CaixaBank's internal data on the sale of electronic goods (high-tech goods, in general), both in physical retail establishments and online, between 2018 and 2021.¹ We then compared these data with what happened with the total consumption of goods (excluding essential goods).²

What the data reveals is that the consumption of electronic goods has shown remarkable resilience. In particular, consumption in this category contracted by just 1% in 2020, compared to a drop of around 13% in the consumption of all other goods. This divergence in behaviour between the two types of consumption was not common in the past: although electronic goods were growing at a higher rate, the difference between them was much smaller than that observed in 2020 (see first chart).

Indeed, this resistance shown by the consumption of technological goods at the height of the pandemic in 2020 is in line with what happened globally, especially in advanced countries, as we discussed in the first article of this same Dossier.³

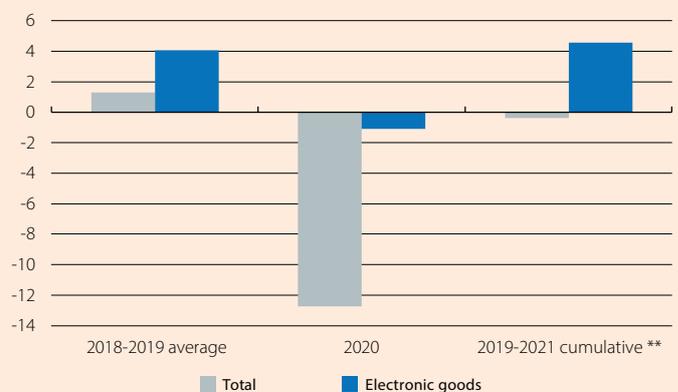
Thus, as in the previous article, for the case of Spain the next question also focuses on the continuity of this greater demand for technological goods after the pandemic. While we cannot yet provide a definitive answer to this question, the 2021 data can offer us some clues. Unfortunately, the pattern in the consumption of electronic goods may have been more adversely affected than other goods by the disruptions in global value chains in the face of supply shortages since mid-2021. To reduce this effect, for the consumption of electronic goods we will stick to the data up to June 2021, while for the broader category of goods we will use the data available up to November 2021.⁴ What we see with our internal data sources is that the consumption of this type of goods in 2021 was still 5% above 2019 levels, unlike in the case of overall consumption (0.4% below, see first chart).

It is still too early to declare that Spanish consumers have shifted towards a greater consumption of technological goods. Nevertheless, there are some elements that could support such a change of trend. In the next section we discuss some of these elements for the specific case of Spain.

The future of teleworking and the impact of the NGEU programme

Beyond the boom shown by the recent data on the consumption of technological goods, there are other reasons which lead us to believe that this trend could last. These include the marked increase in teleworking and also some of the actions included in the European aid package (NGEU).

Spain: consumption of goods *
Annual growth (%)



Notes: * Consumption in nominal terms. The total does not include essential goods. ** 2021 includes data up to June for the electronic goods category, but up to November for the total.

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

1. Fully anonymised data for a total of over 16 million transactions in 2021.

2. To approximate the total consumption of electronic goods, we used internal data on purchases of electronic goods based on credit and debit card usage, the historical percentages of payment types used to purchase these durable goods (mainly card and consumer credit) and the global growth figures for consumer credit. The latter element serves to correct for the sharp contraction in this type of credit in 2020. We also compared the consumption of goods excluding essential goods, since these were greatly impacted by the lockdowns (in the same way as services).

3. See the article «[The global demand for technological goods: change of trend?](#)» in this same Dossier.

4. If we use data up to November 2021 for electronic goods, the cumulative growth in the consumption of these goods between 2019 and 2021 goes from the 4.6% shown in the first chart to -3.4%

The link between teleworking and the demand for technological goods is well known: by its very nature, teleworking requires a series of technological equipment, both tangible and intangible, to make it possible. Greater use of this way of working ought to result in a structural increase in demand for technological goods, and there are several reasons to believe that this is precisely what we will see in the future. The second chart shows the evolution of teleworking in Spain.

In Spain, the percentage of employed people who teleworked at least occasionally showed a slight upward trend between 2006 and 2019, but the arrival of the pandemic in Q2 2020 led to a paradigm shift: the percentage of employees who were teleworking more than doubled, and when we look within the subgroup of those teleworking more than half of the time, the figure tripled. Since then, the figure has closely followed the evolution of the pandemic, with reductions in teleworking when the epidemiological situation has improved and increases when it has deteriorated, but in any case it has remained largely above the levels of 2019. The latest available figure, for Q4 2021, shows a slight upturn due to the outbreak of the sixth wave of infections and is more than 60% above the 2019 level.

Thus, while the intensive use of teleworking at the height of the pandemic appears unlikely to continue in the future, the data seem to indicate that, in a situation of relative normality, teleworking could stabilise at higher levels than prior to the pandemic. Some indicators point in this direction. According to the Bank of Spain's survey on the evolution of Spanish companies' activities, 27% of companies plan to continue using teleworking in the next six months.⁵ This percentage is very similar to those obtained in the Q2 2021 edition of the survey (30%), as well as in the Q3 2021 edition (25%).⁶

Besides teleworking, there are other factors that could continue to drive the increased demand for technological goods in Spain. One such factor is the investments planned in the field of digitalisation under the umbrella of the NGEU funds. The Spanish plan includes investments related to digitalisation amounting to 19.6 billion euros.⁷ By their very nature, a considerable portion of these investments will be in technological goods. One example is the recently announced Strategic Project for Economic Recovery and Transformation (PERTE) relating to state-of-the-art healthcare. With a planned investment of 1,469 million euros between 2021 and 2023, among other things this project foresees the creation of a database for the healthcare system that will enable improvements in prevention, diagnosis, treatment, rehabilitation and health-related research. It also aims to boost the digital transformation of healthcare services by applying new digital technologies to all activities that involve communicating and dealing with citizens.

In short, Spain has not been an exception in the changing consumption patterns during the pandemic, with a clear bias toward technological goods. Testament to this is the resilience shown by the demand for this type of goods during 2020, as well as the relative buoyancy during 2021. Furthermore, while it is still early to talk about structural change, it is clear that trends like teleworking and investments such as those planned under the NGEU umbrella will provide some continuity to this shift in consumption patterns.

Clàudia Canals, Oriol Carreras and Eduard Llorens i Jimeno

Spain: employees who telework
(% of total employees)



Note: * The orange line is the sum of the blue and grey lines.

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

5. See M. Izquierdo Peinado (2021). «Encuesta a las empresas españolas sobre la evolución de su actividad: noviembre de 2021». Bank of Spain. Economic Bulletin nº 4 (content available in Spanish).

6. In addition, various surveys and studies support this outlook of an environment with greater teleworking in the future. See the article «[The global demand for technological goods: change of trend?](#)» in this same Dossier.

7. See the articles of the Dossier «[NGEU European funds: the spring board for the digital leap](#)» in the MR09/2021.

Characteristics of the demand for electronic goods in Spain

In the previous article, we presented to the reader the evolution of the demand for electronic goods in Spain from an aggregate standpoint, through the use of duly anonymised internal CaixaBank data. In this article, we will analyse the behaviour of this demand according to different sociodemographic segments.¹

Demand by age bracket

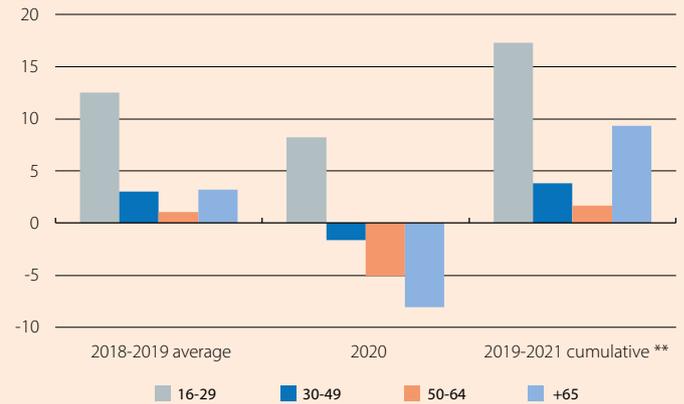
In the first chart, we show how spending on electronic goods in Spain has changed over time, split into four different age brackets.

In the pre-COVID period, there is a marked difference between the growth of spending on these goods among the younger segment of consumers compared to the rest: specifically, the growth was 10 pps higher among the younger group compared to the weighted average of the rest. That said, all age brackets showed positive growth.

With the advent of the COVID-19 crisis, it is clear that the trend in spending was closely correlated with age. In particular, the older the age group, the greater the decline in spending on this type of goods. Finally, the recovery during 2021 was significant across all age brackets, bringing the level of spending during the first half of 2021 above 2019 levels in all cases. Nevertheless, notable differences persist between the different segments: for the population between 16 and 29 years of age, spending was well above 2019 levels (more than 15% higher), while in the case of people aged 30 to 64 the cumulative increase was just under 5%. Somewhat surprisingly, the recovery in spending on electronic goods has been particularly strong in the 65-and-over age group: while this was the group with the biggest declines in 2020, its spending in the first half of 2021 was almost 10% above 2019 levels, 6 pps higher than in the case of those aged 30 to 64.

Spain: consumption of technological goods by age bracket *

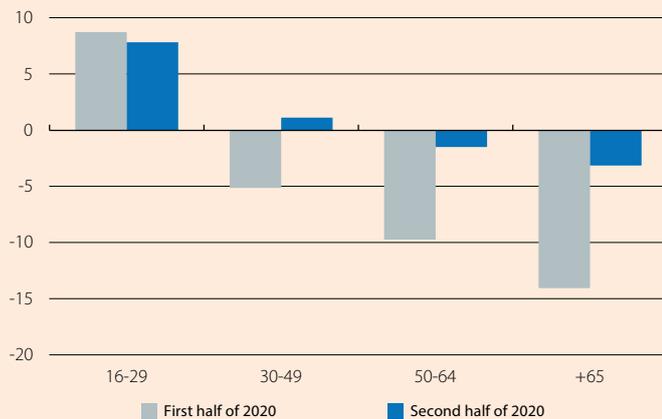
Annual change (%)



Notes: * Consumption in nominal terms. ** 2021 includes data only up to June 2021 in order to avoid the potential impact of the disruptions in global supply chains on the demand for electronic goods. Source: CaixaBank Research, based on internal CaixaBank data.

Spain: consumption of technological goods by age bracket

Year-on-year change (%)



Source: CaixaBank Research, based on internal CaixaBank data.

We have highlighted the inverse relationship between age and spending on electronic goods that occurred during 2020. This relationship comes as a surprise as it does not seem to occur so clearly in the pre-crisis years: while it is true that the younger group showed higher growth in spending on this type of goods than the other age groups, this is not the case when we compare the rest of the age groups to each other. For instance, the average spending growth in the 30 to 49 age bracket was very similar to that of the 65-and-over group in 2018 and 2019, but not in 2020.

One possible explanation for the relationship between age and spending on electronic goods in 2020 is the fact that as age increases, we see a decrease in the use of e-commerce.² Thus, when we look at the monthly behaviour of spending on electronic goods in 2020, there is a marked difference between the first and second half of 2020 (see second chart). In the 16 to

1. To approximate the total consumption of electronic goods, we use internal data on purchases of electronic goods based on credit and debit card usage, the historical percentages of payment types used to purchase these durable goods (mainly card and consumer credit) and the global growth figures for consumer credit (to correct for the sharp contraction in this type of credit in 2020). In the various sociodemographic segments, we will apply this latter correction symmetrically, since we do not have the level of detail necessary to differentiate between the different segments.

2. See the article «[The transition to e-commerce during the pandemic: everyone in equal measure?](#)» in the Dossier of the MR05/2021.

29 age bracket, spending grew at high rates in both halves of the year, indicating intense use of the e-commerce channel during the first half of 2020, given that face-to-face consumption was not possible from the second half of March until June 2020 due to the lockdown. In contrast, the other age brackets show much more pronounced declines in spending in the first half of 2020 than in the second half, and the higher the age range, the bigger the decline. This behaviour suggests that the lower use of the e-commerce channel as we go up the age brackets had a negative impact on people's spending decisions.

Do geographical situation and wage income matter?

Secondly, we analysed the behaviour of spending on electronic goods according to whether it was carried out by people living in rural or urban areas.³ As shown in the third chart, we did not see any substantial differences between the two groups. In the pre-crisis period, both groups showed a very similar rate of expenditure growth. In 2020, spending in rural areas held up better than it did in urban areas, but the difference in magnitude between the two growth rates, of only 1 pp, is not enough to conclude that there was differentiated behaviour. In addition, the greater recovery of spending in urban areas during the first half of 2021 allowed the gap that opened up in 2020 to be closed, or even reversed.

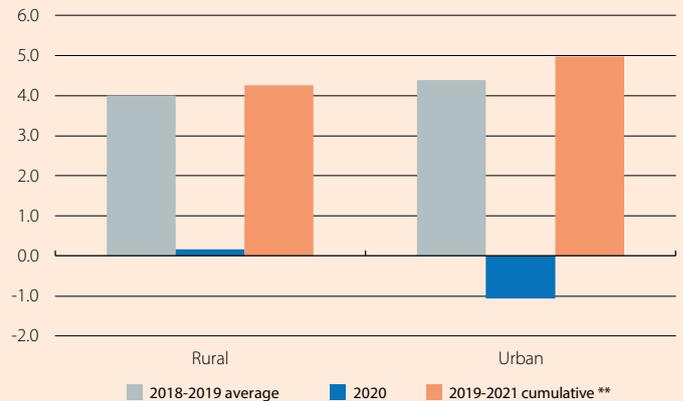
Finally, the data also do not show any significant differences when we look at the behaviour of spending on electronic goods disaggregated by wage income. In particular, in 2020, expenditure growth in the wage range of less 1,000 per month was 0.0%, while it was -1.4% in the 1,000 to 2,000 euros range, and +0.9% in the case of wages over 2,000 euros per month.⁴ This result is surprising when we consider the fact that, in 2020, remote working, one of the factors that could have driven the demand for electronic goods, was more common among higher wage-earners.⁵ One reason that could explain the absence of a clear relationship between expenditure on electronic goods and wages is that our data only capture the spending of individuals, whereas much of the investment that enabled the use of teleworking may have been made by entities (companies).⁶ In contrast, spending on leisure-related technological goods used to offset the restrictions imposed on more social forms of entertainment – another likely source that has helped to boost the consumption of electronic goods – may have been more even across the income spectrum.

In short, the data show that the pattern of demand for technological goods differs according to the consumer's age bracket, and these differences were further accentuated during 2020, possibly due to the lower use of e-commerce among the older age groups. However, the data do not show any differential behaviour in demand between rural and urban settings, nor do they show any differences by income level.

Clàudia Canals, Oriol Carreras and Eduard Llorens i Jimeno

Spain: consumption of technological goods in rural areas vs. urban areas *

Annual change (%)



Notes: * Consumption in nominal terms. ** 2021 includes data only up to June 2021 in order to avoid the potential impact of the disruptions in global supply chains on the demand for electronic goods.

Source: CaixaBank Research, based on internal CaixaBank data.

3. A municipality is defined as rural if it has fewer than 30,000 inhabitants or fewer than 100 inhabitants per square kilometre. Everything else is classified as urban.

4. The internal data do not include furlough benefits as wages. In order to control this factor, in 2020 we assigned to each observation the corresponding salary range according to the average annual salary observed in 2019, regardless of the salary observed in 2020.

5. See, for example, J.M. Barrero, N. Bloom and S.J. Davis (2021). «Why working from home will stick». National Bureau of Economic Research.

6. For example, it is common for companies to provide their staff with a laptop computer for the purpose of working remotely.

The global chip supply: disruptions and new trends

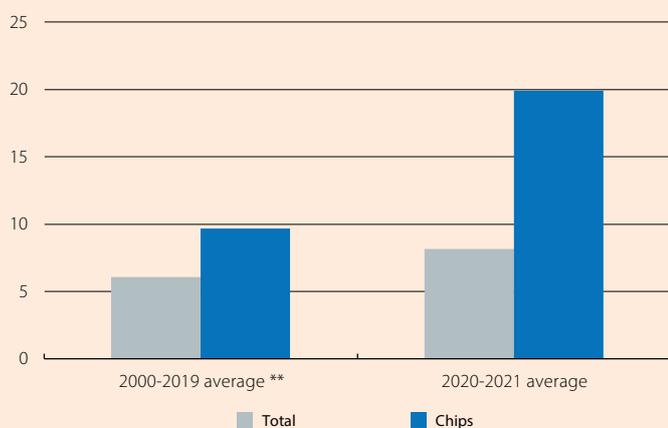
In the previous articles of this same Dossier, we have analysed the high demand for technological goods at the height of the pandemic, as well as various factors which could favour the persistence of this trend in the medium term. However, in the face of increased structural demand for technological goods, is the supply ready for it? This is precisely what we ask ourselves in this final article, in which we focus on the case of chips.

Supply: the efforts of the last two years... insufficient

In 2021, supply problems (or bottlenecks) have dominated the financial headlines. One of the most prominent problems has been the lack of chips (or semiconductors), which has caused many headaches across a range of sectors, including the automotive industry that is so key to European industry.

Taiwan: exports of manufactured goods

Annual growth (%) *



Notes: * In nominal terms. ** Does not include the years of the dotcom crisis or the financial crisis.
Source: CaixaBank Research, based on data from the Bureau of Trade Statistics of Taiwan.

However, producers of semiconductors and other technological goods have not rested on their laurels in the face of the rise in demand since 2020 and the evident shortage since 2021. Indeed, they have done quite the opposite. For instance, Taiwan, one of the world's leading chip producers, has greatly increased its production in 2020 and 2021: its chip exports grew by an average annual rate of 20%, compared to an annual rate of 10% in the previous 20 years (see first chart).¹ In the same vein, Chinese exports of high-tech goods also grew in the last two years at well above the average rate of the previous 10 years (16.4% on average in 2020-2021, compared to 4.6% on average in the period 2010-2019).²

Despite these efforts by the main producing economies to boost the supply of technological goods, it has proven insufficient to close the gap with the buoyant demand. In addition, transport and logistics problems have arisen in the face of high levels of freight traffic in this pandemic environment.

Policies that promise a change in the supply of chips – but in the medium term and with question marks

Among many other aspects, the pandemic has highlighted the need to accelerate economies' digital transformation. Those countries that are more digitalised and technologically advanced have managed to better weather the current economic and health crisis. In this regard, most major economies have already put forward plans to accelerate this digital change. The EU is no exception, and as we discussed in a recent article,³ much of the NGEU funds will precisely go towards this digital transition in Europe.

Among the various elements aimed at driving digital change, the European Chips Act will play a key role. This act aims to alleviate the problem of semiconductor scarcity in the European region (as a key input in technological goods), as well as foreign dependence for their supply. «Technological sovereignty» and «European strategic autonomy» are two of the most frequently heard slogans when discussing industrial and trade policy in Europe. In the case of chips, it should be mentioned that 75% of their production is concentrated in East Asia, with Taiwan and South Korea being the main producers, especially in the case of the most sophisticated semiconductors (see second chart).

In this regard, in 2022 the EU will present a proposal for this semiconductors act. With a planned investment of between 20 and 30 billion euros up to 2030, it will double Europe's share of the global chip production (from the current 9% up to 20%), especially in those more sophisticated variants. These are ambitious goals to achieve greater self-sufficiency and sophistication, which are shared by many other countries. In the US, we have the CHIPS for America Act and the FABS Act, which also aim to increase the

1. Exports of technological goods from the main producing countries serve as a good proxy for the global supply of this type of goods. Similarly, in the [first article of this same Dossier](#), the imports of the main consuming countries of these goods serve as a proxy for global demand.

2. According to monthly data from the Chinese customs statistics. The World Bank also provides data on high-tech Chinese exports up to 2020 and the results are in line with those reported by the national statistics.

3. See the article «[NGEU: an international comparison of the recovery plans and their investments in new technologies](#)» in the Dossier of the MR09/2021.

US' productive capacity and have a planned investment of 50 billion dollars over five years (around 44 billion euros); China has supported the semiconductor industry with investments of 180 billion dollars (some 160 billion euros) since 2015 and aims to produce 80% of its domestic chip needs by 2030, and even South Korea has announced an investment of 400 billion dollars (some 355 billion euros) up to 2030.

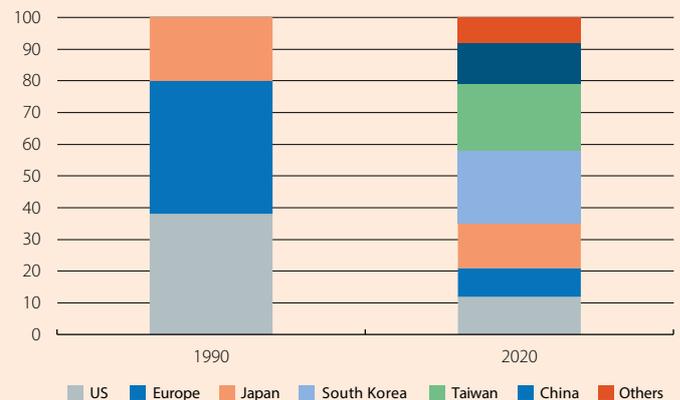
In the face of such a deployment of resources, a considerable increase in the global chip production capacity seems assured. But this will not be in the short term. Building a semiconductor manufacturing plant involves a multi-billion-dollar investment (around 20 billion dollars for the most sophisticated variants) and it typically takes around two years (if not longer) for it to become operational. On the other hand, there are various question marks regarding the chip policy that the EU seems intent on pursuing. Firstly, the planned investments within the Union are modest if we consider that South Korea, a leader in production alongside Taiwan, aims to invest up to 10 times more over the same period; or that China has invested up to five times more in the last six years.

Secondly, Europe has focused on the most complex types of chips, which require not only greater economic investment but also a know-how that can only be gained from experience, such as that which countries like South Korea or Taiwan have.⁴ In addition, the automotive sector, one of the European sectors that has been hardest hit by this semiconductor supply crisis, does not have a particularly high demand for these more complex types of chips. Perhaps a production strategy more coherent with the region's domestic needs could yield more beneficial results in terms of providing some degree of autonomy in the medium term.⁵ And we say «some degree of autonomy» since, in such a technologically advanced sector which uses a wide range of commodities, involves highly sophisticated machinery and has constantly shifting specification, one cannot pretend to be detached from global supply chains. Decoupling from these global chains in chip production would result in their prices rising by between 35% to 65%, according to estimates by the Boston Consulting Group.⁶

Finally, in a world in which technology will continue to advance at a breakneck pace, and in which geopolitical tensions continue to escalate, empowering a workforce that is technologically prepared, as well as collaborating with regions that are at the cutting edge of technology and which play a central role in geopolitical terms, such as the US, are strategies that our region must also consider.

Clàudia Canals and Oriol Carreras

Global: chip production * (%)



Note: * Relative distribution of the manufacturing production capacity.
 Source: CaixaBank Research, based on the article «Semiconductor Strategy for Germany and Europe», ZVEI Discussion Paper (2021).

4. See the article «Public policies for the diffusion of technology» in the Dossier of the MR09/2021 to obtain a better understanding of the importance of know-how in the acquisition and diffusion of technology.
 5. See (2021). «Semiconductor Strategy for Germany and Europe». ZVEI Discussion Paper.
 6. See (2021). «Strengthening the global semiconductor supply chain in an uncertain era». April. Boston Consulting Group and SIA.

Through our studies, we help to stimulate debate and the exchange of views among all sectors of society, as well as to promote the dissemination of the major themes of the socio-economic environment of our time. Both the *Monthly Report* and the rest of CaixaBank Research's publications are available at: www.caixabankresearch.com

We recommend:

Energy prices: present and future

In the January Dossier we analyse some of the factors behind the sharp rise in energy prices in Europe, how the electricity market is built in Spain and Portugal, and the impact of rising electricity prices on households' electricity bills.



Spain: «Electricity prices are sky high, but what about household bills?»

We analyse the direct debit electricity bill payments of individual CaixaBank customers to determine how the increase in prices affected Spanish households' finances.



Brief Notes on Economic and Financial Developments

Assessment of the main macroeconomic indicators for Spain, Portugal, the euro area, the US and China, as well as of the meetings of the European Central Bank and the Federal Reserve.



COVID-19 tracker

Weekly report on the evolution of the COVID-19 pandemic and the vaccination campaign both in Spain and around the world: cumulative incidence, pressure on hospitals, new cases and deaths, infections by age, rate of vaccination, and so on.



Tourism Report 1S 2022

Thanks to the intense recovery experienced by the tourism sector in the summer, the tourism activity indicators published up to December showed no signs of slowing down. However, this good trend must once again cope with a new wave of infections.



Real Estate Sector Report 1S 2022

Following the initial shock of the health crisis, the real estate sector has recovered in record time and is expected to remain buoyant in the coming months, despite the challenges that the economy faces.



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