# MR10

**MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK**

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CaixaBank Research

**MONTHLY REPORT - ECONOMIC AND FINANCIAL MARKET OUTLOOK**
**October 2019**

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# Digital money

The world of payments is undergoing a true revolution. Just a few years ago, it was difficult to find an establishment where you could pay for a coffee with a debit or credit card, and a bank transfer within the same country could take days. Today, we can pay for a coffee with our mobile phone or watch, and the transfers that once took days now take seconds.

What we cannot yet do is pay for that same coffee in bitcoins. And it is no surprise. This cryptocurrency, like many others, cannot be considered money. It is neither widely accepted nor, given its volatility, can it serve as a unit of account or as a store of value. Its use, which is limited, has been mostly for speculative purposes or illicit activities.

That is why new proposals for digital money have appeared, with mechanisms that seek to stabilise their value. This is what the consortium led by Facebook, for example, purports to do with Libra. If you purchase libras (when they are issued, if it ends up happening), the association that manages the cryptocurrency will invest the euros you pay in safe-haven assets (such as treasury bonds) denominated in various currencies. Thus, the value of Libra in euros will fluctuate, but only to the extent that the value of the euro will fluctuate against the other currencies included in the set of investments.

Proposals like Libra have a greater potential to be more widely adopted. In addition to the benefit of a more stable valuation, its promoters have a broad user base – more than 2 billion people in the case of Facebook alone – and an indisputable technological capacity. This potential is what has put a good number of regulators and central banks on high alert since the project's launch.

The regulators have underlined the risks that could arise if Libra were to become a systemic payments vehicle worldwide. Among others, these include risks to financial stability: for instance, those arising from the possibility that the supposedly safe investments that back the currency's issuance could lose value, which could cause mass withdrawals of deposits in Libra. On the other hand, there are doubts over the ability of an operator of this kind to ensure compliance with regulations aimed at preventing money laundering and other illicit activities. Lastly, there are also fears that Facebook could abuse its dominant position in social networks to promote the adoption of Libra over other alternatives.

All of the above underlines how important it is for an operator of this type not to operate in a legal vacuum. The rules of the game should be clear from the outset and provide a balanced framework for competition. Among other things, this would require such an operator to be subject to capital and liquidity requirements, in addition to all anti-money laundering and terrorism financing regulations (obligations relating to customer identification, control of transactions and reporting of suspicious activities).

Among the risks posed by the mass adoption of digital money issued by new operators is also that of the disintermediation of banks. This refers to the possibility of a mass transfer of deposits to digital money, which would result in commercial banks having less capital in order to lend, thus driving up the price of credit. This is nothing more than an age-old risk: that of losing business if a competitor does it better. The solution is also the same as ever: being clear about customers' needs and innovating continuously to offer them the best value proposition.

Another matter is the proposals for central banks to issue digital currencies. In some cases, it is suggested that this will serve to allow everybody to hold an account in the central bank itself, through which they could manage receipts and payments. This really could put the current monetary system in jeopardy. As far back as the 1930s, some economists advocated for the separation of payment processing and loan granting activities (the end of fractional reserve banking), and now new technologies have enabled their resurrection. For the same reasons that they did not succeeded then – because it would not prevent financial crises, but rather could cause them – it is unlikely that they will succeed now.

**Enric Fernández**
Chief Economist
30 September 2019

# Chronology

### SEPTEMBER 2019

**1** The US implements a tariff increase on 112 billion dollars of Chinese imports and China imposes tariffs on around 2,000 US products.
**12** The ECB announces a new stimulus package, with a 10-bp cut in the deposit facility interest rate (–0.50%), a tiered system for deposit remuneration and the resumption of net purchases of assets (20 billion per month).
**18** The Fed cuts its reference interest rates by 25 bps, down to the 1.75%-2.00% range.
**20** The rating agency S&P improves Spain's credit rating from A– to A.

### JULY 2019

**16** As proposed by the European Council, the European Parliament elects Ursula von der Leyen as President of the European Commission.
**24** Boris Johnson takes over from Theresa May as the British Prime Minister.
**31** The Fed cuts its reference interest rates by 25 bps to 2%-2.5%.

### MAY 2019

**10** The US implements the tariff hike from 10% to 25% on 200 billion dollars of imports from China (previously suspended in late February). In response, China announced that it will raise tariffs on 60 billion dollars of imports from the US.
**23-26** European Parliament elections are held.

### AUGUST 2019

**1** The US announces a new tariff increase on 300 billion dollars of Chinese imports not previously subject to tariffs.
**5** The US calls China a «currency manipulator» after the Central Bank of China allowed the yuan to depreciate to levels not seen since 2008.
**23** China announces the introduction of tariffs on 75 billion dollars of US imports.

### JUNE 2019

**7** Theresa May resigns as leader of the Conservative Party in the United Kingdom and remains as interim prime minister until a new leader is chosen at the end of July.
**30** Donald Trump and Xi Jinping agree to resume trade negotiations between the US and China following their meeting at the G-20 summit.

### APRIL 2019

**10** The EU delays Brexit until 31 October 2019.
**28** General elections are held in Spain.

# Agenda

### OCTOBER 2019

**2** Spain: registration with Social Security and registered unemployment (September).
**4** Portugal: DBRS rating.
**10** Portugal: international trade (August).
**11** Spain: CPI (September).
**15** Spain: financial accounts (Q2).
**17-18** European Council meeting.
**18** Portugal: coincident economic activity indicators (September).
**21** Portugal: loans and deposits (August).
**22** Spain: loans, deposits and NPL ratio (August).
**24** Spain: labour force survey (Q3).
Governing Council of the European Central Bank meeting.
**29-30** Federal Open Market Committee meeting.
**30** Spain: CPI flash estimate (October).
Euro area: economic sentiment index (October).
US: GDP (Q3).
**31** Spain: GDP flash estimate (Q3).
Euro area: GDP (Q3).

### NOVEMBER 2019

**5** Spain: registration with Social Security and registered unemployment (October).
**6** Portugal: employment (Q3).
**8** Portugal: international trade (September).
**14** Spain: CPI (October).
Portugal: GDP flash estimate (Q3).
Japan: GDP (Q3).
**21** Portugal: loans and deposits (September).
**22** Spain: loans, deposits and NPL ratio (September).
**28** Spain: state budget execution (October).
Spain: CPI flash estimate (November).
Euro area: economic sentiment index (November).
**29** Portugal: CPI flash estimate (November).

# Will there be a recession, yes or no?

**If you are reading this article hoping to find out what is going to happen in less than 30 seconds, please stop now.** You will be disappointed. If you have come to this article from LinkedIn or Twitter, you may go back to reading headlines there. Alternatively, if you still read the *Monthly Report* romantically in paper format, you can close it and find another journal.

We are living in the age of the tweet; in the era of short, blunt messages without nuances. And us economists are constantly asked to make statements to that effect. *Will there be a recession, yes or no?*, is the question of the moment. When we succumb to the temptation to respond in these terms, without reflecting the true uncertainty that surrounds us, the only thing we achieve is to erode the limited reputation that our wonderful profession is left with. The reality is very complex, and the situation in which the global economy finds itself today is proof of that.

After a summer in which many capitals have taken worrying, often disconcerting, political decisions, September was the month of mediocre macroeconomic data, confirming that the global economy, and particularly that of the major countries, is heading into a considerable slowdown. This term, «considerable slowdown», is a somewhat enigmatic concept that requires some clarification.

«Considerable slowdown» means very different things depending on the country we are referring to. In China, it means going from a growth rate of 6.6% in 2018 to 6.0% in 2019. In the US, it refers to a reduction in growth of a similar magnitude, but from a lower starting point, going from 2.9% in 2018 to 2.2% in 2019. In both cases, the slowdown should be regarded as considerable. Even so, the pace of growth maintained by both countries is also considerable. And depending on which aspect is emphasised – the slowdown in growth or the pace they still maintain – the difference in the message is... considerable!

In Europe, where the starting point was more fragile and the indicators seem to be more sombre, «considerable slowdown» means that growth will drop from 1.9% to 1.0% this year. For a proper assessment of these figures, it is helpful to keep in mind that the euro area's medium-term growth potential is clearly lower than that of China, as well as that of the US (both because of its lower capacity for innovation, and therefore its productivity, and because of its demographics). In fact, the growth forecast for this year is not dissimilar to the estimated growth rate for the euro area over the medium term. And, by the way, this medium-term growth will not increase with an easier monetary policy, nor with fiscal stimuli that only boost demand in the short term.

In part, the slowdown is the result of the major economies being in a more mature phase of the business cycle. Intuitively: it was easier to grow when the unemployment rate was high and a lot of people were looking for work. Now, however, in countries such as the US and Germany where the unemployment rate is at an all-time low, it is increasingly difficult to expand production due to difficulties in recruiting new workers.

Despite this, heading into the mature phase of the cycle was expected to only lead to a slight slowdown in growth. Indeed, there are no significant macroeconomic or financial imbalances in the major economies, which is what usually causes expansionary cycles to end abruptly. However, in recent quarters, and beyond each country's idiosyncrasies, two factors of global reach have entered the scene that are causing the slowdown to be more marked than expected: the trade war between the US and China, and the crisis in the manufacturing sector and especially in the automotive industry (moreover, Europe is being affected by the uncertainty generated by the political situation in the United Kingdom). Although the impact of these factors on the rest of the economy is by no means insignificant, there is no reason for them to end up causing a global recession. This consideration is reflected in CaixaBank Research's forecasts for the next few years.

However, in order for this forecast to be met, the messages we receive need to be sufficiently rich in nuances so as to differentiate what is happening in the different areas of the economy. For the past several months, a sharp slowdown in global trade and a significant drop in the indicators of the industrial sector have coexisted with consumer and services sector confidence that remain relatively high. However, in the last few weeks confidence has begun to show signs of weakening, reaching less comfortable levels. It is telling that this is being accompanied by a dramatic increase in Google searches for the word «recession», up to levels similar to those reached during the Great Recession of 2009. Is society becoming overly pessimistic? The reality does not fit in a tweet.

**Oriol Aspachs**
Head of Research

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

## *Financial markets*

| | Average 2000-2007 | Average 2008-2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **INTEREST RATES** | | | | | | | |
| **Dollar** | | | | | | | |
| Fed funds (upper limit) | 3.43 | 0.48 | 1.50 | 2.50 | 1.75 | 1.50 | 1.75 |
| 3-month Libor | 3.62 | 0.70 | 1.61 | 2.79 | 1.65 | 1.68 | 1.90 |
| 12-month Libor | 3.86 | 1.20 | 2.05 | 3.08 | 1.70 | 1.83 | 2.20 |
| 2-year government bonds | 3.70 | 0.73 | 1.84 | 2.68 | 1.65 | 1.85 | 2.00 |
| 10-year government bonds | 4.70 | 2.61 | 2.41 | 2.83 | 1.80 | 2.00 | 2.20 |
| **Euro** | | | | | | | |
| ECB depo | 2.05 | 0.40 | –0.40 | –0.40 | –0.50 | –0.50 | –0.25 |
| ECB refi | 3.05 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| Eonia | 3.12 | 0.65 | –0.34 | –0.36 | –0.45 | –0.45 | –0.25 |
| 1-month Euribor | 3.18 | 0.79 | –0.37 | –0.37 | –0.43 | –0.43 | –0.20 |
| 3-month Euribor | 3.24 | 0.98 | –0.33 | –0.31 | –0.40 | –0.40 | –0.15 |
| 6-month Euribor | 3.29 | 1.14 | –0.27 | –0.24 | –0.35 | –0.35 | –0.05 |
| 12-month Euribor | 3.40 | 1.34 | –0.19 | –0.13 | –0.30 | –0.30 | 0.05 |
| **Germany** | | | | | | | |
| 2-year government bonds | 3.41 | 0.69 | –0.69 | –0.60 | –0.80 | –0.40 | –0.10 |
| 10-year government bonds | 4.30 | 1.98 | 0.35 | 0.25 | –0.45 | 0.10 | 0.67 |
| **Spain** | | | | | | | |
| 3-year government bonds | 3.62 | 2.30 | –0.04 | –0.02 | –0.09 | 0.31 | 0.71 |
| 5-year government bonds | 3.91 | 2.85 | 0.31 | 0.36 | 0.07 | 0.50 | 0.95 |
| 10-year government bonds | 4.42 | 3.82 | 1.46 | 1.42 | 0.35 | 0.90 | 1.37 |
| Risk premium | 11 | 184 | 110 | 117 | 80 | 80 | 70 |
| **Portugal** | | | | | | | |
| 3-year government bonds | 3.68 | 4.42 | –0.05 | –0.18 | –0.03 | 0.56 | 1.13 |
| 5-year government bonds | 3.96 | 5.03 | 0.46 | 0.47 | 0.21 | 0.79 | 1.34 |
| 10-year government bonds | 4.49 | 5.60 | 1.84 | 1.72 | 0.40 | 1.00 | 1.52 |
| Risk premium | 19 | 362 | 149 | 147 | 85 | 90 | 85 |
| **EXCHANGE RATES** | | | | | | | |
| EUR/USD (dollars per euro) | 1.13 | 1.30 | 1.18 | 1.14 | 1.10 | 1.15 | 1.21 |
| EUR/JPY (yen per euro) | 129.50 | 126.36 | 133.70 | 127.89 | 116.85 | 121.90 | 128.26 |
| USD/JPY (yen per dollar) | 115.34 | 97.50 | 113.02 | 112.38 | 106.23 | 106.00 | 106.00 |
| EUR/GBP (pounds per euro) | 0.66 | 0.83 | 0.88 | 0.90 | 0.91 | 0.90 | 0.89 |
| USD/GBP (pounds per dollar) | 0.59 | 0.63 | 0.75 | 0.79 | 0.83 | 0.78 | 0.73 |
| **OIL PRICE** | | | | | | | |
| Brent ($/barrel) | 42.3 | 85.6 | 64.1 | 57.7 | 60.0 | 61.5 | 63.0 |
| Brent (euros/barrel) | 36.4 | 64.8 | 54.2 | 50.7 | 54.5 | 53.5 | 52.1 |

Forecasts

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

## *International economy*

| | Average 2000-2007 | Average 2008-2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **GDP GROWTH** | | | | | | | |
| **Global** | 4.5 | 3.3 | 3.8 | 3.6 | 3.0 | 3.2 | 3.4 |
| ***Developed countries*** | *2.7* | *1.2* | *2.4* | *2.2* | *1.7* | *1.4* | *1.6* |
| United States | 2.7 | 1.4 | 2.4 | 2.9 | 2.2 | 1.6 | 1.8 |
| Euro area | 2.2 | 0.4 | 2.7 | 1.9 | 1.0 | 1.1 | 1.3 |
| Germany | 1.6 | 1.1 | 2.5 | 1.6 | 0.4 | 0.7 | 1.6 |
| France | 2.0 | 0.6 | 2.3 | 1.7 | 1.3 | 1.4 | 1.5 |
| Italy | 1.5 | –0.7 | 1.8 | 0.7 | 0.2 | 0.7 | 0.7 |
| Portugal | 1.5 | –0.3 | 3.5 | 2.4 | 1.8 | 1.6 | 1.6 |
| Spain | 3.7 | 0.0 | 2.9 | 2.4 | 1.9 | 1.5 | 1.5 |
| Japan | 1.5 | 0.4 | 1.9 | 0.8 | 1.1 | 0.5 | 0.8 |
| United Kingdom | 2.8 | 1.0 | 1.8 | 1.4 | 1.1 | 1.1 | 1.5 |
| ***Emerging countries*** | *6.5* | *5.2* | *4.8* | *4.5* | *3.9* | *4.4* | *4.5* |
| China | 11.7 | 8.4 | 6.9 | 6.6 | 6.0 | 5.8 | 5.7 |
| India | 9.7 | 6.9 | 6.9 | 7.4 | 5.7 | 6.1 | 6.0 |
| Indonesia | 5.5 | 5.7 | 5.1 | 5.2 | 5.0 | 4.8 | 4.7 |
| Brazil | 3.6 | 1.7 | 1.1 | 1.1 | 1.0 | 1.8 | 2.1 |
| Mexico | 2.4 | 2.1 | 2.1 | 2.0 | 0.6 | 1.4 | 2.1 |
| Chile | 5.0 | 3.2 | 1.3 | 4.0 | 3.2 | 3.0 | 2.8 |
| Russia | 7.2 | 1.0 | 1.6 | 2.2 | 1.1 | 1.9 | 1.8 |
| Turkey | 5.4 | 4.8 | 7.4 | 3.1 | –1.3 | 2.5 | 3.1 |
| Poland | 4.0 | 3.2 | 4.9 | 5.2 | 3.8 | 2.9 | 2.4 |
| South Africa | 4.4 | 1.8 | 1.5 | 0.7 | 0.5 | 1.8 | 1.9 |
| **INFLATION** | | | | | | | |
| **Global** | 4.2 | 3.8 | 3.2 | 3.6 | 3.5 | 3.5 | 3.5 |
| ***Developed countries*** | *2.1* | *1.5* | *1.7* | *2.0* | *1.4* | *1.6* | *1.8* |
| United States | 2.8 | 1.6 | 2.1 | 2.4 | 1.8 | 2.0 | 2.0 |
| Euro area | 2.1 | 1.4 | 1.5 | 1.8 | 1.1 | 1.2 | 1.7 |
| Germany | 1.7 | 1.3 | 1.7 | 1.9 | 1.3 | 1.3 | 1.8 |
| France | 1.8 | 1.2 | 1.2 | 2.1 | 1.3 | 1.4 | 1.8 |
| Italy | 1.9 | 1.5 | 1.3 | 1.2 | 0.7 | 1.0 | 1.5 |
| Portugal | 3.0 | 1.2 | 1.4 | 1.0 | 0.5 | 0.8 | 1.1 |
| Spain | 3.2 | 1.3 | 2.0 | 1.7 | 0.8 | 1.2 | 1.7 |
| Japan | –0.3 | 0.3 | 0.5 | 1.0 | 0.5 | 1.3 | 1.2 |
| United Kingdom | 1.9 | 2.3 | 2.7 | 2.5 | 1.9 | 1.9 | 2.1 |
| ***Emerging countries*** | *6.8* | *5.8* | *4.3* | *4.8* | *4.8* | *4.7* | *4.5* |
| China | 1.7 | 2.6 | 1.6 | 2.1 | 2.5 | 2.4 | 2.6 |
| India | 4.5 | 8.5 | 3.3 | 3.9 | 3.6 | 4.5 | 5.1 |
| Indonesia | 8.4 | 5.7 | 3.8 | 3.2 | 3.2 | 3.0 | 3.2 |
| Brazil | 7.3 | 6.4 | 3.5 | 3.7 | 3.9 | 3.9 | 4.0 |
| Mexico | 5.2 | 3.9 | 6.0 | 4.9 | 3.9 | 3.7 | 3.5 |
| Chile | 3.1 | 3.5 | 2.2 | 2.7 | 2.2 | 2.8 | 3.1 |
| Russia | 14.2 | 9.3 | 3.7 | 2.9 | 4.9 | 4.2 | 4.0 |
| Turkey | 27.2 | 8.1 | 11.1 | 16.2 | 15.5 | 13.0 | 10.0 |
| Poland | 3.5 | 2.1 | 1.6 | 1.2 | 2.1 | 2.5 | 2.5 |
| South Africa | 5.3 | 6.2 | 5.3 | 4.6 | 4.6 | 5.4 | 5.3 |

Forecasts

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

## *Spanish economy*

| | Average 2000-2007 | Average 2008-2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **Macroeconomic aggregates** | | | | | | | |
| Household consumption | 3.6 | –0.6 | 3.0 | 1.8 | 0.8 | 1.2 | 1.3 |
| Government consumption | 5.0 | 0.9 | 1.0 | 1.9 | 2.0 | 1.5 | 1.2 |
| Gross fixed capital formation | 5.6 | –3.8 | 5.9 | 5.3 | 2.6 | 2.7 | 2.4 |
| Capital goods | 5.0 | –1.5 | 8.5 | 5.7 | 2.4 | 2.7 | 2.6 |
| Construction | 5.7 | –6.5 | 5.9 | 6.6 | 3.1 | 2.6 | 2.4 |
| Domestic demand (vs. GDP Δ) | 4.5 | –1.2 | 3.0 | 2.6 | 1.3 | 1.5 | 1.5 |
| Exports of goods and services | 4.8 | 2.8 | 5.6 | 2.2 | 2.4 | 2.6 | 3.1 |
| Imports of goods and services | 7.0 | –1.0 | 6.6 | 3.3 | 0.8 | 3.1 | 3.3 |
| **Gross domestic product** | **3.7** | **0.0** | **2.9** | **2.4** | **1.9** | **1.5** | **1.5** |
| | | | | | | | |
| **Other variables** | | | | | | | |
| Employment | 3.2 | –1.5 | 2.8 | 2.5 | 2.2 | 1.6 | 1.5 |
| Unemployment rate (% of labour force) | 10.5 | 20.8 | 17.2 | 15.3 | 13.9 | 12.6 | 11.5 |
| Consumer price index | 3.2 | 1.3 | 2.0 | 1.7 | 0.8 | 1.2 | 1.7 |
| Unit labour costs | 3.0 | 0.1 | 0.7 | 1.2 | 2.3 | 2.5 | 2.6 |
| Current account balance (% GDP) | –5.9 | –1.1 | 2.7 | 1.9 | 1.7 | 1.5 | 1.5 |
| External funding capacity/needs (% GDP) | –5.2 | –0.7 | 2.9 | 2.4 | 1.9 | 1.7 | 1.7 |
| Fiscal balance (% GDP)[1] | 0.4 | –7.0 | –3.0 | –2.5 | –2.3 | –2.0 | –1.5 |

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

Forecasts

## *Portuguese economy*

| | Average 2000-2007 | Average 2008-2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **Macroeconomic aggregates** | | | | | | | |
| Household consumption | 1.7 | –0.2 | 2.1 | 3.1 | 2.1 | 1.8 | 1.7 |
| Government consumption | 2.3 | –0.7 | 0.2 | 0.9 | 0.6 | 0.3 | 0.2 |
| Gross fixed capital formation | –0.3 | –3.5 | 11.5 | 5.8 | 7.0 | 4.5 | 4.0 |
| Capital goods | 1.2 | –0.1 | 12.5 | 7.5 | 6.9 | 5.9 | 5.9 |
| Construction | –1.5 | –6.2 | 12.2 | 4.6 | 7.1 | 2.5 | 2.5 |
| Domestic demand (vs. GDP Δ) | 1.3 | –1.0 | 3.3 | 3.2 | 2.8 | 2.1 | 1.9 |
| Exports of goods and services | 5.2 | 3.5 | 8.4 | 3.9 | 3.4 | 3.9 | 4.3 |
| Imports of goods and services | 3.6 | 1.6 | 8.1 | 5.9 | 5.6 | 5.1 | 4.8 |
| **Gross domestic product** | **1.5** | **–0.3** | **3.5** | **2.4** | **1.8** | **1.6** | **1.6** |
| | | | | | | | |
| **Other variables** | | | | | | | |
| Employment | 0.4 | –1.1 | 3.3 | 2.3 | 0.8 | 0.3 | 0.2 |
| Unemployment rate (% of labour force) | 6.1 | 12.2 | 8.9 | 7.0 | 6.5 | 6.3 | 6.1 |
| Consumer price index | 3.0 | 1.2 | 1.4 | 1.0 | 0.5 | 0.8 | 1.1 |
| Current account balance (% GDP) | –9.4 | –4.2 | 0.5 | –0.6 | –1.8 | –1.7 | –1.4 |
| External funding capacity/needs (% GDP) | –7.9 | –2.9 | 1.4 | 0.4 | –0.7 | –0.6 | 0.0 |
| Fiscal balance (% GDP) | –4.6 | –6.4 | –3.0 | –0.4 | –0.3 | –0.3 | 0.1 |

Forecasts

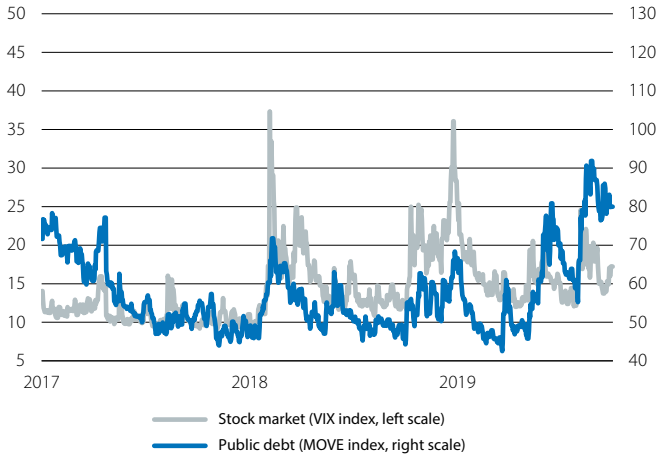
# The central banks take the reins

**The markets end a turbulent quarter on a calm note**. After a summer of volatility marked by falling stock prices and declines in yields on sovereign bonds, September was characterised by a return to normality in the financial markets. The main catalysts for this improvement were the formal announcement of the resumption of trade negotiations between the US and China, and the accommodative measures taken by the major central banks (with a rate cut by the Fed and a new stimulus package from the ECB). Thus, risk aversion, which had prevailed during much of July and August, ceded its pressure on most types of assets and gave rise to a cautious recovery in the stock markets and in sovereign bond yields. Only at the end of the month did the concurrence of several geopolitical events (such as the drone attacks on the largest refinery in Saudi Arabia) and the publication of some rather disappointing economic indicators, mainly in the euro area, stoke the nervousness of the markets. As such, the markets have shown their continued susceptibility to political statements, messages from central banks and uncertainty over the slowdown of the global economy.

**The Fed cuts interest rates in response to the sources of risk**. At its September meeting, the US monetary institution cut interest rates by 25 bps (down to the 1.75%-2.00% range) and supported its decision based on contained inflationary pressures and the persistence of risks to the scenario (mainly uncertainty over the trade negotiations between the US and China and the moderation in global economic activity). Like at its July meeting, the decision was not unanimous, and the chairpersons of the regional Feds of Kansas and Boston voted to keep rates unchanged, while the chairman of the St. Louis Fed defended a cut of 50 bps. This division was also reflected in the path that interest rates are expected to follow over the coming quarters: in particular, the so-called dot plot shows that 7 of its members point towards a further cut before the end of the year, while the remaining 10 are split between keeping rates unchanged and raising them once again. As for the macroeconomic outlook, both the description of the economic scenario and the new economic activity projections for the next year remained favourable and without significant changes. That said, the members of the Fed stressed the perceived weakness in private investment and in the foreign sector. On the other hand, the New York Fed made several injections of liquidity into the interbank system for the first time in over 10 years, faced with the rise in interbank interest rates in the very short term. The gradual drain on reserves which domestic banks deposit in the Fed, as a result of the decrease in the size of its balance sheet over the past few months, put a strain on liquidity on the days on which firms had to meet their tax obligations.

**The ECB relaunched the monetary stimulus**. In response to a somewhat weaker economic scenario in the euro area, at its latest meeting the ECB formalised the new monetary stimulus programme that it had announced at its July meeting.

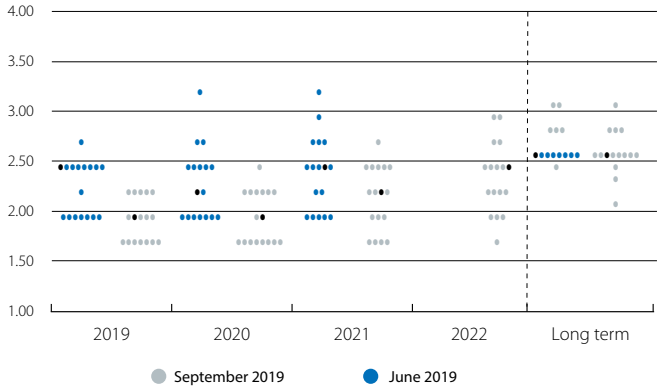
### *Implicit volatility in the financial markets*




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

### *Federal Reserve: expected trend in interest rates*

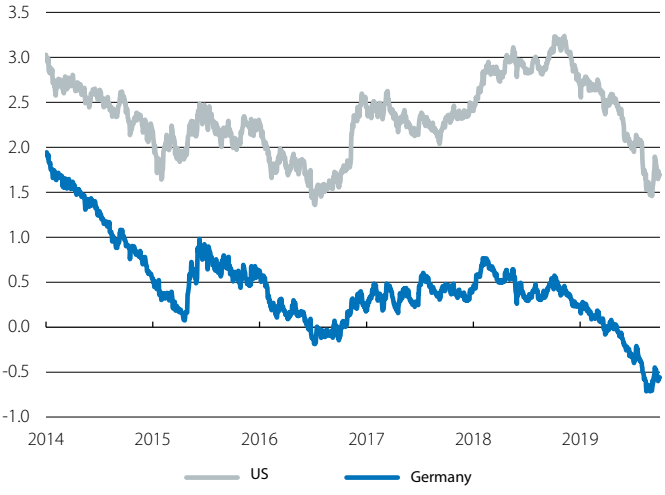
*(%)*




***Note:*** *Each point represents a voter in the Federal Reserve's Federal Open Market Committee. The median voter is indicated in black.*
***Source:*** *CaixaBank Research, based on data from the Federal Reserve.*

### *Yield on 10-year sovereign bonds*

*(%)*




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

The new measures consisted of a 10-bp cut to the interest rate of the deposit facility (down to –0.50%) and the resumption of net purchases of assets (which had come to an end last December), starting in November at a monthly rate of 20 billion euros. In addition, in order to reduce the potential adverse effects of the prolonged environment of low rates on the financial system, the ECB has increased the appeal of its liquidity injections (TLTRO-III), extending the deadline and reducing the cost, as well as announcing a tiered system for reserve remuneration (only a portion of the excess liquidity deposited in the ECB will be subject to the deposit rate). Finally, the ECB did not provide any indicative date for the end of the programme (like it had done in the past) and suggested that the environment of low interest rates will persist until there are clear signs of recovery in inflation. However, some decisions (such as asset purchases) failed to receive the unanimous support of the Governing Council, and some information suggested a link between this and the resignation of Sabine Lautenschlager just days later.

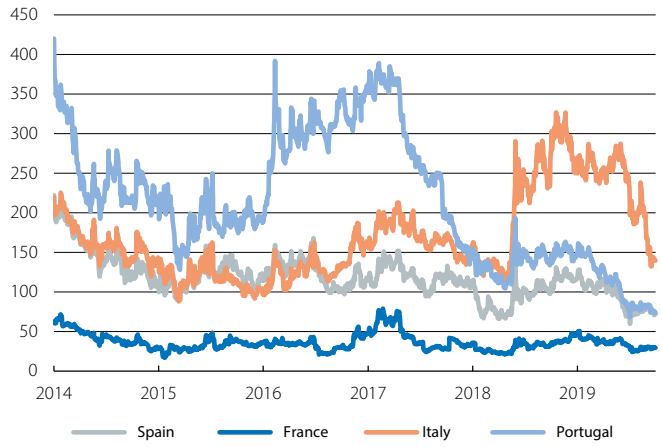
**Sovereign yields increase**. Despite the central banks adopting a more accommodative tone, financial security prices reflected investors' expectations of a bigger stimulus. Therefore, in response to the meetings of the Fed and the ECB, sovereign yields recovered some of the decline experienced during the summer, with increases of up to 17 bps being recorded in the US and 13 bps in Germany. Nevertheless, yields remain at their lowest levels in recent years, while the risk premiums of the euro area periphery experienced a widespread reduction. This recovery was also boosted by Standard & Poor's improving the credit ratings of Spain (from A– to A) and of Portugal (maintained at BBB, but with an improvement in the outlook), as well as by the positive response among investors to the new coalition government in Italy.

**The stock markets recover following the summer**. In addition to the decisions of the central banks, a more conciliatory tone was struck in the trade tensions between the US and China, in contrast with the escalation witnessed in August. These circumstances, in a month without major business news, facilitated a recovery of the appetite for risk and in the major stock markets of both developed and emerging economies closed the month with widespread gains (the US' S&P 500 closed up +1.7%, the Eurostoxx 50 +4.2% and the MSCI Emerging Markets +1.7%).

**Geopolitical tensions drive up the oil price**. The drone attack carried out on the largest refinery in Saudi Arabia, which damaged around 50% of the country's productive capacity, led to a significant, albeit short, surge in the price of oil in September. Specifically, fears of a possible fall in supply initially drove up the price of a barrel by 20%, placing it above 68 dollars. However, the statements by the Saudi government ensuring a quick recovery in its productive capacity and the extensive availability of crude oil reserves in the US and most advanced economies calmed the mood among investors and helped to bring prices down to around the 60-dollar mark.

### *Euro area: risk premiums of 10-year sovereign bonds*

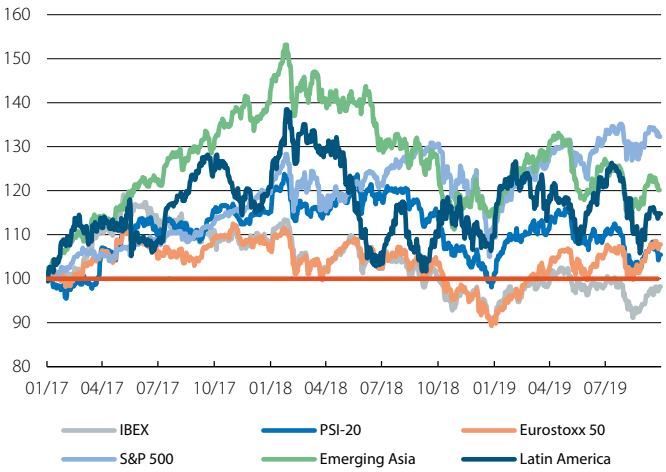
*(bps)*




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

### *Main international stock markets*

*Index (100 = January 2017)*




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

### *Brent oil price*

*(Dollars per barrel)*


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

## Interest rates (%)

| | 30-Sep. | 31-Aug. | 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 | –0.42 | –0.43 | 2 | –10.9 | –10.1 |
| 1-year Euribor | –0.33 | –0.38 | 5 | –21.3 | –17.2 |
| 1-year government bonds (Germany) | –0.68 | –0.85 | 17 | –11.3 | –7.3 |
| 2-year government bonds (Germany) | –0.77 | –0.93 | 16 | –15.6 | –22.5 |
| 10-year government bonds (Germany) | –0.57 | –0.70 | 13 | –81.3 | –104.2 |
| 10-year government bonds (Spain) | 0.15 | 0.11 | 4 | –127.1 | –138.5 |
| 10-year government bonds (Portugal) | 0.16 | 0.13 | 4 | –156.1 | –174.2 |
| **US** | | | | | |
| Fed funds | 2.00 | 2.25 | –25 | –50.0 | –25.0 |
| 3-month Libor | 2.10 | 2.14 | –4 | –70.9 | –30.0 |
| 12-month Libor | 2.04 | 1.97 | 7 | –96.2 | –88.2 |
| 1-year government bonds | 1.74 | 1.76 | –2 | –85.1 | –82.9 |
| 2-year government bonds | 1.62 | 1.50 | 12 | –86.6 | –119.7 |
| 10-year government bonds | 1.66 | 1.50 | 17 | –102.0 | –141.9 |

## Spreads corporate bonds (bps)

| | 30-Sep. | 31-Aug. | Monthly change (bp) | Year-to-date (bp) | Year-on-year change (bp) |
|---|---|---|---|---|---|
| Itraxx Corporate | 55 | 48 | 7 | –33.4 | –12.1 |
| Itraxx Financials Senior | 64 | 62 | 3 | –44.3 | –21.2 |
| Itraxx Subordinated Financials | 139 | 135 | 5 | –89.0 | –34.1 |

## Exchange rates

| | 30-Sep. | 31-Aug. | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|---|---|---|---|---|---|
| EUR/USD (dollars per euro) | 1.090 | 1.098 | –0.8 | –5.0 | –5.9 |
| EUR/JPY (yen per euro) | 117.800 | 116.830 | 0.8 | –6.4 | –10.7 |
| EUR/GBP (pounds per euro) | 0.887 | 0.904 | –1.9 | –1.3 | –0.1 |
| USD/JPY (yen per dollar) | 108.080 | 106.280 | 1.7 | –1.5 | –5.1 |

## Commodities

| | 30-Sep. | 31-Aug. | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|---|---|---|---|---|---|
| CRB Commodity Index | 387.6 | 387.2 | 0.1 | –5.3 | –6.7 |
| Brent ($/barrel) | 60.8 | 60.4 | 0.6 | 13.0 | –28.5 |
| Gold ($/ounce) | 1,472.4 | 1,520.3 | –3.2 | 14.8 | 23.8 |

## Equity

| | 30-Sep. | 31-Aug. | Monthly change (%) | Year-to-date (%) | Year-on-year change (%) |
|---|---|---|---|---|---|
| S&P 500 (USA) | 2,976.7 | 2,926.5 | 1.7 | 18.7 | 1.8 |
| Eurostoxx 50 (euro area) | 3,569.5 | 3,426.8 | 4.2 | 18.9 | 4.5 |
| Ibex 35 (Spain) | 9,244.6 | 8,812.9 | 4.9 | 8.3 | –1.7 |
| PSI 20 (Portugal) | 4,973.8 | 4,887.6 | 1.8 | 5.1 | –6.4 |
| Nikkei 225 (Japan) | 21,755.8 | 20,704.4 | 5.1 | 8.7 | –10.3 |
| MSCI Emerging | 1,001.0 | 984.3 | 1.7 | 3.6 | –4.3 |

# Risks persist amidst a global slowdown

**Moderation in global economic activity in Q3**. In a context of significant pockets of geopolitical uncertainty, which intensified over the summer, the various indicators published in the past month have confirmed the moderation in global economic activity in Q3 2019. This is reflected by economic activity indicators such as the global composite Purchasing Managers' Index (PMI), which was rather contained in August (51.3 points, slightly below the figure for July). Looking at the different components, the manufacturing index remained below the 50-point threshold (49.5), indicating contraction in the manufacturing sector whereasthe services indexremained above 50 points (51.8) but is drawing ever closer to this threshold. With these indicators in mind, CaixaBank Research slightly reduced last month its global growth forecasts for 2019 and 2020 down to 3.0% and 3.2%, respectively, 2 decimal points less than expected before the summer.

**Tit for tat in the trade war between the US and China**. In early September, the US imposed the first round of tariffs announced in August, while China responded in kind by imposing tariffs on US imports. In particular, as the US applied 15% tariffs on 112 billion of Chinese imports, which represents the first round of the tariffs announced on 300 billion of imports, China imposed tariffs of between 5% and 10% on nearly 2,000 US products. Despite the escalation of protectionism implied by these tariffs, September also saw some developments of a more constructive tone in terms of trade: the US and China agreed to restart negotiations in October, the US announced the delay of some tariffs on Chinese imports and China withdrew 16 US products from its tariff list. A basic agreement between the two parties therefore remains on the cards. Nevertheless, uncertainty has already dented economic sentiment and it is not clear that a potential agreement will be stable in the medium term. As a result, the eroded trust will only be restored gradually and the negative impact of the trade tensions on economic activity will persist for the remainder of 2019 and throughout 2020.

**In Europe, Brexit provides no respite, while Italy sees a reduction in political uncertainty**. All the indicators in the United Kingdom suggest that a hard Brexit at the end of October is unlikely. The reason is that the House of Commons passed a law obliging the government to request a new extension to Brexit if no agreement is reached with the EU by 19th October. In addition, the suspension of the country's Parliament until 14th October was cancelled by the Supreme Court, increasing the likelihood of an extension at the end of October. However, a no-deal Brexit cannot be ruled out, and elections resulting in a new Parliament with

### GDP growth

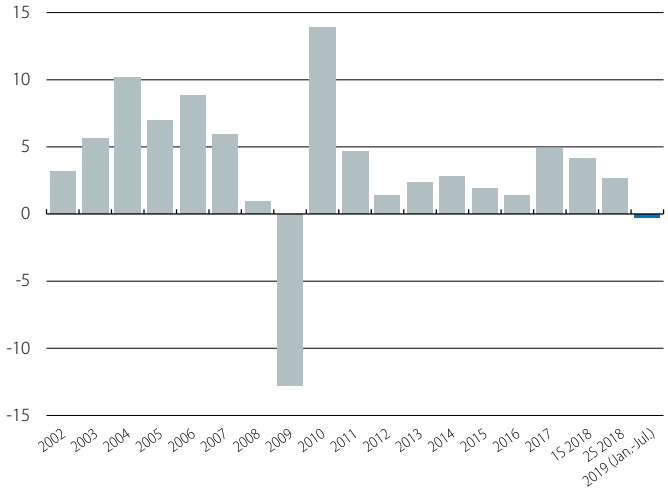
*Annual change (%)*

| | 2018 | 2019 | | 2020 | |
|---|---|---|---|---|---|
| | Figure | Current forecast | Forecast as of January 2019 | Current forecast | Forecast as of January 2019 |
| **Global** | 3.6 | 3.0 | 3.5 | 3.2 | 3.5 |
| **Developed countries** | 2.2 | 1.7 | 2.0 | 1.4 | 1.8 |
| US | 2.9 | 2.2 | 2.3 | 1.6 | 1.9 |
| Euro area | 1.9 | 1.0 | 1.8 | 1.1 | 1.7 |
| **Emerging countries** | 4.5 | 3.9 | 4.5 | 4.4 | 4.6 |
| China | 6.6 | 6.0 | 6.2 | 5.8 | 6.0 |

***Source:*** *CaixaBank Research, based on data from Thomson Reuters Datastream.*

### International trade in goods

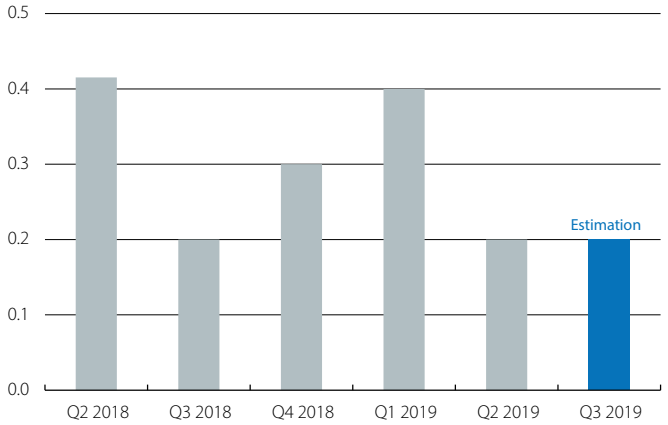
*Year-on-year change in volumes (%)*




***Source:*** *CaixaBank Research, based on data from the CPB World Trade Monitor (Merchandise).*

### Euro area: CEPR-Eurocoin GDP estimate for Q3

*Quarter-on-quarter change (%)*




***Source:*** *CaixaBank Research, based on data from Eurostat and from the CEPR-Eurocoin model for the Q3 2019 estimate.*

a pro-Brexit majority could support this option. Besides, in Italy, following the collapse of the government in August, the alliance between the Five Star Movement and the Democratic Party made way for a new government to be formed during the past month. With this new coalition, the risk of another fiscal confrontation with the EU has been reduced. Nonetheless, this does not dramatically change Italy's macroeconomic scenario and its indicators remain weak.

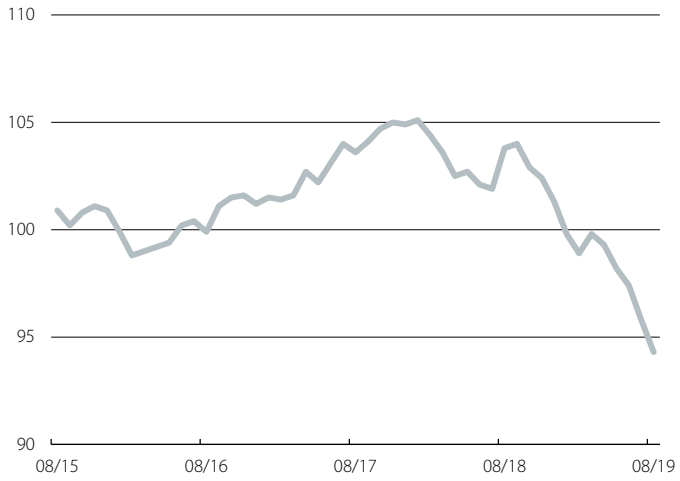
## EUROPE

**In the euro area, weakness remains prevalent**. The euro area's economic activity indicators continue to point towards very contained growth rates. The Bank of Italy's real-time forecasting model predicts that euro area GDP will grow at a discrete 0.2% quarter-on-quarter in Q3, the same figure as in the previous quarter and well below the rates seen in 2017 (0.6%). This suggests that the moderation in economic activity that the euro area has been experiencing since 2018 will continue in the second half of 2019. At the country level, the weakness of Germany stands out in particular. The country's industrial production suffered a new and sharp drop in July (–5.3% year-on-year), contrasting with relatively modest variations in the rest of the region's major economies. Similarly, Germany's IFO business activity indicator fell sharply in July and August.

**Uncertainty over trade and an automotive shock at the core of the European slowdown**. The uncertainty generated by the trade dispute between the US and China is one of the elements that could be weighing down on European economic activity the most. Nevertheless, other idiosyncratic elements such as the shock in the automotive industry are also behind the slowdown in Europe. All of this is particularly pronounced in the case of the German economy, where GDP is expected to have contracted once again in Q3 (see the article «Germany: why is the European locomotive losing steam?» in this same *Monthly Report*). In this predicament, the ECB presented a somewhat weaker macroeconomic scenario at its September meeting, with reductions in its growth and inflation forecasts. In particular, in 2019, the ECB predicts a growth of 1.1% (1 decimal point below June's forecast) and, in 2020, of 1.2% (2 decimal points lower). Headline inflation is forecast to stand at 1.2% in 2019 and at 1.0% in the 2020, 1 and 4 decimal points. This is below what was forecast a few months ago and is clearly below the ECB's target rate (~2%). As a result, at the meeting, the ECB presented a new monetary stimulus programme consisting of the ingredients that were expected by most analysts: a cut in the deposit facility rate, a resumption of net purchases of assets, a two-tier reserve remuneration system and more attractive TLTRO-III (see the section on Financial Markets for further details on the monetary measures).

### *Germany: IFO business activity index*

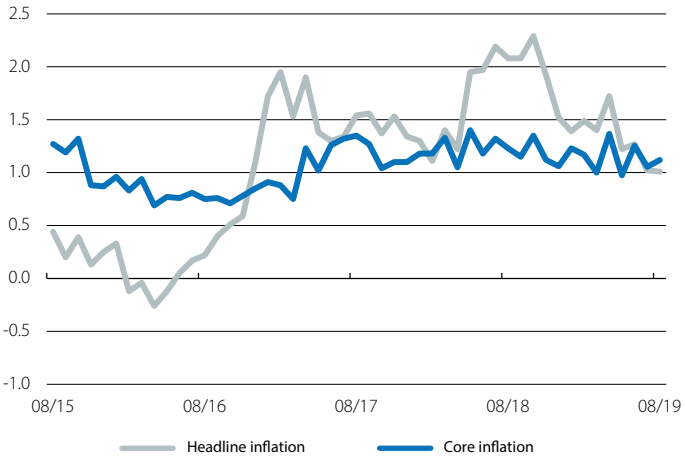
*Level*




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

### *Euro area: CPI **

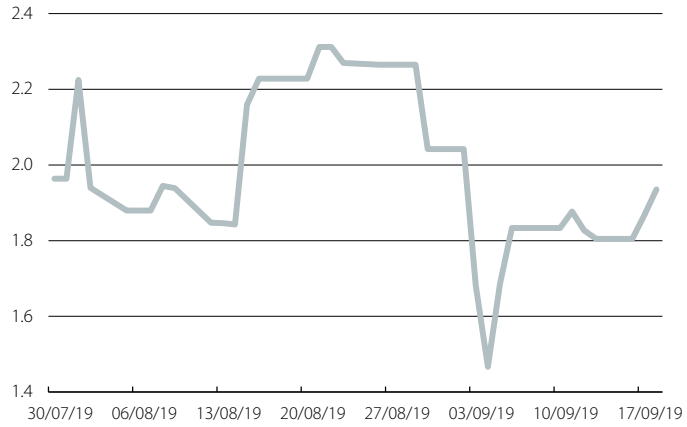
*Year-on-year change (%)*




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

### *US: Q3 GDP estimate by the Atlanta Fed **

*Annualised quarter-on-quarter change (%)*




***Note:*** ** Change in the estimate as key economic activity indicators become available.*
***Source:*** *CaixaBank Research, based on the Atlanta Fed's Nowcasting model (GDP Now).*

## US

**The economic activity data continue to indicate considerable growth, despite the trade dispute and the Trump impeachment enquiry**. The GDP forecast models of the various federal reserves place GDP growth in Q3 at around 2.0% in annualised quarter-on-quarter terms (i.e. similar to that of Q2). In fact, this growth rate is relatively close to the potential we attribute to the US economy. In this environment, a new escalation in trade tensions and further protectionist measures pose significant risks for the country's economic activity. Potential fiscal stimulus measures in 2020 (an election year), as well as the Fed's new interest rate cut at its September meeting, could nevetheless counteract part of these disruptive factors. In particular, the country's monetary institution cuts the reference interest rate by 25 bps down to the 1.75%-2.00% range. The institution attributes the move to the context of global risks since it kept its macroeconomic outlook practically unchanged: growth of around 2.0% and with no acceleration in inflationary pressures.

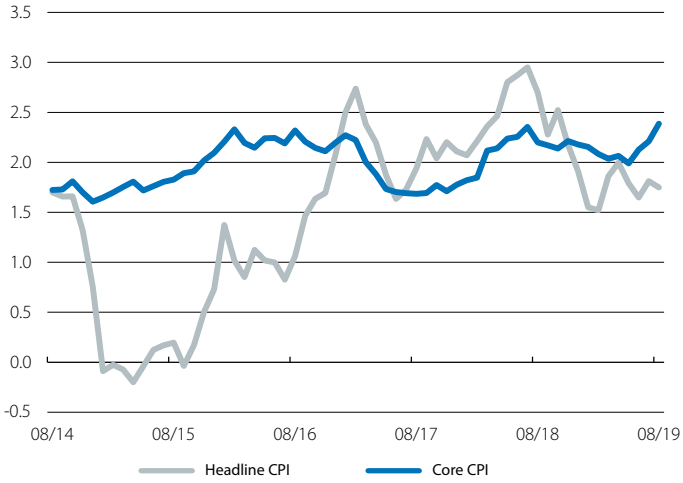
## EMERGING MARKETS

**The Chinese economy continues to slow down, hence the authorities will continue to stimulate the economy**. The main economic activity indicators for China showed a slowdown in August. In particular, growth in industrial production moderated down to 4.4% (4.8% in July), the lowest figure in 17 years, while retail sales were also tempered with year-on-year growth of 7.5% (7.9% in July), stunted by the drop in car sales (–8.1% year-on-year). There was also a decline in exports, of 1.0% year-on-year, weighed down by the trade conflict and the global slowdown. These data suggest that the Chinese economy continues to slow down, and it could be doing so somewhat faster than we envisaged a few months ago. In this context, the country's government cabinet is supporting the economy with various measures, including some aimed at boosting investment in infrastructure. Specifically, an increase has been announced in the volume of bonds issued by local corporations to finance infrastructure investment projects. This support will persist over the next few quarters.

**Turkey's GDP fell by less than expected in Q2**. In Q2 2019, GDP fell by 1.5% year-on-year. This was less than expected, due to the contribution of the external sector being significantly greater than in previous quarters, more than offsetting the decline in domestic demand. This figure indicates that the macroeconomic adjustment is having a significant impact, particularly in the foreign sector: in Q2, the current account balance was positive, standing at +0.1% of GDP, something not seen since 2002. All in all, the immediate outlook remains restricted by the contraction in domestic demand.

### *US: CPI*

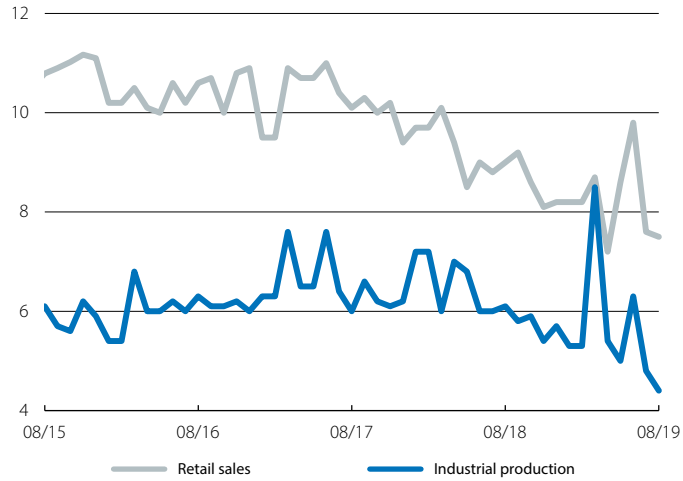
*Year-on-year change (%)*




***Source:*** *CaixaBank Research, based on data from the Bureau of Labor Statistics.*

### *China: economic activity indicators*

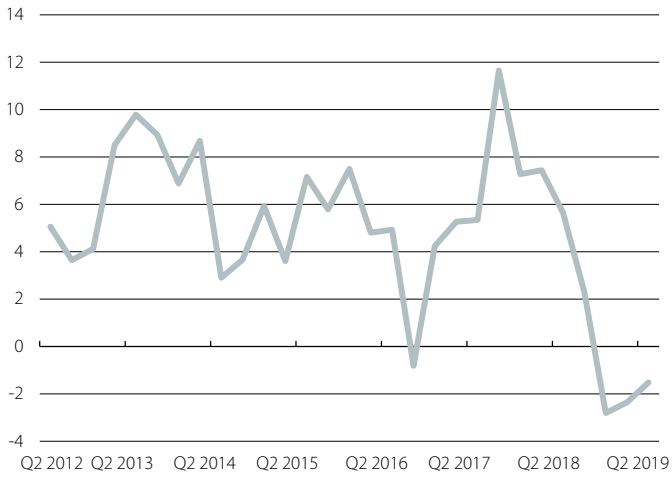
*Year-on-year change (%)*




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

### *Turkey: GDP*

*Year-on-year change (%)*




***Source:*** *CaixaBank Research, based on data from Thomson Reuters Datastream.*

# Germany: why is the European locomotive losing steam?

After growing by a considerable 2.8% in 2017, Germany slowed down sharply in 2018, and over the past four quarters year-on-year growth has been a meagre 0.8% on average. In fact, in Q2 growth was negative and all the indicators suggest that this trend has continued in Q3, which would technically mean that the country has entered into a recession. Below we discuss why.

### The cooling of the German economy

**Two adverse shocks, one global and another sectoral**, have hit the German economy:

- **The increase in uncertainty at the global level** (as a result of the trade conflict between the US and China, but also due to tensions in Europe such as Brexit and frictions between Italy and the European Commission) has led to a slowdown in international trade that has stunted German exports (they have featured a slowdown of 3.0 pps on average in the last four quarters compared to the first half of 2018). Moreover, the manufacturing sector has suffered a considerable slowdown, largely due to its high dependency on the foreign sector (59% of German production is exported, according to data from the OECD), leaving it more exposed to changes in the global manufacturing cycle.

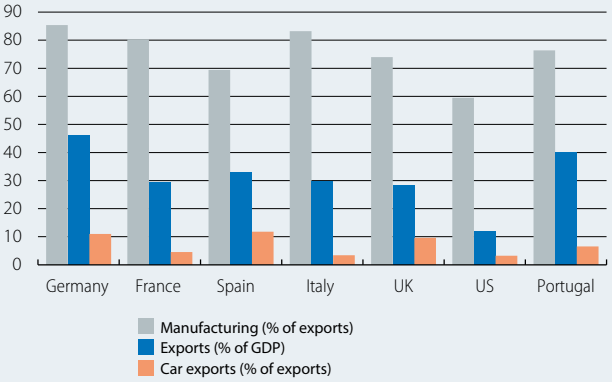
- The sensitivity of Germany's foreign and industrial sectors to global demand is well illustrated by the fact that **the growth in exports and industrial production began to decline coinciding with the slowdown in the growth of its key trading partners** and have followed a similar trend (see second chart). In fact, the slowdown in GDP growth of its main trading partners accounts for 70% of the decline in its exports and a third of the fall in its industrial production.

- When we analyse Germany's exports to its main trading partners in the current year (see third chart), we see that **the most notable contractions** have been in two economies particularly affected by the high uncertainty: the **United Kingdom and Italy**.[1] In the case of the United Kingdom, the accumulation of inventories in Q1 to cope with a potential no-deal Brexit explains the 20% year-on-year fall in German exports seen in April and May.

- **At the same time, another shock has affected the automotive sector, which represents 5% of Germany's GDP** and is the manufacturing sector that is most interconnected with the rest of the economy. Specifically, there have been production cuts in order to adapt to the new EU vehicle emissions regulations that came into force in September 2018, coupled with a decrease in the global demand for cars (largely due to a «wait and see» attitude among consumers, driven by regulatory uncertainty and the expectation of a reduction in the cost of hybrid and electric cars thanks to technological advances). These shocks have caused a significant drop both in vehicle production and in exports of German cars, which represent 11% of Germany's total exports, well above most euro area economies.

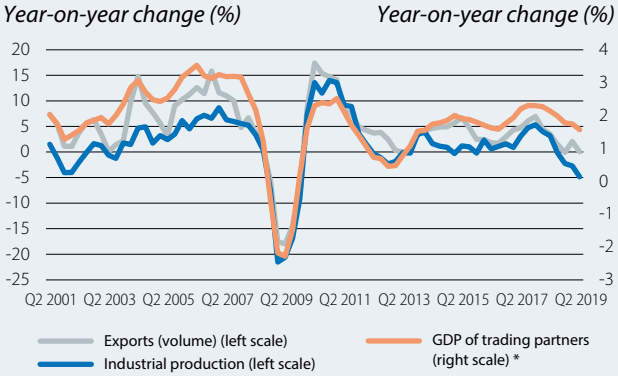
- **Consumption and investment, meanwhile, have shown signs of slowing down in recent quarters, albeit at a much more moderate rate** than the foreign sector (for instance, private consumption grew by 0.3% quarter-on-quarter in the first two quarters of 2019, versus 0.4% in 2017-2018; investment grew by 0.4% in the first half of 2019 versus 1.0% in 2017-2018). Thus, although domestic demand remains resilient thanks to the buoyancy of the labour market and accommodative financial conditions, if these shocks persist for longer than expected, we could begin to see a more pronounced slowdown in these components.

***Importance of manufacturing and the automotive industry in the foreign sector***
*(%)*




***Note:*** *Data for 2018. Exports correspond to goods (we exclude services).*
***Source:*** *CaixaBank Research, based on data from the World Bank and the «World Factbook».*

***Germany: exports and GDP of its trading partners***




***Note:*** ** Weighted average GDP growth of Germany's main trading partners.*
***Source:*** *CaixaBank Research, based on data from Eurostat, Oxford Economics and the Federal Statistics Office of Germany.*

1. In the case of Spain, the slowdown in the automotive sector, following regulatory changes, is the main cause: 20% of German exports to Spain are cars (and car components), which have fallen by 9.3% year-on-year in the period January to June.

**Why Germany?**

- **Germany is a much more open economy than the rest of the major European economies** and it is more integrated into global supply chains. Therefore, global uncertainty affects it to a greater extent. The historical evidence shows that the degree of sensitivity of exports to a global uncertainty shock of a similar magnitude to the one seen in recent months is far greater in Germany than in other economies such as France, Spain or Portugal. The results show that **the negative impact is much greater on German exports** and this is the only case in which the impact is significant (see fourth chart).
- **The German manufacturing sector is more geared towards foreign markets** than other euro area economies, so it is more affected by the slowdown in exports. The historical evidence shows that, in Germany, a slowdown in exports has a greater knock-on effect on manufacturing activity (see fifth chart).
- Another, somewhat more subtle factor is the fact that **Germany is in a more mature phase of the expansionary cycle**, so its growth was potentially going to moderate in any case. Some labour market indicators support this vision: for instance, **the vacancies ratio** which shows the degree of tightening in the labour market, is much higher in Germany (3.3%) than in countries such as France (1.3%), Italy (1.2%), Spain (0.9%) or Portugal (1.0%). Another sign of the maturity of the cycle is wage growth, which is more pronounced in Germany (standing at 3.2% in Q2 2019, compared to 2.7% for the euro area as a whole).

**Outlook: what next?**

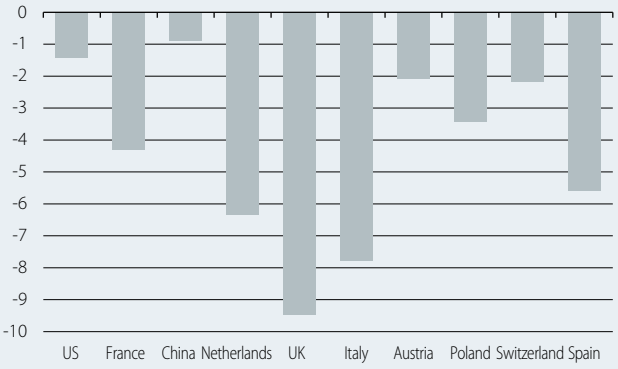
- The uncertainty surrounding geopolitical conflicts is unlikely to dissipate in the short term. Therefore, in all likelihood **the German economy will continue to show weakness in the remainder of the year**. One factor to keep in mind is that, according to our forecasts, **the growth of Germany's trading partners will stabilise**, which could lead to a modest rebound in exports in the coming quarters.
- The relative resilience of domestic demand and the strength of a labour market with full employment (the unemployment rate is at an all-time low of 3.0%) suggest that, if the uncertainty is mitigated, Germany will recover its dynamism from 2020 onwards.
- If necessary, Germany has enough fiscal space to implement a significant stimulus (according to the Minister of Finance, such a stimulus could amount to 50 billion euros, representing 1.4% of GDP). With a fiscal balance that could close 2019 with a surplus of around 1.0% of GDP, Germany can afford to make investments to support not only short-term growth but also the economy's competitiveness in the medium and long term. This could be achieved, for instance, by making improvements in key infrastructure and supporting the energy transition in the industrial sector with a focus on the automotive industry.

*Javier Garcia-Arenas*

*(See an extended version of this article at caixabankresearch.com)*

### *Germany: exports to the top 10 trading partners*

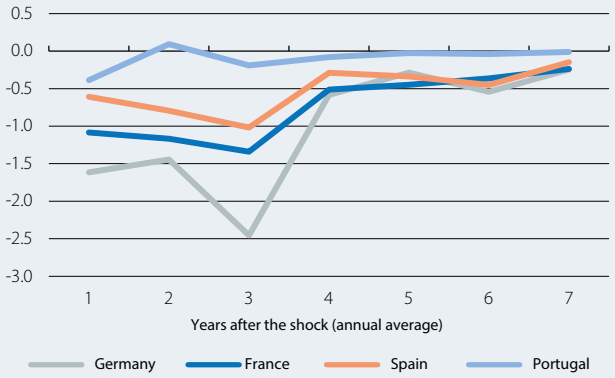
*Year-on-year change (January-May 2019, %)*




***Source:*** *CaixaBank Research, based on data from the IMF's Direction of Trade Statistics (DOTS).*

### *Response of growth in exports to a global uncertainty shock*

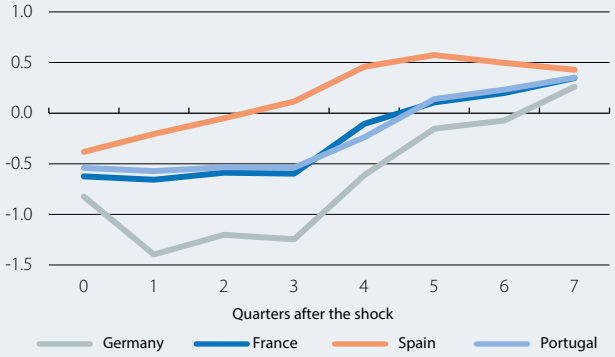
*(pps)*




***Note:*** *An autoregressive vector of the sixth order is estimated, including quarterly data from the global uncertainty index by Baker, Bloom and Davis, the global GDP deflator for exported goods, and the year-on-year growth rate of the country's exports. We simulate an exogenous shock that increases global uncertainty by 100 points (the increase seen between Q3 2018 and Q2 2019 relative to the first two quarters of 2018). It is significant for Germany in the first two quarters, at 95%.*
***Source:*** *CaixaBank Research, based on data from the respective countries' official statistics.*

### *Response of growth in industrial production to an adverse shock on exports*

*(pps)*




***Note:*** *An autoregressive vector of the sixth order is estimated, including quarterly data on export growth, the manufacturing PMI, growth in industrial production and the services PMI (for Portugal, we exclude the PMIs since they do not exist). Shock on export growth of half a standard deviation (equivalent to a 3.0-pp slowdown, which is what has been observed in Germany). The impact is significant, at 95% for all countries in the first quarters.*
***Source:*** *CaixaBank Research.*

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

## UNITED STATES

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Activity** | | | | | | | | | |
| Real GDP | 2.4 | 2.9 | 3.1 | 2.5 | 2.7 | 2.3 | – | – | ... |
| Retail sales (excluding cars and petrol) | 4.5 | 4.7 | 5.4 | 3.4 | 3.4 | 3.6 | 3.8 | 4.1 | 4.2 |
| Consumer confidence *(value)* | 120.5 | 130.1 | 132.6 | 133.6 | 125.8 | 128.3 | 124.3 | 135.8 | 134.2 |
| Industrial production | 2.3 | 3.9 | 5.0 | 4.0 | 2.9 | 1.2 | 1.1 | 0.5 | 0.4 |
| Manufacturing activity index (ISM) *(value)* | 57.4 | 58.8 | 59.7 | 56.9 | 55.4 | 52.2 | 51.7 | 51.2 | 49.1 |
| Housing starts *(thousands)* | 1,209 | 1,250 | 1,234 | 1,185 | 1,213 | 1,256 | 1,233 | 1,215 | 1,364 |
| Case-Shiller home price index *(value)* | 200 | 211 | 212 | 214 | 215 | 216 | 216 | 216 | ... |
| Unemployment rate *(% lab. force)* | 4.4 | 3.9 | 3.8 | 3.8 | 3.9 | 3.6 | 3.7 | 3.7 | 3.7 |
| Employment-population ratio *(% pop. > 16 years)* | 60.1 | 60.4 | 60.4 | 60.6 | 60.7 | 60.6 | 60.6 | 60.7 | 60.9 |
| Trade balance [1] *(% GDP)* | –2.8 | –2.4 | –2.9 | –3.0 | –3.0 | –3.1 | –3.1 | –3.1 | ... |
| **Prices** | | | | | | | | | |
| Headline inflation | 2.1 | 2.4 | 2.6 | 2.2 | 1.6 | 1.8 | 1.6 | 1.8 | 1.7 |
| Core inflation | 1.8 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.4 |

## JAPAN

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Activity** | | | | | | | | | |
| Real GDP | 1.9 | 0.8 | 0.1 | 0.3 | 1.0 | 0.8 | – | – | ... |
| Consumer confidence *(value)* | 43.8 | 43.6 | 43.4 | 42.8 | 41.3 | 39.5 | 38.7 | 37.8 | 37.1 |
| Industrial production | 2.9 | 1.0 | –0.1 | 0.5 | –1.1 | –1.2 | –2.2 | –1.1 | –2.0 |
| Business activity index (Tankan) *(value)* | 19.0 | 20.8 | 19.0 | 19.0 | 12.0 | 7.0 | – | – | 5.0 |
| Unemployment rate *(% lab. force)* | 2.8 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.2 | 2.2 |
| Trade balance [1] *(% GDP)* | 0.5 | –0.1 | 0.1 | –0.2 | –0.3 | –0.5 | –0.5 | –0.6 | –0.6 |
| **Prices** | | | | | | | | | |
| Headline inflation | 0.5 | 1.0 | 1.1 | 0.9 | 0.3 | 0.8 | 0.7 | 0.6 | 0.2 |
| Core inflation | 0.1 | 0.3 | 0.3 | 0.3 | 0.4 | 0.6 | 0.6 | 0.6 | 0.5 |

## CHINA

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Activity** | | | | | | | | | |
| Real GDP | 6.8 | 6.6 | 6.5 | 6.4 | 6.4 | 6.2 | – | – | ... |
| Retail sales | 10.3 | 9.0 | 9.0 | 8.3 | 8.5 | 8.5 | 9.8 | 7.6 | 7.5 |
| Industrial production | 6.6 | 6.2 | 6.0 | 5.7 | 6.4 | 5.6 | 6.3 | 4.8 | 4.4 |
| PMI manufacturing *(value)* | 51.6 | 50.9 | 51.1 | 49.9 | 49.7 | 49.6 | 49.4 | 49.7 | 49.5 |
| **Foreign sector** | | | | | | | | | |
| Trade balance [1,2] | 420 | 352 | 349 | 352 | 381 | 396 | 396 | 413 | 422 |
| Exports | 7.9 | 9.9 | 11.7 | 4.0 | 1.2 | –1.0 | –1.3 | 3.3 | –1.0 |
| Imports | 16.3 | 15.8 | 20.4 | 4.4 | –4.5 | –4.0 | –7.3 | –5.4 | –5.6 |
| **Prices** | | | | | | | | | |
| Headline inflation | 1.6 | 2.1 | 2.3 | 2.2 | 1.8 | 2.6 | 2.7 | 2.8 | 2.8 |
| Official interest rate [3] | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| Renminbi per dollar | 6.8 | 6.6 | 6.8 | 6.9 | 6.8 | 6.8 | 6.9 | 6.9 | 7.1 |

***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, Department of Labor, Federal Reserve, Standard & Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Thomson Reuters Datastream.*

# EURO AREA

## Activity and employment indicators

*Values, unless otherwise specified*

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| Retail sales *(year-on-year change)* | 2.5 | 1.6 | 1.3 | 1.6 | 2.5 | 2.0 | 2.8 | 2.2 | ... |
| Industrial production *(year-on-year change)* | 3.0 | 0.9 | 0.5 | –2.0 | –0.5 | –1.3 | –2.4 | –2.0 | ... |
| Consumer confidence | –5.4 | –4.9 | –5.1 | –6.4 | –7.0 | –7.0 | –7.2 | –6.6 | –7.1 |
| Economic sentiment | 110.1 | 111.2 | 110.9 | 108.8 | 106.0 | 104.1 | 103.3 | 102.7 | 103.1 |
| Manufacturing PMI | 57.4 | 55.0 | 54.3 | 51.7 | 49.1 | 47.7 | 47.6 | 46.5 | 47.0 |
| Services PMI | 55.6 | 54.5 | 54.4 | 52.8 | 52.4 | 53.1 | 53.6 | 53.2 | 53.5 |
| **Labour market** | | | | | | | | | |
| Employment (people) *(year-on-year change)* | 1.6 | 1.5 | 1.4 | 1.4 | 1.4 | 1.2 | – | – | ... |
| **Unemployment rate** *(% labour force)* | 9.1 | 8.2 | 8.0 | 7.9 | 7.8 | 7.6 | 7.5 | 7.5 | 7.4 |
| Germany *(% labour force)* | 3.8 | 3.4 | 3.4 | 3.3 | 3.2 | 3.1 | 3.1 | 3.1 | 3.1 |
| France *(% labour force)* | 9.4 | 9.1 | 9.0 | 8.9 | 8.7 | 8.5 | 8.5 | 8.5 | 8.5 |
| Italy *(% labour force)* | 11.3 | 10.6 | 10.3 | 10.5 | 10.3 | 9.9 | 9.7 | 9.8 | 9.5 |
| **Real GDP***(year-on-year change)* | 2.7 | 1.9 | 1.7 | 1.2 | 1.3 | 1.2 | – | – | ... |
| Germany *(year-on-year change)* | 2.8 | 1.6 | 1.1 | 0.6 | 0.9 | 0.4 | – | – | ... |
| France *(year-on-year change)* | 2.4 | 1.7 | 1.5 | 1.2 | 1.3 | 1.4 | – | – | ... |
| Italy *(year-on-year change)* | 1.8 | 0.7 | 0.5 | 0.0 | –0.1 | –0.1 | – | – | ... |

## Prices

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| General | 1.5 | 1.8 | 2.1 | 1.9 | 1.4 | 1.4 | 1.3 | 1.0 | 1.0 |
| Core | 1.1 | 1.2 | 1.2 | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | 1.1 |

## Foreign sector

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Current balance** | 3.4 | 3.4 | 3.6 | 3.4 | 3.3 | 2.9 | 2.9 | 2.9 | ... |
| Germany | 8.1 | 7.3 | 7.6 | 7.3 | 7.2 | 7.1 | 7.1 | 7.3 | ... |
| France | –0.7 | –0.6 | –0.7 | –0.6 | –0.5 | –0.6 | –0.6 | –0.7 | ... |
| Italy | 2.6 | 2.5 | 2.6 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | ... |
| **Nominal effective exchange rate**[1] *(value)* | 96.5 | 98.9 | 99.2 | 98.5 | 97.3 | 97.3 | 97.9 | 97.5 | 98.1 |

## Credit and deposits of non-financial sectors

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Private sector financing** | | | | | | | | | |
| Credit to non-financial firms[2] | 2,5 | 3,8 | 4,2 | 4,0 | 3,7 | 3,9 | 3,9 | 3,9 | ... |
| Credit to households[2,3] | 2,6 | 3,0 | 3,1 | 3,2 | 3,3 | 3,3 | 3,3 | 3,4 | ... |
| Interest rate on loans to non-financial firms[4] *(%)* | 1,3 | 1,2 | 1,2 | 1,2 | 1,2 | 1,1 | 1,1 | ... | ... |
| Interest rate on loans to households for house purchases[5] *(%)* | 1,7 | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | 1,6 | ... | ... |
| **Deposits** | | | | | | | | | |
| On demand deposits | 10,1 | 7,9 | 7,3 | 7,1 | 7,0 | 7,7 | 7,7 | 8,3 | ... |
| Other short-term deposits | –2,7 | –1,5 | –1,4 | –0,9 | –0,4 | 0,4 | –0,1 | 0,1 | ... |
| Marketable instruments | 1,4 | –4,4 | –5,6 | –3,4 | –3,7 | –4,6 | –4,7 | –1,2 | ... |
| Interest rate on deposits up to 1 year from households *(%)* | 0,4 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | ... | ... |

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

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

# The Spanish economy grows at a more moderate pace than anticipated

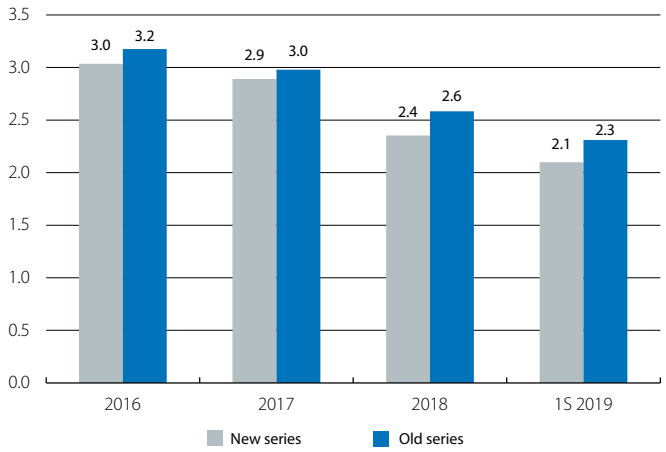
**The statistical revision of GDP reflects a more moderate growth**. September has been marked by a series of revisions of historical data on macroeconomic variables, which to some extent have altered the analysis of the current economic environment. Spain's National Statistics Institute (NSI) revised GDP growth between 2016 and 2018 downwards, reducing economic activity growth in 2018 by 0.2 pps to 2.4%. The institution also revised quarter-on-quarter GDP growth in Q1 and Q2 2019 down by 0.2 and 0.1 pps, respectively. By component, the main factor behind the downward revision of growth in 2018 is private consumption, which has gone from growing at an annual rate of 2.3% to 1.8%. This lower growth in consumption in a favourable domestic context, with strong performance in the labour market and accommodative financial conditions (supported by the ECB), could indicate that consumers reacted to the increase in uncertainty in the external environment and modified their spending decisions in order to shore up their finances in the face of greater downside risks. In this regard, the NSI has also revised the series for the savings rate which, as we shall see later, now shows that household savings are higher than previously estimated. Overall, the new data indicate that domestic demand is growing at more moderate rates than expected, due to a more demanding international environment, and lead us to revise our growth forecasts down by 0.4 pps (compared to our July forecast) in both 2019 and 2020, bringing them to 1.9% and 1.5%, respectively.

**The economic activity indicators suggest moderate growth in Q3**. The latest economic activity indicators show that the differing performance between the services sector and the industrial sector (which we have observed since the end of 2018) continues. While the PMI of the manufacturing sector stood at 48.8 points in August, still below the 50-point growth threshold, the equivalent figure for the services sector rose by 1.4 points to 54.3. Similarly, while industrial production in July maintained a moderate tone and grew by 0.8% year-on-year, a rate similar to the average for the first half of the year (0.7%), retail sales grew at a notable pace of 3.2% year-on-year. On the whole, with these and other indicators, CaixaBank Research's GDP forecasting model suggests that GDP growth in Q3 will be around 0.3%-0.4% quarter-on-quarter.

**Job creation experiences a gradual slowdown, but wages continue to rise**. The data on Social Security affiliation show that employment grew by 2.55% year-on-year in August, a slightly lower rate than in the previous month (2.6%). As such, a slowdown in the labour market is emerging that was more gradual than expected in the first half of the year. On the other hand, the progressive increase in labour costs continued in Q2 2019. According to the quarterly labour cost survey, the labour cost per effective hour rose by 3.1% year-on-year in Q2, +0.6 pps higher than in Q1 2019. Meanwhile, the wage cost per effective

### *Revision of the GDP series*

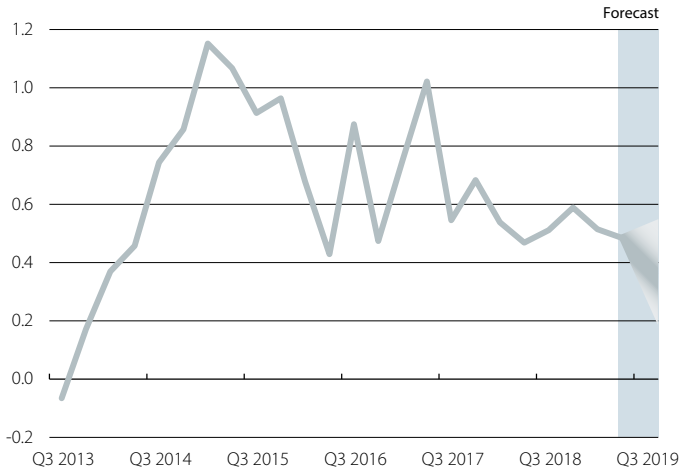
*Annual change (%) **




***Note:*** ** Except for the figure for S1 2019, which corresponds to the average of the year-on-year change of Q1 and Q2 2019.*
***Source:*** *CaixaBank Research, based on data from the National Statistics Institute.*

### *Spain: GDP*

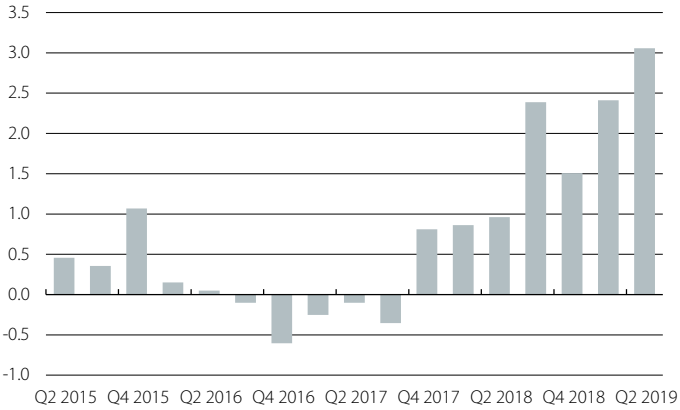
*Quarter-on-quarter change (%)*




***Note:*** *90% confidence interval.*
***Source:*** *CaixaBank Research, based on data from the National Statistics Institute.*

### *Spain: labour cost per effective hour **

*Year-on-year change (%)*




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

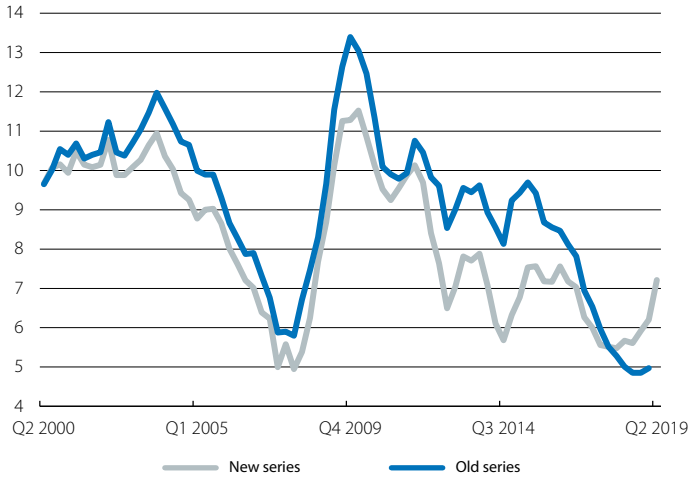
hour, which represents over two thirds of the total labour cost, increased by 2.7% (+2.2% in Q1 2019). Therefore, the recovery in wages continues, as can also be seen in the pay rises agreed in collective agreements, which amount to 2.3% in August 2019.

**The slowdown in private consumption has translated into an increase in savings**. With the new available data we can see that, after reaching a low point at the end of 2017, the savings rate began to recover until it reached 7.2% of gross disposable income in Q2 2019 (four-quarter cumulative figure). This figure contrasts with the previous estimate, which indicated that household savings had fallen steadily since mid-2015 and had stabilised at around 5.0% in Q1 2019. Although it provides less impetus to the current growth rate, this increase in savings gives the economy greater strength to withstand potential downside risks.

**The current account balance remains stable thanks to the slower growth of imports**. In coordination with EU countries, the ECB and Eurostat, the Bank of Spain has performed a major review of the series. The resulting revision of the figures does not change the trends affecting the balance of payments since 2016, but it raises the level of the current account surplus by 1.1 pps of GDP. With the new data, the cumulative current account balance for the 12 months to July 2019 stood at 21,945 million euros (1.79% of GDP), a level similar to the figure for the previous month (1.75% of GDP). This stability (which contrasts with the steady deterioration in the current account balance between late 2016 and March 2019) is mainly attributable to the non-energy goods component, which has stabilised since April as a result of the slowdown in imports: in July this component grew by 1.9% year-on-year (12-month cumulative balance), less than the 2.5% of the previous month and the 5.9% registered in July 2018. Nevertheless, the adverse international environment continues to manifest itself in the weakness of exports, which in July grew by a modest 1.3% (1.6% in June and 4.4% in July 2018).

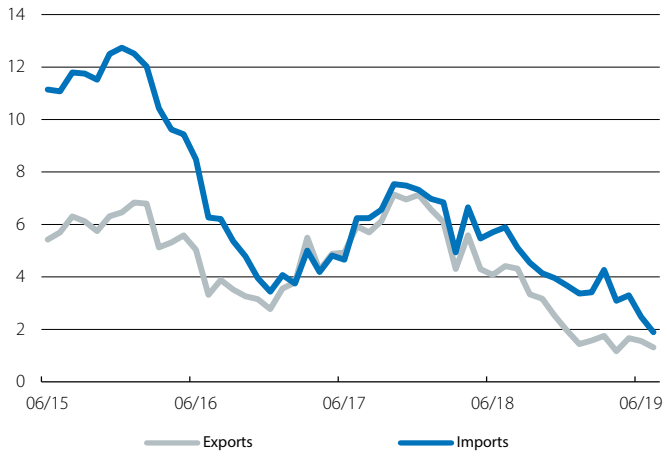
**The real estate market shows signs of moderation**. The price of housing based on valuations slowed its pace of growth in Q2 2019, with an increase of 0.1% quarter-on-quarter (1.1% in Q1). The growth rate of the price of housing based on transactions also fell in Q2 2019, in this case by 0.3 pps down to 1.2% quarter-on-quarter. This slowdown in housing prices is occurring in a context in which demand is showing signs of stabilisation. More specifically, property sales have barely grown so far this year (0.6% in January to July on a cumulative basis). That said, this slowdown is partly due to the temporary impact of the implementation of the new mortgage law (property sales fell by 9.0% in June), although in July they recovered (+3.8%). Furthermore, the supply indicators are slowing down too, although growth in the construction sector remains significantly higher than that of the economy as a whole. Looking ahead to the coming quarters, the moderation in the sector's growth rate will continue in the context of a slowdown across the economy as a whole. Nevertheless, this should not be interpreted as a sign of weakness in the sector, but rather as a process of normalisation towards more sustainable growth rates following the strong rebound experienced during the recovery.

### Spain: savings rate
*(% of gross disposable income)*



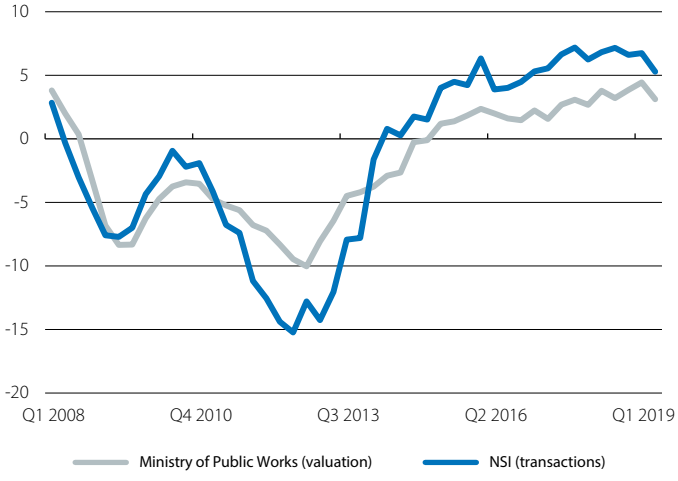

***Source:*** *CaixaBank Research, based on data from the National Statistics Institute.*

### Spain: foreign trade in goods *
*Year-on-year change in the 12-month cumulative balance (%)*




***Note:*** ** Nominal data, not seasonally adjusted. Excluding energy.*
***Source:*** *CaixaBank Research, based on data from the Department of Customs.*

### Spain: price of unsubsidised housing
*Year-on-year change (%)*




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

# The United Kingdom's potential for Spain after Brexit

- **In this article, we analyse the extent to which it will be more difficult for Spanish companies to establish relations for international expansion with the United Kingdom following Brexit.**
- **To this end, we use the CaixaBank Index for Business Internationalisation (CIBI), which classifies foreign countries according to the potential for internationalisation they offer for Spanish companies, and we analyse the impact of the four Brexit scenarios put forward by the Bank of England.**
- **The United Kingdom would remain high in the CIBI ranking five years after Brexit, although its score would be higher in the case of a soft Brexit thanks to the existence of a relatively comprehensive free trade agreement with the EU.**

The uncertainty generated by Brexit is already affecting economic growth (mainly in the United Kingdom, and in particular in the form of a suspension of investment projects) and it could hinder business relations with S pain in the short term. However, the time frame being considered in this article extends beyond this, to the medium to long term (five years). Over this time frame, the relationship arising from whatever form Brexit takes will determine how difficult it will be for Spanish companies to establish internationalisation links with the United Kingdom, since these relationships are currently close (see first chart).[1]

### What is the CIBI?

In order to assess the impact of Brexit in this regard, we use the CaixaBank Index for Business Internationalisation (CIBI), which ranks **countries according to the potential they offer Spanish companies for international expansion** based on various key aspects. These include aspects such as accessibility to each country's market, the ease of operating in each market, their commercial appeal, the financial and innovative environment, and their institutional and macroeconomic stability.[2] In the case of the CIBI 2019, the United Kingdom holds the second position behind France, in the ranking of potential for internationalisation from among the 67 economies analysed. It is important to point out that the CIBI mainly gathers facts on the analysed country, rather than potential future developments. As such, the exercise we have undertaken seeks to capture how Brexit would affect the CIBI.

### Brexit scenarios according to the Bank of England

For the purposes of our analysis, **we relied on the four Brexit scenarios put forward by the Bank of England, and their estimated impact** on a large number of economic and financial variables five years on (see table).[3]

To understand the implications of each of the four scenarios, it is important to take into account the current framework that the United Kingdom enjoys as a member of the EU, under which it participates in the free movement of goods, people, services and capital.

The first and least negative of the scenarios («**close partnership**») foresees a withdrawal agreed upon by both parties, with a two-year transition period, in which the

### *Description of Brexit scenarios*

| | Scenarios with a deal | | No-deal scenarios | |
|---|---|---|---|---|
| | **Close partnership** | **Less close partnership** | **Disruptive scenario** | **Disorderly scenario** |
| **Trade in goods and services** | • No tariffs or customs controls are applied.<br>• Trade barriers for non-financial services. | • No tariffs are applied.<br>• Customs controls are implemented in 2021.<br>• Trade barriers for non-financial services. | • WTO tariffs are applied.<br>• Customs controls are introduced.<br>• Barriers to trade in goods: the EU does not recognise the United Kingdom's production standards.<br>• Barriers to trade in services: reversion to WTO rules. | |
| **Movement of capital** | • Contained loss of passporting rights for financial services. | • Notable loss of passporting rights for financial services. | • Complete loss of passporting rights for financial services (reversion to WTO rules). | |
| **New trading context** | • Existing FTAs* with third parties are maintained.<br>• Correct operation of customs given the adaptation during the transition period (up to 2021). | | • Existing FTAs* with third-party countries are maintained.<br>• Slight delays at customs. | • Existing FTAs * are lost.<br>• Severe disruptions at customs. |
| **Macroeconomic uncertainty** | • Uncertainty subsides by the end of 2019. | • Uncertainty subsides by the end of 2021. | • The level of uncertainty reached is similar to that reached following the referendum. | • The level of uncertainty reached is greater than that reached following the referendum. |

***Note:*** ** FTA refers to Free Trade Agreement.*
***Source:*** *Bank of England (2018).*

1. For further details, see CaixaBank Research's forthcoming working paper 02/19, which provides further details on the items summarised in this article.
2. For further details on the CIBI, see the CaixaBank Index of Business Internationalisation - CIBI 2019 and the article «CIBI 2019: a compass to guide you in the foreign markets» in the MR09/2019.
3. See Bank of England (2018). «EU withdrawal scenarios and monetary and financial stability: A response to the House of Commons Treasury Committee».

United Kingdom and the EU would agree to maintain a **close bilateral relationship**. This would mean that certain barriers would apply to trade in services[4] and the movement of capital. The second scenario («**less close partnership**») is very similar to the first, although in this case a **less comprehensive trade agreement** would be agreed. This would involve tariff barriers and customs controls, in addition to stricter regulatory barriers on the movement of capital, which would affect 50% of current flows. Despite this, both scenarios would be considered a soft Brexit, since they would take place following an agreement between London and Brussels.

The two remaining scenarios envisage a no-deal withdrawal **(hard Brexit)**, after which the trading **relationship between the United Kingdom and the EU would be governed by World Trade Organization rules** (i.e. tariffs, customs controls and non-tariff barriers would apply to trade in goods and services, etc.). Under these scenarios, there would be no transition period prior to the new trading framework coming into force, which would cause serious delays at customs, among other problems. The difference between these two scenarios is that, unlike in the second one («**disorderly» scenario**), in the first one («**disruptive» scenar**io) the United Kingdom would maintain its trade agreements with third-party countries (i.e. those currently in place as an EU Member State).

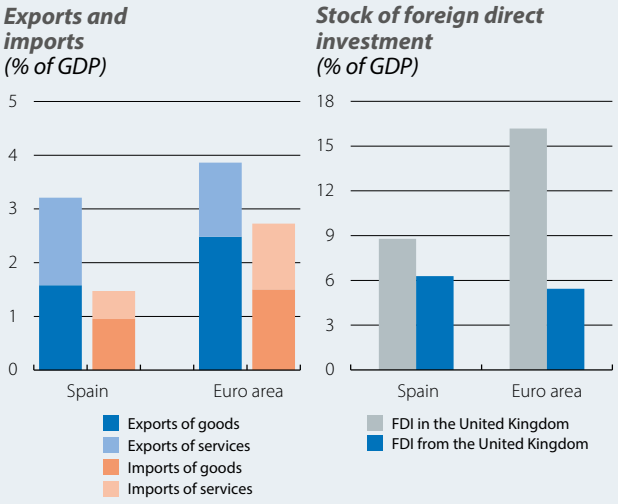
### Main results of the analysis

In all scenarios, **the United Kingdom would continue to enjoy an advantageous position in the CIBI ranking**. That is, five years after Brexit, it would remain an attractive country for Spanish companies looking to expand internationally. Specifically, it would remain in second position in the CIBI ranking in the two soft-Brexit scenarios, and would drop down to fourth position in the two hard-Brexit scenarios. The reason for it remaining among the top positions is that the agreement over the United Kingdom's withdrawal from the EU will not significantly affect the strong investment ties that connect it to Spain, nor the advanced British legal and administrative framework, nor its well-prepared labour force, among other aspects that are relevant for internationalisation. In fact, **the United Kingdom would not be far from the position currently held in the CIBI 2019 ranking by the US: an advanced country, which is also Anglo-Saxon and does not form part of the EU, and which is geographically farther away than the United Kingdom**.

The main differentiating factor between the CIBI score in the first two scenarios (soft Brexit) compared to that in the second two (hard Brexit) is the existence or non-existence of a relatively comprehensive free trade agreement with the EU, since such an agreement is a key factor that companies assess when deciding to establish trade, investment or any other kind of relations with a foreign country. In particular, this factor, which is largely reflected in the CIBI's «Accessibility» pillar, accounts for more than half of the United Kingdom's fall in the index

4. In particular, the financial services sector would lose its passport right to operate.

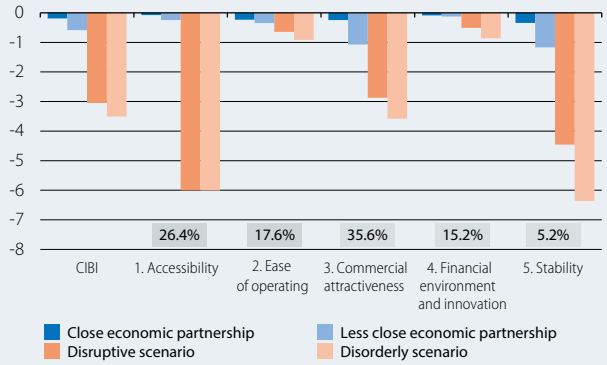
### *Bilateral trade and investment relations with the United Kingdom*




***Note:*** *Bilateral relations of Spain and the euro area with the United Kingdom, expressed as a percentage of their GDP, respectively.*
***Source:*** *CaixaBank Research, based on data from Eurostat and the Bank of Spain.*

### *CIBI: impact of Brexit scenarios on the score of the various pillars*

*Change in points (min. 0 - max. 10)*




***Note:*** *The percentages shown in the boxes indicate the weight of each of the CIBI's pillars.*
***Source:*** *CaixaBank Research.*

in the event of a hard Brexit. The other half of the decline is driven by other factors, such as the loss of purchasing power among British consumers due to a weaker pound against the euro, as a result of a worse macroeconomic situation than that foreseen in the case of a soft Brexit.

Thus, this exercise shows how, in **the medium term, certainty over the new framework of relations, a solid legal and institutional framework and the trade and economic relations in place should facilitate a return to a certain degree of normality, in which the United Kingdom would remain a preferential partner for Spanish companies**. That said, once again it is important to emphasise that this does not prevent the uncertainty surrounding the United Kingdom's withdrawal from the EU from potentially posing a significant obstruction for Spain's internationalisation relations with the United Kingdom during that process.

*Clàudia Canals,*
*Javier Ibáñez de Aldecoa and Josep Mestres*

# Taking the pulse of the Spanish economy's competitiveness: part I

- Although productivity has recovered from the steady decline suffered in the first decade of this century, it remains below that of its main European partners in terms of output per hour worked (with the exception of Portugal).
- The Spanish economy's lower productivity is not so much due to its sectoral composition relative to other countries but rather to the fact that its economic sectors are less productive.

## How do we measure competitiveness?

A country's competitiveness shows «the degree to which it can produce goods and services with exposure to competition in international markets while maintaining and expanding the real incomes of its individuals over the long term.»[1] A country's competitiveness is therefore determined by a set of institutions, policies and factors that are interrelated and include elements such as the country's human capital, the degree of innovation incorporated into the products and services produced by its companies, the efficiency of their productive and organisational processes, as well as many other factors. Thus, assessing all of these determining factors would clearly be a major undertaking.[2]

However, it is also possible to measure competitiveness not by assessing its determining factors but rather based on the results arising from it. Under this approach, two types of indicators can help to measure a country's competitiveness, **productivity indicators**, and **indicators related to the performance of the foreign sector**.

Greater competitiveness should be related to greater productive efficiency relative to that of other countries and, therefore, greater relative productivity. A competitive country can also be expected to gain more market share than its competitors.[3]

In this article, we will focus on analysing the trends in the productivity indicators of the Spanish economy and we will compare them to those of other developed economies.

## Productivity indicators

Productivity measures the degree of efficiency in the use of inputs in a productive process. An increase in productivity, therefore, indicates that fewer inputs are required to produce the same unit of a particular product or service.

1. See OECD (1992). «Technology and the Economy: the Key Relationships». Paris.
2. The WEF Global Competitiveness Report documents almost a hundred determining factors for competitiveness, which it uses to produce a ranked list of countries. However, it does not allow us to establish how these determining factors are used and combined to increase competitiveness. For further details, see http://reports.weforum.org/global-competitiveness-report-2018/.
3. A country can gain market share in the international market without having increased its relative productivity by introducing new products/services into these markets.

The two main indicators for measuring productivity are:

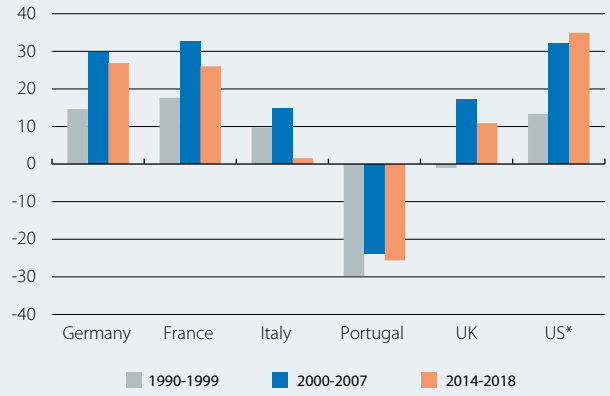
- **Total factor productivity (TFP)**, or the portion of the increase in output that is not explained by the accumulation of production factors (such as capital or employment). The problem with this indicator is that it is difficult to measure.
- **Apparent labour productivity**, or the output per hour worked. This measure is influenced by other factors, such as the capital per worker or human capital, but it has the advantage that more reliable data are available to measure it and it allows comparisons to be made between countries.

The first chart shows the differential, expressed as a percentage, in output per hour worked between these countries and Spain, adjusted for purchasing power parity.[4] Two main conclusions can be drawn from the chart:

- Firstly, Spain's productivity declined relative to other countries between the 1990s and the first decade of this century.
- Secondly, the improvement in productivity since the economic recovery began has allowed to reduce the gaps (except for with the US), although there is still a long way to go: Spain remains less productive, in terms of output per hour worked, than these countries in absolute terms (except for Portugal).

### *Apparent labour productivity*

*Differential of each country relative to Spain (%)*




***Note:*** ** Annual average for 2014-2017.*
***Source:*** *CaixaBank Research, based on data from the OECD.*

4. By way of example, the first grey bar in the chart, which refers to Germany, denotes that the output per hour worked in that country between 1990 and 1999 was around 15% higher than in Spain.

### Breakdown of the productivity gap between countries

What is the reason for the lower productivity relative to these countries? To investigate this matter, we analyse what portion of the contribution to the gap in apparent labour productivity can be attributed to the intensive margin and what portion is due to the composition effect. By **intensive margin**, we refer to the portion of the gap that can be explained by differences in the productivity of the same sector of the economy between Spain and another country. To calculate this effect, we compare the apparent labour productivity in each sector of the economy between two countries, while keeping the relative weight of that sector in both countries constant. On the other hand, **the composition** effect measures the portion of the gap that can be attributed to the fact that the sectors in question in each country represent a different portion of the total economy. Therefore, a country can be more productive not because its sectors are themselves more productive than those in other countries, but rather because the most productive sectors have a greater weight in the economy as a whole.

The main factor that explains the productivity gap between Spain and the other countries analysed is the intensive margin: i.e. Spain's lower productivity is a phenomenon that is common across the various economic sectors. This is evident in the second chart, in which the productivity gaps between Spain and the other countries have been normalised at 100 and the various contributions to this gap are presented. This shows how over 80% of the gap is due to the intensive margin.[5]

As such, the productivity problem in Spain is common to all sectors, rather than being specific to any one sector in particular. As shown in the third chart, there is a significant productivity gap between Spain and France in each productive sector.[6] In all sectors, Spain's productivity is lower than that of France, particularly in sectors ranging from professional and scientific activities, to commerce, to the manufacturing industry and even general government.

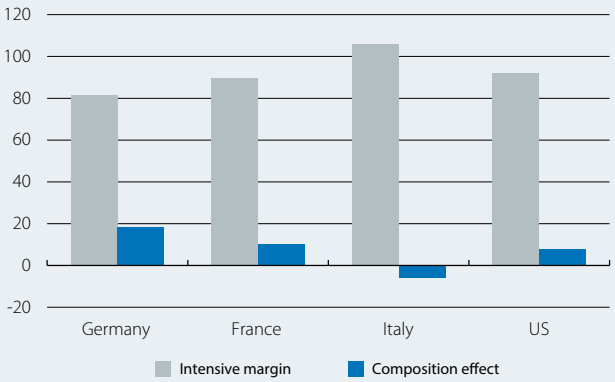
There are a multitude of causes that lie behind this lower productivity. Nevertheless, it is worth analysing how it relates to the country's business sector. The productivity gap is much greater for small and medium-sized Spanish enterprises than it is for larger companies, as shown in the fourth chart. In each sector, the latter are more like their French counterparts in terms of productivity, which suggests that bigger companies are able to achieve greater efficiency in the use of inputs in the production process.[7]

*Oriol Carreras and Josep Mestres*

5. As an example, in the case of Germany, we see that around 80% of the productivity gap is due to the intensive margin and that only 20% can be explained by the composition effect.
6. The data used to analyse the gap by sector comes from EU KLEMS, whereas the trend over time shown previously was analysed using data from the OECD and corresponds to different time periods, hence the figures do not match exactly.
7. For further details on the interaction between productivity and business size, see C. Guillamón, E. Moral-Benito and S. Puente (2017). «High growth firms in employment and productivity: dynamic interactions and the role of financial constraints?». Working Papers 1718. Bank of Spain.

### *Spain: breakdown of the productivity gap*

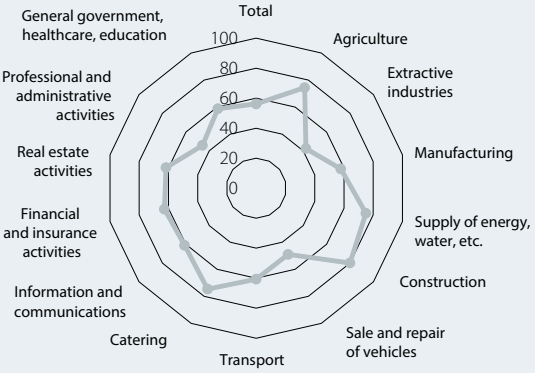
*Data for 2015 (%)*




***Note:*** *A positive value means that the effect makes a negative contribution to Spain's level of productivity, given that it contributes to widening the gap.*
***Source:*** *CaixaBank Research, based on data from EU KLEMS.*

### *Spain: productivity gap with France by sector*

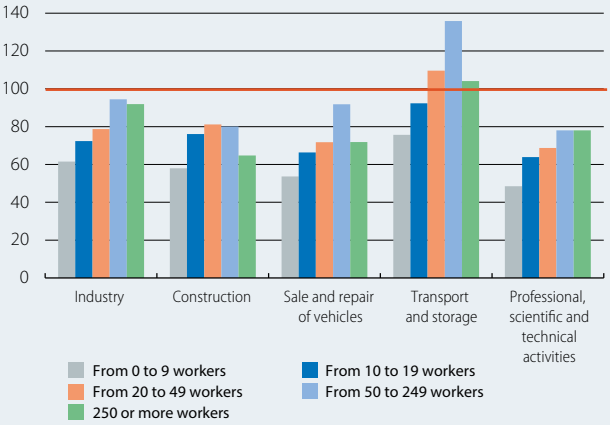
*(100 = France)*




***Note:*** *The line shows the productivity of each economic sector in Spain compared to its French equivalent (normalised to a value equal to 100).*
***Source:*** *CaixaBank Research, based on data from EU KLEMS.*

### *Spain: productivity gap with France by sector and company size*

*(100 = France)*




***Note:*** *The chart shows the productivity of companies of different sizes in each economic sector in Spain compared to their French equivalents (normalised to a value equal to 100).*
***Source:*** *CaixaBank Research, based on data from Eurostat («Structural business statistics»).*

*(See an extended version of this article at caixabankresearch.com)*

## Activity and employment indicators

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 06/19 | 07/19 | 08/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Industry** | | | | | | | | | |
| Industrial production index | 3.2 | 0.3 | 0.5 | –2.7 | –0.1 | 1.5 | 1.6 | 0.8 | ... |
| Indicator of confidence in industry *(value)* | 1.0 | –0.1 | –2.6 | –1.9 | –3.8 | –4.6 | –4.8 | –3.0 | 1.6 |
| Manufacturing PMI *(value)* | 54.8 | 53.3 | 52.4 | 51.8 | 51.1 | 49.9 | 47.9 | 48.2 | 48.8 |
| **Construction** | | | | | | | | | |
| Building permits *(cumulative over 12 months)* | 22.9 | 25.7 | 25.8 | 23.9 | 25.8 | 21.9 | 19.6 | 14.4 | ... |
| House sales *(cumulative over 12 months)* | 14.1 | 14.2 | 13.5 | 11.5 | 8.3 | 5.5 | 4.7 | 3.6 | ... |
| House prices | 6.2 | 6.7 | 7.2 | 6.6 | 6.8 | 5.3 | – | – | ... |
| **Services** | | | | | | | | | |
| Foreign tourists *(cumulative over 12 months)* | 10.0 | 4.0 | 1.6 | 0.9 | 1.0 | 1.5 | 1.6 | ... | ... |
| Services PMI *(value)* | 56.4 | 54.8 | 52.6 | 54.0 | 55.3 | 53.2 | 53.6 | 52.9 | 54.3 |
| **Consumption** | | | | | | | | | |
| Retail sales | 1.0 | 0.7 | –0.4 | 1.4 | 1.3 | 2.2 | 2.5 | 3.3 | 3.2 |
| Car registrations | 7.9 | 7.8 | 17.0 | –7.6 | –7.0 | –4.4 | –8.3 | –11.1 | –30.8 |
| Consumer confidence index *(value)* | –3.4 | –4.2 | –3.7 | –6.2 | –4.8 | –4.0 | –2.1 | –4.9 | –6.2 |
| **Labour market** | | | | | | | | | |
| Employment [1] | 2.6 | 2.7 | 2.5 | 3.0 | 3.2 | 2.4 | – | – | ... |
| Unemployment rate (% labour force) | 17.2 | 15.3 | 14.6 | 14.4 | 14.7 | 14.0 | – | – | ... |
| Registered as employed with Social Security [2] | 3.6 | 3.1 | 2.9 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 |
| **GDP** | **2.9** | **2.4** | **2.2** | **2.1** | **2.2** | **2.0** | **–** | **–** | **...** |

## Prices

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 05/19 | 06/19 | 07/19 |
|---|---|---|---|---|---|---|---|---|---|
| General | 2.0 | 1.7 | 2.2 | 1.7 | 1.1 | 0.9 | 0.4 | 0.5 | 0.3 |
| Core | 1.1 | 0.9 | 0.8 | 0.9 | 0.7 | 0.8 | 0.9 | 0.9 | 0.9 |

## Foreign sector

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 05/19 | 06/19 | 07/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Trade of goods** | | | | | | | | | |
| Exports *(year-on-year change, cumulative over 12 months)* | 8.9 | 2.9 | 4.5 | 2.9 | 2.4 | 2.3 | 2.3 | 1.8 | ... |
| Imports *(year-on-year change, cumulative over 12 months)* | 10.5 | 5.6 | 6.2 | 5.6 | 6.1 | 3.9 | 3.9 | 2.9 | ... |
| **Current balance** | **31.1** | **23.3** | **26.0** | **23.3** | **19.6** | **21.4** | **21.4** | **21.9** | **...** |
| Goods and services | 41.6 | 32.6 | 35.1 | 32.6 | 30.2 | 31.6 | 31.6 | 32.4 | ... |
| Primary and secondary income | –10.5 | –9.3 | –9.1 | –9.3 | –10.6 | –10.2 | –10.2 | –10.4 | ... |
| **Net lending (+) / borrowing (–) capacity** | **33.9** | **29.1** | **29.4** | **29.1** | **25.5** | **27.4** | **27.4** | **27.9** | **...** |

## Credit and deposits in non-financial sectors [3]

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 05/19 | 06/19 | 07/19 |
|---|---|---|---|---|---|---|---|---|---|
| **Deposits** | | | | | | | | | |
| Household and company deposits | 2.8 | 3.2 | 3.4 | 3.7 | 5.3 | 5.8 | 5.3 | 5.4 | 6.0 |
| Sight and savings | 17.6 | 10.9 | 10.3 | 10.0 | 11.3 | 10.9 | 10.0 | 10.5 | 10.9 |
| Term and notice | –24.2 | –19.9 | –18.7 | –16.8 | –13.7 | –12.8 | –13.2 | –13.1 | –13.2 |
| General government deposits | –8.7 | 15.4 | 10.4 | 16.9 | 17.8 | 15.7 | 9.6 | 2.7 | 3.9 |
| **TOTAL** | **1.9** | **3.8** | **3.8** | **4.5** | **6.0** | **6.4** | **5.6** | **5.3** | **5.8** |
| **Outstanding balance of credit** | | | | | | | | | |
| Private sector | –2.2 | –2.4 | –2.3 | –2.2 | –2.1 | –1.1 | –1.2 | –1.0 | –0.9 |
| Non-financial firms | –3.6 | –5.5 | –5.6 | –5.7 | –5.5 | –3.0 | –3.0 | –2.2 | –1.8 |
| Households - housing | –2.8 | –1.9 | –1.7 | –1.4 | –1.1 | –1.2 | –1.3 | –1.6 | –1.5 |
| Households - other purposes | 3.7 | 5.1 | 5.5 | 4.7 | 4.2 | 3.8 | 3.6 | 3.6 | 3.4 |
| General government | –9.7 | –10.6 | –8.9 | –11.8 | –10.4 | –7.2 | –6.0 | –5.2 | –5.0 |
| **TOTAL** | **–2.8** | **–2.9** | **–2.7** | **–2.8** | **–2.6** | **–1.5** | **–1.5** | **–1.3** | **–1.1** |
| **NPL ratio (%)[4]** | **7.8** | **5.8** | **6.2** | **5.8** | **5.7** | **5.4** | **5.4** | **5.2** | **...** |

***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.*

# The Portuguese economy shows a positive performance

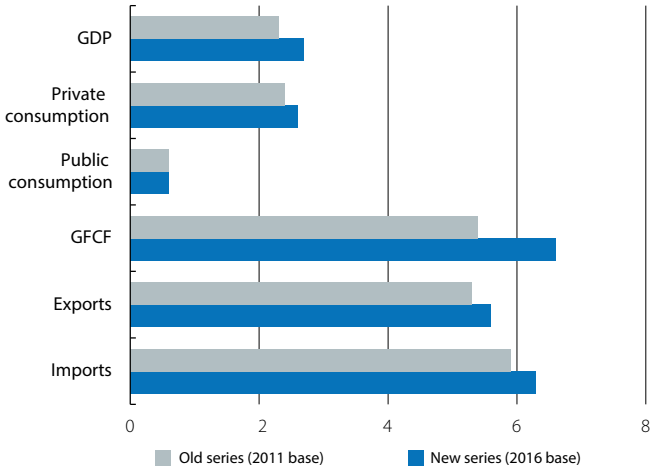
**The statistical review of the national accounts reveals a more positive picture of the Portuguese economy.** In September, the National Statistics Institute (NSI) conducted a review of the historical GDP series, which resulted in a significant improvement in the growth figures for the past three years. In particular, according to the new series, GDP grew at an average annual rate of 2.7% between 2016 and 2018, 0.4 pps higher than according to the previous series. Another especially noteworthy aspect was the upward revision of investment, with an average annual growth over the three-year period of 6.6%, 1.2 pps higher than in the previous series. This was driven by upward revisions of the construction, transport equipment and intellectual property subcomponents. The new series also shows that GDP growth was higher in the first half of 2019 (+2.0%, compared to the 1.8% previously estimated). This leads us to raise our forecast for the year as a whole to 1.8%, 1 decimal point higher than previously estimated. These revisions, however, do not change the trend towards a gradual slowdown in growth. On the one hand, this slowdown reflects the fact that the economy is in a more mature phase of the cycle, in which it is natural for growth to moderate down to its potential. On the other hand, in a demanding external environment, the slowdown of the global economy will also contribute to moderating the growth of the Portuguese economy. Indeed, the Bank of Portugal's coincident economic activity indicator (which is closely associated with GDP) fell in July to 1.8%.

**The new series also mitigate the deterioration of the external situation.** In particular, following the NSI's revisions, in Q2 2019 the economy's financing capacity stood at 0.4% of GDP (four-quarter cumulative figure). This is clearly more positive than the figure reflected in the previous series (according to which the country had external financing needs amounting to 0.1% of GDP). Furthermore, it indicates that the process of reducing Portugal's still high level of external debt (around 100% of GDP) remains on track. Similarly, the household savings rate was revised upwards, now standing at 5.9% of gross disposable income in Q2 2019 (four-quarter cumulative figure). This represents an increase of around +1.5 pps compared to the previous series. Despite these improvements, the trend of a gradual decline in savings continues as consumption continues to grow faster than disposable income. This trend is favoured by confidence in the evolution of the labour market and households' financial situation (see the article «Portuguese household savings rate at rock bottom: how concerned should we be?» in this same *Monthly Report*).

**The budgetary balance improved substantially in the first half of the year.** In June 2019, the public sector balance stood at –0.8% of GDP according to the national accounting data

***Portugal: GDP and components***

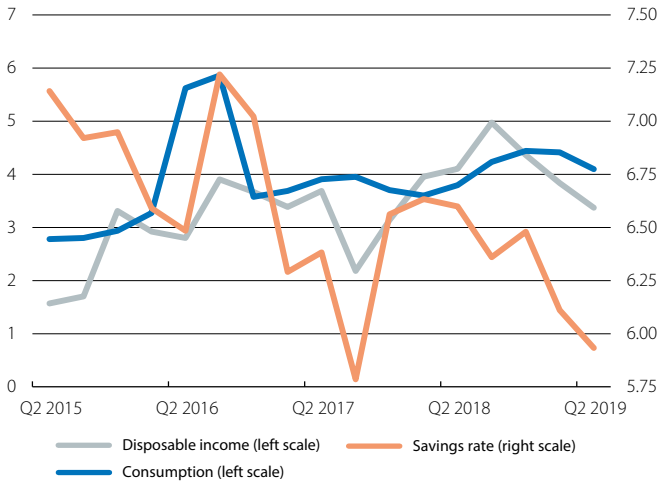
*Average annual growth for 2016-2018 (%)*




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

***Portugal: household savings, income and consumption***

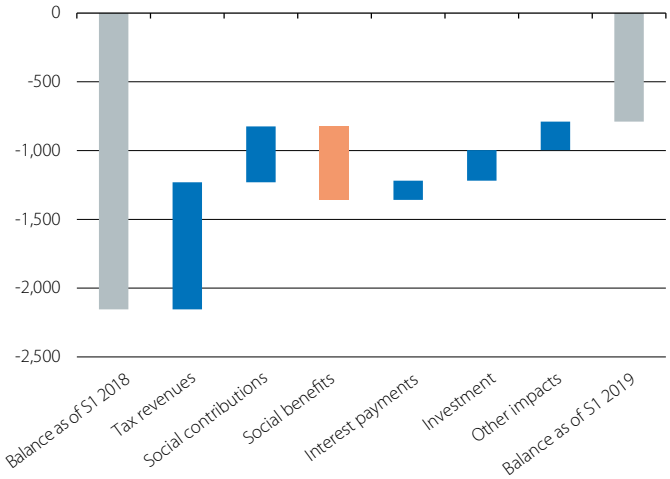
*Year-on-year change (%)* *(% of gross disposable income)*




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

***Portugal: central government balance***

*(EUR millions)*




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

(–789 million euros), representing a clear improvement over the figure for the same period in 2018 (–2.2% of GDP). This improvement reflects the considerable growth in revenues (5.0%), compared to a moderate increase in expenditure (1.4%), with the reduction in interest costs (–4.2%) and the fall in investment (–14.1%) standing out. The monthly budget execution, meanwhile, continues to follow a favourable trend and reached a surplus of 402 million euros with data up to August, indicating that the improvement in the public finances will continue for the rest of the year.

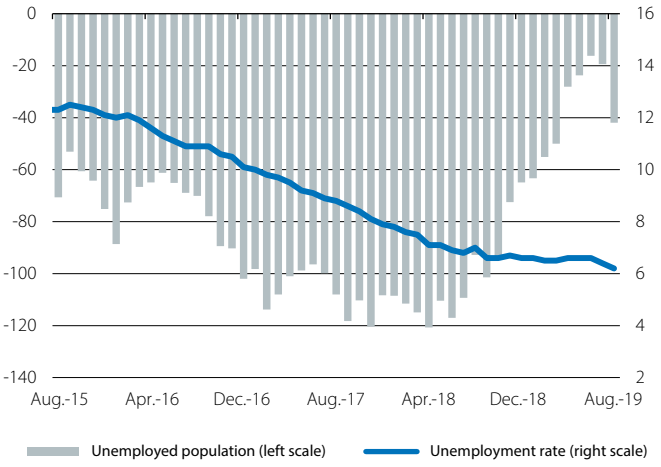
**The unemployment rate has dropped to levels of 2002**. In August, the unemployment rate fell to 6.2% (in seasonally-adjusted terms), representing a 0.8 pps reduction in the past 12 months. The number of people in employment also continued to grow more moderately than in the past (1.1% year-on-year, versus 2.0% in August 2018 and 2.3% on average in 2018), and in August it reached the highest level since early 2009. Both figures were better than expected. However, looking ahead to the coming quarters a more moderate trend can be expected in the labour market, as it has entered a more mature phase.

**The real estate sector remains buoyant**. In Q2 2019, housing prices rose by 10.1% year-on-year, 0.9 pps more than in the previous quarter. This trend can be explained by the increase in the relative weight of non-resident buyers in the sum of all property transactions (they have gone from representing 7% of transactions in 2017 to 13% in 2018). Furthermore, this group of buyers is concentrated in the most luxurious segments of the market (in 2018, the average price paid by non-residents exceeded the average price paid by residents by 58%, which may be related to the fact that purchasing houses for over 500,000 euros is one of the requirements for obtaining Portuguese residency through investment activities). These signals, however, contrast with the 6.6% year-on-year decline in sales in Q2 (the first decline since Q1 2013).

**Non-financial private sector lending continues to contract, with a –1.5% year-on-year reduction in July**. On the one hand, the stock of lending to households fell by 0.8% year-on-year, largely due to lending for housing (–1.5%) and in particular due to repayments, given that new lending operations remain strong. On the other hand, the recovery in new lending to non-financial corporations has softened the contraction of total lending (–2.7% in July, versus –6.0% at the beginning of the year). Finally, it should also be noted that sales of doubtful loans have a negative impact on lending stock: excluding this effect, the lending stock would have increased by 2.4% up to July.

### *Portugal: unemployed population and unemployment rate*

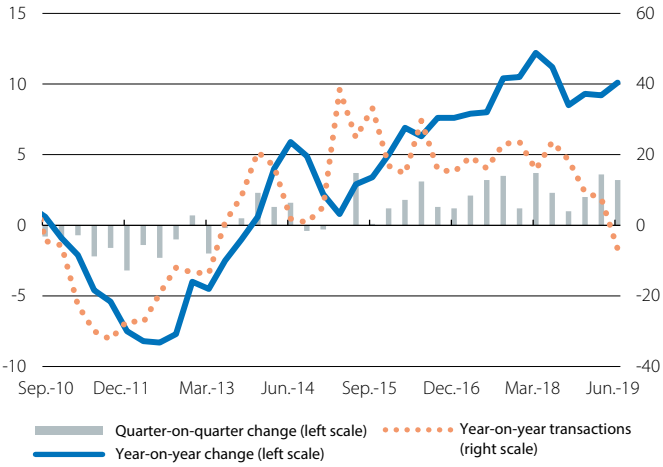
*Year-on-year change (thousands)* *(%)*




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

### *Portugal: housing prices and transactions*

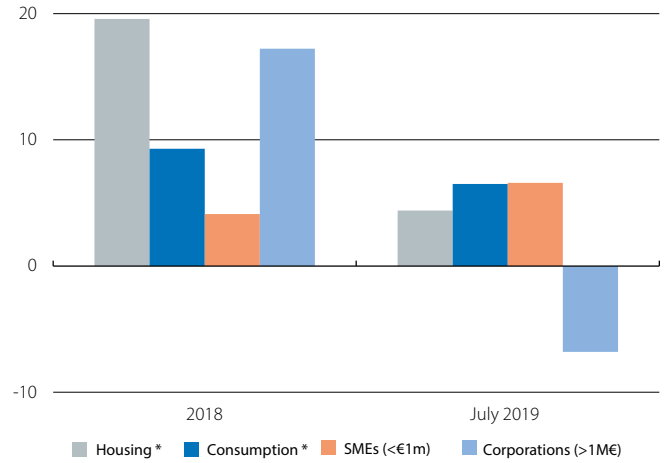
*Year-on-year change (%)* *Year-on-year change (%)*




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

### *Portugal: new lending operations*

*Year-on-year change (%)*




***Note:*** ** Excluding renegotiations.*
***Source:*** *CaixaBank Research, based on data from the Bank of Portugal.*

# Portuguese household savings rate at rock bottom: how concerned should we be?

- The savings rate of Portuguese households has dropped in recent years, reaching an all-time low in 2018.
- This decline is associated with the strong performance of economic activity and the labour market in recent years, the lower levels of domestic uncertainty and the materialisation of consumption decisions that were deferred during the financial crisis.
- Looking ahead to the future, the more moderate growth in consumption and the recovery in household income will support a gradual improvement in savings.

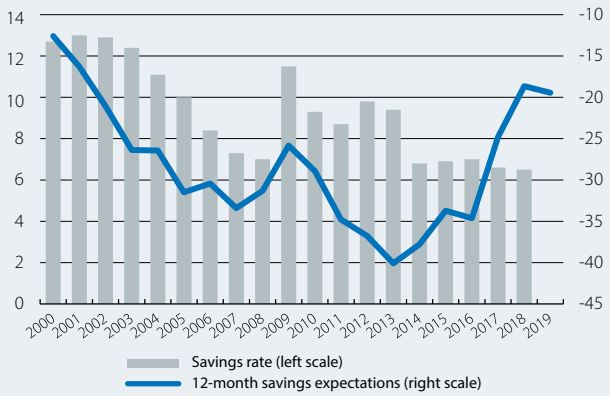
The savings rate of Portuguese households[1] reached an all-time low in 2018: 6.5% of gross disposable income[2] (see first chart), which contrasts with the euro area average of 11.9%. In fact, the Portuguese household savings rate has been in decline since 2001 (with brief interludes in 2009 and 2012 during periods of economic and financial crisis). Given the importance of savings for private investment and to mitigate the adverse effects of new demographic trends (such as population ageing), we must understand what factors could lie behind these low levels in the saving rate in Portugal and whether they should be cause for concern.

According to Portuguese households themselves, their main reason for saving is to provide protection against unforeseen events: saving as a precaution. This is natural, given that saving allows households to deal with income instability over the course of a lifetime and to maintain a stable level of consumption. In other words, savings make it possible to limit the impact of temporary fluctuations in income on consumption.[3] So it is understandable that precaution was the main driver behind the increase in savings in 2009 and 2012: these were years marked by a high degree of uncertainty and a decline in expectations for the labour market and household income (see second chart). Both of these factors contribute to the desire to save and, when added to the contraction of economic activity, this led to a drop in the consumption of durable goods,[4] as well as in the consumption of non-durable goods, which is normally more stable.

Starting in 2014, the improvement in economic and financial conditions helped to stabilise households' expectations. Since then, consumption has grown significantly, in excess of the growth in gross disposable income.[5] Thus, in a context with less uncertainty, a recovery in economic growth and better expectations in relation to the labour market, households began to materialise the consumption decisions that they had

***Portugal: savings rate and 12-month savings expectations***

*(% of gross disposable income)* *Index (annual average)*




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

***Portugal: savings rate and unemployment expectations ****

*(% of gross disposable income)* *(Index)*


***Note:*** ** The unemployment expectations reflect the difference between the percentage of households that expect unemployment to increase over the next 12 months and the percentage that expect it to decline.*
***Source:*** *CaixaBank Research, based on data from the National Statistics Institute and the European Commission.*

1. The term «households» includes family households, individual entrepreneurs and non-profit institutions serving households. This broad classification is used due to the absence, as of the date of this document, of data on the savings rate relating exclusively to family households in 2018.
2. National accounting data.
3. See Bank of Portugal (2016). « An interpretation of household saving rate developments in Portugal ». Economic Bulletin for May.
4. *Ibid.*
5. On average, nominal consumption grew by 3.5% between 2014 and 2018, while gross disposable income increased by 2.7% over the same period.

postponed during the financial crisis, especially those relating to the consumption of durable goods (such as cars).

**Should we be concerned about the current levels of saving?**

As households catch up with the spending decisions that were deferred in the past, consumption growth will resume a more gradual rate. At the same time, gross disposable income is expected to continue to recover over the coming years, in line with the increase in wages and job creation,[6] which exceeds the growth rate of consumption. As such, we can expect a recovery in household savings (albeit a gradual one).

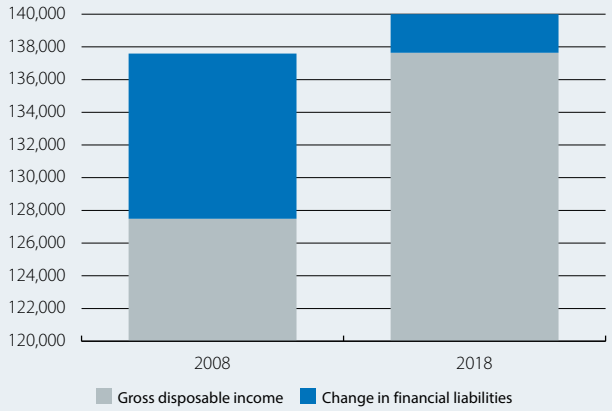
Furthermore, it should be borne in mind that the reduction in household savings has not been accompanied by an increase in their financial obligations (see third chart). In fact, household debt has declined steadily.[7] This is down to the fact that households have accelerated the early repayment of debts, encouraged by the low interest rate environment and the limited availability of savings instruments offering high returns[8] (see fourth chart). On the other hand, credit growth has been constrained by the implementation of macroprudential measures[9] and, in the case of mortgages, higher housing prices.

Despite the expectation of a recovery in the household savings rate, there are other factors that should be taken into consideration. The statistics of the Bank of Portugal[10] reveal that 68% of households have admitted to having experienced difficulties in coping with their regular expenses in 2018 (versus an average of 45% for the euro area). According to data from Eurostat, meanwhile, 34.7% of households lack the capacity to cope with unforeseen financial expenses (versus 32.2% for the euro area). When combined with the ageing of the population (since the elderly are one of the age groups that save the least),[11] these factors suggest that the recovery in aggregate savings will be very gradual over the next few years.

6. Nevertheless, job creation is expected to be more moderate going forward, given that the improvements registered in recent years were rather remarkable (employment grew by 3.3% in 2017 and by 2.3% in 2018).
7. In 2018, it stood at 95.4% of gross disposable income, substantially below the 126.3% registered in 2009.
8. The Bank of Portugal notes that a considerable portion of the savings of households that are in debt is used to make capital repayments. See note 2.
9. For more information on the macroprudential measures implemented by the Bank of Portugal in July 2018, see the article «Portugal: macroprudential measures and the state of the housing credit cycle» in the MR05/2019.
10. See Bank of Portugal (2019). «Financial Stability Report» for the month of June.
11. The IMF concluded that the savings rate in Portugal is worse than that of other European countries due, among other factors, to the high dependency ratio of the elderly, in addition to the high level of state expenditure on pensions and social protection schemes. See IMF (June 2019). «Selected Issues Paper: Household saving in Portugal».

***Portugal: household resources***

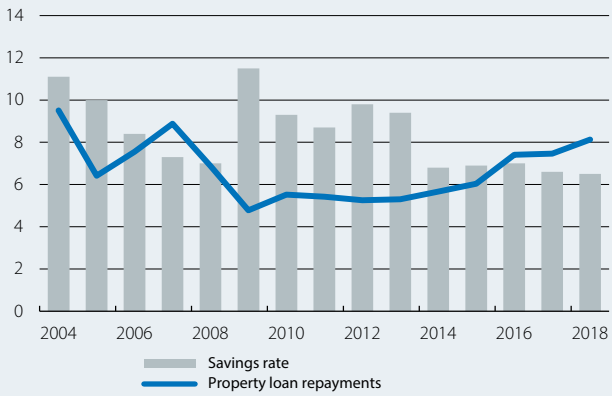
*(EUR millions)*




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

***Portugal: property loan repayments and savings rate***

*(% of gross disposable income)*




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

In short, the recent reduction in the household savings rate in Portugal reflects the recovery from the turbulent period of 2009 and 2012 and the current buoyancy of the Portuguese economy (with the resulting better expectations for the labour market). In addition, the low levels of saving are offset by the fact that household resources reached their peak in 2018. However, in a less favourable scenario, households' low levels of saving could make them more vulnerable to unforeseen changes in their income.

*Vânia Duarte*

## Activity and employment indicators

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 08/19 | 09/19 |
|---|---|---|---|---|---|---|---|---|
| Coincident economic activity index | 2.9 | 2.1 | 1.8 | 1.7 | 1.9 | 2.0 | 1.8 | ... |
| **Industry** | | | | | | | | |
| Industrial production index | 4.0 | 0.1 | –1.6 | –1.3 | –3.7 | –2.2 | –4.8 | ... |
| Confidence indicator in industry *(value)* | 2.1 | 0.8 | 0.4 | –0.8 | –1.4 | –3.3 | –3.2 | –4.1 |
| **Construction** | | | | | | | | |
| Building permits *(cumulative over 12 months)* | 16.6 | 19.1 | 13.2 | 19.1 | 20.6 | 15.1 | ... | ... |
| House sales | 20.5 | 16.8 | 18.4 | 9.4 | 7.6 | –6.6 | ... | ... |
| House prices *(euro / m² - valuation)* | 5.1 | 5.8 | 6.2 | 6.1 | 6.9 | 7.8 | 7.7 | ... |
| **Services** | | | | | | | | |
| Foreign tourists *(cumulative over 12 months)* | 16.0 | 4.8 | 6.9 | 5.2 | 4.5 | 4.9 | ... | ... |
| Confidence indicator in services *(value)* | 13.3 | 14.1 | 15.9 | 13.0 | 15.3 | 14.2 | 11.3 | 9.9 |
| **Consumption** | | | | | | | | |
| Retail sales | 4.1 | 4.2 | 2.6 | 5.2 | 4.3 | 5.9 | 4.5 | ... |
| Coincident indicator for private consumption | 2.7 | 2.4 | 2.3 | 2.0 | 1.9 | 1.9 | 2.1 | ... |
| Consumer confidence index *(value)* | –5.4 | –4.6 | –5.0 | –5.4 | –8.3 | –8.9 | –7.6 | –7.1 |
| **Labour market** | | | | | | | | |
| Employment | 3.3 | 2.3 | 2.1 | 1.6 | 1.5 | 0.9 | 1.1 | ... |
| Unemployment rate (% labour force) | 8.9 | 7.0 | 6.7 | 6.7 | 6.8 | 6.3 | 6.2 | ... |
| **GDP** | **3.5** | **2.4** | **2.1** | **2.0** | **2.1** | **1.9** | ... | ... |

## Prices

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 08/19 | 09/19 |
|---|---|---|---|---|---|---|---|---|
| General | 1.4 | 1.0 | 1.4 | 0.8 | 0.8 | 0.5 | –0.1 | –0.1 |
| Core | 1.1 | 0.7 | 0.8 | 0.5 | 0.8 | 0.6 | 0.2 | 0.2 |

## Foreign sector

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 08/19 | 09/19 |
|---|---|---|---|---|---|---|---|---|
| **Trade of goods** | | | | | | | | |
| Exports *(year-on-year change, cumulative over 12 months)* | 10.0 | 5.1 | 7.1 | 5.1 | 5.8 | 3.3 | ... | |
| Imports *(year-on-year change, cumulative over 12 months)* | 13.7 | 8.2 | 8.6 | 8.2 | 9.2 | 8.3 | ... | |
| **Current balance** | **0.9** | **–1.2** | **–0.4** | **–1.2** | **–2.4** | **–2.1** | ... | |
| Goods and services | 3.5 | 2.0 | 3.1 | 2.0 | 0.8 | 0.3 | ... | |
| Primary and secondary income | –2.6 | –3.2 | –3.5 | –3.2 | –3.2 | –2.4 | ... | |
| **Net lending (+) / borrowing (–) capacity** | **2.7** | **0.9** | **1.6** | **0.9** | **–0.3** | **0.0** | ... | |

## Credit and deposits in non-financial sectors

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

| | 2017 | 2018 | Q3 2018 | Q4 2018 | Q1 2019 | Q2 2019 | 08/19 | 09/19 |
|---|---|---|---|---|---|---|---|---|
| **Deposits** [1] | | | | | | | | |
| Household and company deposits | 1.7 | 3.8 | 4.4 | 4.2 | 4.9 | 4.5 | ... | ... |
| Sight and savings | 15.7 | 14.3 | 13.6 | 14.6 | 14.2 | 13.3 | ... | ... |
| Term and notice | –5.8 | –3.0 | –2.1 | –3.1 | –1.9 | –2.3 | ... | ... |
| General government deposits | 1.3 | –1.9 | 1.0 | –9.9 | –11.6 | –11.9 | ... | ... |
| **TOTAL** | **1.6** | **3.5** | **4.2** | **3.4** | **4.1** | **3.6** | ... | ... |
| **Outstanding balance of credit** [1] | | | | | | | | |
| Private sector | –4.0 | –1.7 | –1.4 | –1.8 | –2.6 | –1.9 | ... | ... |
| Non-financial firms | –6.5 | –3.8 | –3.7 | –4.5 | –5.7 | –3.8 | ... | ... |
| Households - housing | –3.1 | –1.5 | –1.2 | –1.3 | –1.5 | –1.4 | ... | ... |
| Households - other purposes | 0.9 | 4.5 | 5.8 | 5.2 | 3.1 | 2.1 | ... | ... |
| General government | 9.3 | 2.4 | –12.4 | –11.6 | –12.5 | –8.1 | ... | ... |
| **TOTAL** | **–3.5** | **–1.6** | **–1.9** | **–2.3** | **–3.0** | **–2.2** | ... | ... |
| **NPL ratio** *(%)* [2] | **13.3** | **9.4** | **11.3** | **9.4** | **8.9** | **...** | ... | ... |

***Notes:*** *1. Aggregate figures for the Portuguese banking sector and residents in Portugal. 2. Period-end figure.*
***Source:*** *CaixaBank Research, based on data from the National Statistics Institute of Portugal, Bank of Portugal and Datastream.*

# Blockchain and cryptocurrencies: welcome to the new digital paradigm

Technological change will change the payment system as we know it, and blockchain technology will probably play a very important role in this process by facilitating the emergence of digital currencies. What are the key aspects of the technologies that will enable this transformation? Which cryptocurrencies are most likely to succeed?

### Blockchain technology

Advances in cryptography, combined with the potential for data transmission and storage, have enabled **the emergence of so-called distributed ledger technologies** (DLTs). **These are databases of which there are multiple identical copies distributed among participants on the network** and which are updated in a synchronised and consensual manner. The great attraction of DLTs is that **they allow data to be securely managed and shared**, as well as saved, without the possibility for the information to be altered. **The most well-known type of DLT is a blockchain**, which organises information into blocks and regularly compares it with a ledger that cannot be deleted.

Blockchain technology is based on three key ingredients:

- Thanks to cryptography, **each block of information is uniquely identified**.
- Participants **on the network must approve and validate all the information** entering the network.
- **The register is tamper-proof and immutable**, making it extremely difficult to hack or modify.

**Blockchain technology facilitates the emergence of cryptocurrencies**, because by creating a shared register of all the transactions and establishing a decentralised method of validation, money can be digitally exchanged between users, directly (traditional payment infrastructures have a central intermediary, such as the central bank, a digital payment processing company, a mobile platform, etc.). The best-known application for blockchain technology in the financial world is payment settlements (in cross-border transfers, cryptocurrencies can play a valuable role as a bridge currency), as illustrated in the first flowchart.

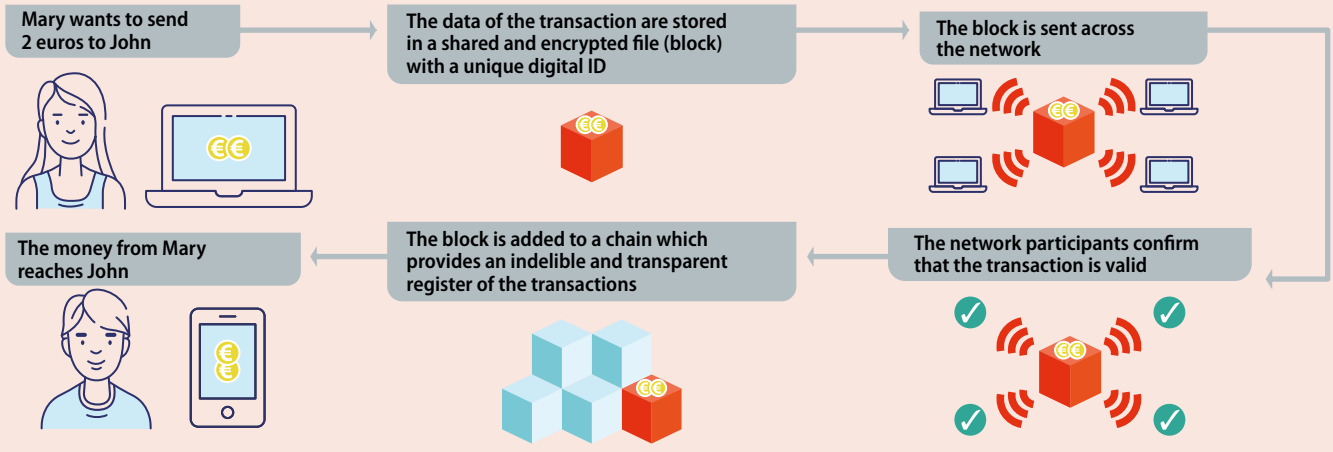
### Blockchain, a rapidly-evolving technology that could facilitate the development of applications for mass use

One of the areas that is being worked on the most is in improving the scalability of blockchain payment systems, one of their key ingredients. The first initiatives that emerged were fully decentralised and public networks. In these cases, since all participants must validate the transactions, the number of transactions that can be processed is greatly limited (a prime example is that of Bitcoin, which processes 7 transactions per second compared to Visa's 65,000) and the energy costs are very high. **One of the solutions being explored is the use of permissioned networks**, in which an administrator controls the network and decides who can participate in it. The advantage of such networks is that they are more scalable and allow transactions to be validated much quicker, although they are more vulnerable to attacks aimed at altering the ledger.

### Beyond blockchain

It is important to clarify that technological advances in the financial sector go far beyond cryptocurrencies and DLTs, and they have enabled improvements in the speed and operation of payment systems. A good example of this is the spectacular advances made in mobile payments. Besides, as we have seen, blockchain technology has a lot of potential, although it would be possible to issue a digital currency without having to resort to using it. In fact, an authority with process centralisation powers, such as a central bank, could do so by developing an infrastructure based on the payment systems that are already in operation today.

*How blockchain technology works*




**Source:** *CaixaBank Research.*

**The main areas in which the use of cryptocurrencies can prove beneficial are:**

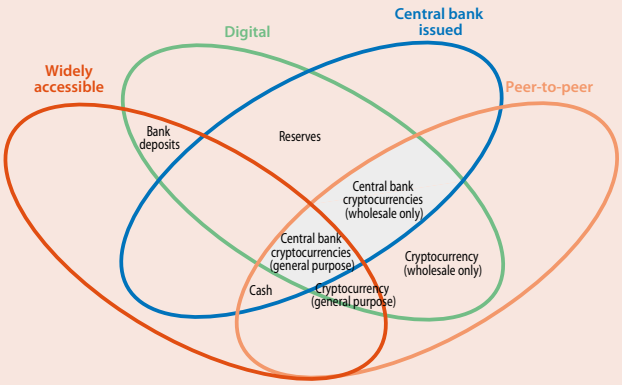
- **International financial transactions**. Although blockchain technology is not the only alternative being explored in this area, it is a clear candidate for improving the efficiency of cross-border payments by **reducing the costs involved and increasing the speed of transactions compared to highly-centralised systems**.
- **Reducing the underground economy**. Despite one of the main properties of cryptocurrencies being the anonymity of the transactions, mechanisms could be designed to facilitate the identification of illegal activities. For instance, they could be designed so that payments in certain areas or of a certain amount would not be anonymous.
- They can promote **financial inclusion** in underdeveloped or emerging countries, where a significant portion of the population is unbanked (but could store cryptocurrencies in a digital wallet linked to their mobile phone).

**Not all cryptocurrencies are made equal**

According to the definition by the BIS,[1] cryptocurrencies stand out because **they are digital** and because **they allow exchanges to be carried out peer-to-peer**. However, there are many types of cryptocurrencies. The so-called «money flower» helps us to classify different currencies, including cryptocurrencies, based on their properties in the most important areas: the type of issuer of the currency (central bank or not), its accessibility (widely accessible or restricted), its form (digital or physical) and its transfer mechanism (peer-to-peer or centralised). For example, depending on the issuer, there are three major classes of cryptocurrencies:

- **Private cryptocurrencies**: issued by an individual or private entity.
- **Central bank cryptocurrencies**.
- **Hybrid solutions (synthetic cryptocurrencies)**: the central bank is the issuer, but a set of private entities would be in charge of customer interaction and innovation (in advanced economies, the natural candidate would be commercial banks).

***The money flower: a taxonomy***




***Source:*** *CaixaBank Research, based on the diagram by the BIS.*

**Central bank cryptocurrencies and private cryptocurrencies: pros and cons**

*A priori*, if a central bank ends up issuing a **cryptocurrency**, and it has a well-defined regulatory framework and there are no doubts over its security, **it is highly likely to be accepted as a widespread form of payment**. Being backed by a public institution that cannot fail, the mere fact that a fraction of savings and transactions switch to being carried out with the «crypto» version of the currency should not affect its value. For private cryptocurrencies, in contrast, it is harder for them to maintain a stable value since it depends on their degree of acceptance and adoption. Given that this can change suddenly, their value tends to be more volatile.

In any case, proposals are emerging that attempt to overcome this disadvantage. So-called stablecoins seek to solve this pitfall by setting what is effectively a fixed exchange rate between the cryptocurrency and an asset with a stable value (such as the currency of an advanced country). Libra, the cryptocurrency proposed by Facebook, falls under this family of cryptocurrencies.[2]

Arguments are often made in favour of developing cryptocurrencies backed by a central bank that could complement traditional monetary policy tools. As an example, setting an interest rate on the digital currency would broaden the range of instruments available to the central bank.[3]

However, the introduction of cryptocurrencies issued by central banks would also present risks given that they could contribute, at least in part, to reducing intermediation in financial activities:

- If a portion of household and business bank deposits were converted into cryptocurrencies not managed by financial intermediaries, the supply of funds available for lending would diminish. This would tend to increase the cost of credit, as well as giving central banks greater prominence as structural suppliers of liquidity to the system.
- The existence of such central bank cryptocurrencies would increase the volatility of flows between bank deposits and cryptocurrencies in times of uncertainty or when doubts arise over the solvency of a financial institution, thus posing a risk to financial stability.
- The degree of financial disintermediation is critically dependent on who holds custody of the digital wallets for the cryptocurrencies. If it is the central bank, individuals could hold accounts directly in the central bank, which would aggravate the risk of disintermediation and financial instability. It would also be possible for financial institutions unrelated to commercial banks to perform this role; this would not eliminate financial intermediation but it would pose major challenges: how would such entities be regulated? Would the wallets be protected by a deposit guarantee?...

*Javier Garcia-Arenas*

1. See Committee on Payments and Market Infrastructures (2015). «Digital currencies». BIS.
2. See the article «Libra, the cryptocurrency of Facebook» in this same Dossier.
3. For more details, see the article «The e-monetary policy of the new digital economy» in this same Dossier.

# Libra, the cryptocurrency of Facebook

Finance is a key sector for the economy. Therefore, any significant innovation in this field deserves to be analysed with caution, and its implications, well understood. This is what we seek to do in this article with the Libra project.

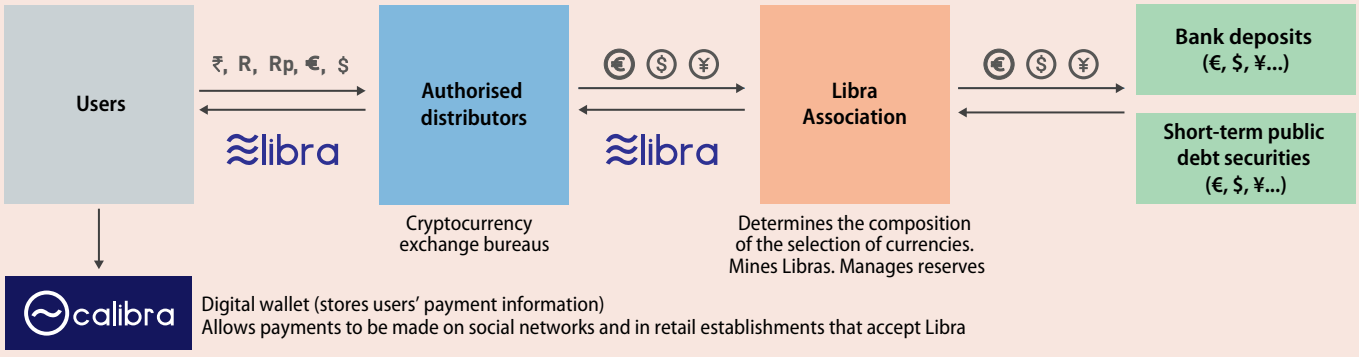
### A brief history of cryptocurrencies: from Bitcoin to Libra

- Up until now, **cryptocurrencies have been considered more as speculative assets than as money itself**. The main reason is that their value has tended to be unstableand they have not demonstrated a clear advantage over existing alternatives. For all these reasons, they have not reached a critical mass of users.[1] This is largely because Bitcoin and other cryptocurrencies that have followed it are not backed by a government, meaning that their value as a means of payment resides in the expectation that other people will accept it as such. In addition, these cryptocurrencies do not adjust their supply according to their demand, causing even more volatility.[2] All this **limits their function as a store of value and unit of account**.
- **In this context, stablecoins seek to minimise the volatility of cryptocurrencies**. To do this, the issuer of the stablecoin links its value to that of another more stable asset, such as fiat currencies (e.g. the dollar) or products (precious metals). **To date, however, stablecoin initiatives have had a limited user base**, since they are promoted by companies that are either new entrants facing high costs to promote the adoption of their product (Tether) or that target wholesale (JPM Coin). In addition, there are doubts over their scalability because, for now, it seems unlikely that the projects presented to date can process the number of transactions that are processed per second through conventional electronic means of payment.[3]

### The Libra project

- Libra is presented as a **private, digital and global currency, and as an alternative means of payment based on blockchain technology**. In fact, Facebook has written its own blockchain code and has announced that the transactions will be verified between servers of the members of the Association[4] (permissioned network) in order to speed up transaction processing times and serve millions of accounts,[5] although the goal is for it to eventually do so in a decentralised manner.
- **Libra has a high potential for adoption since its promoters have a large user base**. Specifically, Facebook has the biggest social network in the world, with over 2.4 billion active users. Furthermore, the other members of the Libra initiative are big players that are well established in the payments and mobile applications markets. In short, Libra has a potential scale that other initiatives lack.
- **Libra is a stablecoin: its value will be linked to a selection of international currencies**. To support its value, the Association aims to maintain, in the form of reserves, deposits and investments denominated in major international currencies, such as the dollar and the euro, for an amount equivalent to the Libras it issues. The evolution of the value of Libra, therefore, should go hand in hand with the currencies that make up the selection. Those wishing to buy Libras will have to do so through authorised distributors (exchange bureaus and banks), which will be able to buy Libras from the Association in exchange for the aforementioned major currencies and sell them on to users in exchange for their local currency.

***How Libra works***




***Source:*** *CaixaBank Research.*

1. See the article «What can we expect from cryptocurrencies?» in the Dossier of the MR05/18.
2. The supply is governed by predetermined rules that do not take into account the demand for them. For example, the Bitcoin protocol establishes that a circulating supply of 21 million units will be reached in 2040, at which point no more bitcoins will be mined.
3. As a benchmark, VISA has the capacity to process over 65,000 transactions per second.
4. Libra will be governed by an association of shareholder companies (for now made up of Facebook and another 26 companies).
5. The validator nodes will at first be the founding members of the Libra Association, and a group of 100 validator nodes is expected to be able to process 1,000 transactions per second.

- **The Association will invest its reserves** in liquid and low-risk assets, such as bank deposits (denominated in stable currencies) and short-term government debt securities of countries with a good credit rating. It is anticipated that the performance of such assets will serve to cover operating costs and pay dividends to the founding members.
- **Libra aims to be an alternative payment vehicle and to reduce friction in international transactions**. A global stablecoin such as Libra, aimed at retail use, can make cross-border payments and transfers cheaper and easier to carry out by reducing transaction costs. Furthermore, it can reach users who do not currently have access to the financial system, by allowing them to store their money[6] and execute transactions using their mobile phone. In fact, the project is also introduced as a tool to promote financial inclusion for the more than 1.5 billion people around the world who do not have access to a bank account.

**Doubts over Libra**

**Various regulators and supervisors have expressed certain reservations that could hamper, or at least slow down, Libra's deployment:**

- **Data management**. Potentially, the Association could have access to large amounts of its users' personal and financial data. Up until now, the Association has not specified how it will store and manage this information, nor what measures it will implement to ensure they remain properly protected.
- **Fight against illicit activities**. The traditional digital payments system is not anonymous, as transactions are processed and recorded by third parties (the bank of the buyer and of the seller, and the card company). All this helps to ensure compliance with regulatory requirements (such as customer's registration) in order to prevent money laundering and other illicit activities. In the case of Libra, on the other hand, as it is a cryptocurrency the exchange of money could presumably take place in a decentralised and anonymous manner. Therefore, it is not clear how compliance with these regulations will be ensured.
- **Risks of abuse of dominant position**. There is a fear that the promoters of Libra could use their current position, which is dominant in some cases, to encourage the use of Libra over other alternatives, which would represent a constraint on innovation.

**Implications for financial stability**

In addition to the considerations above, the size and scope of Facebook imply that Libra has the potential to become systemic. The widespread use of Libra **could have major implications for financial stability, some of which are summarised below**:

- **The stability of Libra is not guaranteed**, rather, it depends on the stability of the assets that back it and on the Association's commitment to keep the value of Libra stable. However, if Libra becomes systemic in its proportions, this commitment should be reinforced through appropriate regulation and supervision.
- **Libra could contribute to the generation of global episodes of financial instability**.[7] The Association plans to invest the currencies it obtains from the sale of Libras in low-risk assets (bank deposits or sovereign bonds). If doubts over the cryptocurrency were to arise, for instance for security reasons, and there were a mass selloff, it is not clear whether the Association could meet this demand if a portion of the reserves are invested in assets that are subject to a certain liquidity risk. In addition, the pressure on banks balance sheets in which the Association is a depositor would inevitably increase.
- **Libra could increase economies' sensitivity to changes in investor sentiment**. Libra can facilitate international capital flows because it substantially reduces the transaction costs associated with cross-border transfers. This offers clear benefits, but it could also have significant implications for the financial stability of many emerging economies because, by boosting and facilitating capital flows, it could amplify capital outflows in the event of changes in investor sentiment and risk aversion.[8]
- **The widespread adoption of Libra in economies with less stable currencies (libraisation) could influence the monetary policy of their central banks**.[9] Just as the dollar does today, Libra is a good candidate to replace the local currency as a store of value in economies with less stable currencies (where high inflation hinders this function). However, if residents can easily exchange their local currency for a set of stable currencies through Libra, they will take refuge in this asset at the slightest hint of problems in their economy. This could lead to significant episodes of depreciation of the local currency and make it difficult to maintain price stability.

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6. Together with Libra, Calibra will also be created. This is a digital wallet that will store users' payment information.
7. See S. Cecchetti and K. Schoenholtz (2019). «Libra: A Dramatic Call To Regulatory Action». VoxEU blog.
8. See M. Pettis (2019). «Facebook's Libra: Does the World Need Less Frictionless Money?», Carnegie Endowment for International Peace.
9. This already occurs with dollarisation: the tendency of residents to protect themselves from the volatility of their local currency with accounts and contracts denominated in dollars.

# The e-monetary policy of the new digital economy

Digital technologies permeate the debate on the future of the economy. Monetary policy and its main vehicle, money, are no exception. More and more products are sold over the internet and cash is used less and less. This new digital economy creates new demands on the financial sector and digital money emerges as a new means of payment that appeals to consumers. How does all this affect monetary policy? What can central banks do (and what are they doing) about it?

**Private digital money, monetary policy and financial stability: constraints and risks**

In simple terms, digital money is the «digital» representation of physical forms of fiat money (such as a 1-dollar bill or a 2-euro coin).[1] But its **extensive integration into our «digital lives»** (think of a Facebook or Instagram profile), **its low transaction costs and network effects** (companies that are considering launching digital money, such as Facebook, have a huge user base) **make it attractive** for consumers and businesses.[2]

However, **users of digital money issued by private issuers face four major sources of risk**:

- **Liquidity**: for example, if each unit of a cryptocurrency is backed by a set of assets denominated in euros, will the issuer have the capacity to sell these assets and convert the cryptocurrency into euros, for those users who wish to do so, even at times of high demand or financial stress?
- **Default**: if the private issuer fails, what happens to the cryptocurrencies held by the users?
- **Value**: let us imagine that the assets which back the cryptocurrency (for example, sovereign bonds denominated in euros) suddenly lose value. *De facto*, the issuer will have issued more digital money than it would owe (given the new value of the assets that back its supply). As a result, it could be forced to «devalue» the cryptocurrency (exchanging it for fewer euros than what it had initially established), which could lead to losses for its users.
- **Market power**: the nature of money leads to network effects (the more players there are using a currency, the more attractive it is as a means of payment), which can lead to a natural monopoly: one currency to «rule» all exchanges. Thus, in the absence of adequate regulation, the issuer could set entry barriers and **extract incomes from the users of its cryptocurrency**.

These individual risks for the user also lead to **other risks affecting society as a whole**. In particular, from the point of view of economic policies, these include:

- **Loss of control over monetary policy**: if a cryptocurrency issued by a private issuer prevails over the central bank's currency, it would erode the central bank's ability to influence the supply of money and interest rates that really affect consumers, savers and investors in the economy. Some examples:
  - **«e-dollarisation» of the economy**: this substitution would be similar to that suffered by some economies in which the US dollar, rather than the local currency, is the main means of exchange due to the population's lack of confidence in their institutions. In the same way that the financial conditions of these economies move to the sound of the US Federal Reserve, in a world of digital money the financial conditions would be influenced by the private issuer of cryptocurrencies.
  - **Procyclicality (a risk associated with stablecoins)**: most stablecoins, such as Libra, would be backed by a selection of currencies and low-risk assets (such as US or German sovereign bonds). Thus, in an expansive phase of the economy, players in the economy would demand more stablecoins, resulting in an increase in purchases of the assets that back them. According to some authors,[3] this would apply downward pressure on their interest rates, which in turn could provide feedback for the expansionary phase and hinder the implementation of the desired monetary policy.
- **Financial stability risks**:
  - **Source of systemic risk**: if a private cryptocurrency were to dominate a significant portion of transactions, a potential failure or weakness of the issuer would affect the entire international payments system.
  - **Disruption in the banking system**: digital money offers an alternative to bank deposits for households and companies to store their savings. Therefore, widespread use of digital money would oblige the traditional banking sector to compete for deposits and to seek alternative sources of funding (no doubt, less stable). This could increase the cost of credit and encourage greater risk taking.

**What can central banks do?**

Central banks will play a key role in defining the new macrofinancial environment: which digital money is adopted and the extent to which it affects the financial system as we know it.

1. In this article, when we talk about «digital money» we do not include deposits and bank accounts.
2. See T. Adrian (2019). «Stablecoins, central bank digital currencies, and cross-border payments: a new look at the international monetary system», speech at the IMF-Swiss National Bank Conference. Furthermore, in countries with fragile institutional systems, it is common for the population to have greater confidence in multinational companies supplying digital money than in their own institutions.
3. See M. Pettis (2019). «Facebook's Libra: Does the World Need Frictionless Money?». Carnegie Endowment for International Peace.

In the past, central banks ended up monopolising the issuance of banknotes and, to date, have guaranteed a single and secure payments system that is accessible to the entire population. Therefore, a natural alternative to private cryptocurrencies is the central bank issuing its own digital currency:

- Broadly speaking, **a central bank digital currency (CBDC) could involve the central bank opening up current accounts directly to households and businesses**: for the consumer, this would be similar to the current system of bank deposits and transfers, with the difference that their current account would be held in the central bank.
- While this might seem a natural step, **this option would require the central bank to play an abnormally active role**: attracting customers, checking their personal details and interacting with them, developing technology, etc. These are tasks in which a central bank lacks experience and which could also put their reputation at risk.

For this reason, some proposals for a **synthetic CBDC** have emerged:[4]

- The central bank would develop an infrastructure for the CBDC into which private issuers of digital money (which could include traditional financial institutions) would incorporate their payment methods:
  - By allowing access to multiple issuers, **this would ensure competition in the market**.
  - To ensure the security of the currency and maintain control over the monetary supply, **the central bank should require issuers to back 100% of their currency with reserves** in the central bank.[5]
  - This would **make the most of the competitive advantages** of both the private sector (e.g. customer management and innovation) and the central bank (supervision and regulation, reputation and trust).
- **A CBDC would offer a direct channel for the transmission of monetary policy**: as an example, if the central bank saw fit, it could issue a digital currency to pay interest costs and adjust such payments as part of its monetary policy. In addition, a CBDC that replaces cash entirely would allow the central bank to cut interest rates to more negative levels than what is feasible today.
- However, a CBDC would also entail risks at the macrofinancial level:
  - **Deposit flight**: as in the case of a private digital currency, the CBDC offers an alternative to bank deposits. In periods of stress, the CBDC could be perceived as being safer, because although it would not necessarily be safeguarded by something like a deposit guarantee fund, it would be backed by reserves deposited in the central bank. This could encourage the outflow of deposits from commercial banks towards issuers of CBDCs and, therefore, indirectly towards the central bank.[6]
  - **International coordination**: digitisation removes physical barriers, thereby making it easier for a user to choose the CBDC that suits them the best, regardless of jurisdiction. In other words, it creates greater competition between CBDCs and, therefore, **requires greater international coordination on monetary policy**.

### Central bank initiatives

Faced with the current reduction in the use of physical currency and the emergence of private initiatives that could entail different risks, some central banks have already assessed the possibility of issuing digital money:[7]

- **Sweden**: the central bank of Sweden (Riksbank) was among the first to study the possibility of issuing its own digital currency, following the collapse in the use of cash (it is common to find businesses that do not accept it). It has made considerable progress in the **e-krona** project and has presented it to the Swedish parliament, which must decide on the need for the central bank to «mint» a CBDC. The Riksbank has not yet decided on its design (whether users could open an account in the central bank itself or a version closer to a synthetic CBDC).
- **Uruguay**: in 2017 the Central Bank of Uruguay launched its digital currency (**e-peso**) in a six-month pilot test which limited the number of e-pesos that could be issued. The e-peso had the characteristics of a synthetic CBDC, but only a private issuer could access the platform. For this reason, there was no competition between different issuers, with all the benefits in terms of innovation that this would generate. Nevertheless, the conclusions that the central bank drew from the project were relatively positive.[8]

As these examples illustrate, central banks have begun to explore the possibilities that digital technologies offer for money and, therefore, for monetary policy. The emergence of private proposals like Facebook's Libra highlights the importance for central banks to uphold their historic commitment to the proper functioning of the payments system.

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*(See an extended version of this article at caixabankresearch.com)*

4. See T. Adrian (2019). «From Stablecoins to Central Bank Digital Currencies». IMF Blog.
5. With a reserve coefficient of 100%, these providers would not grant credit: they would be limited to processing payments.
6. In this scenario, the central bank could stabilise the system by injecting liquidity into commercial banks (injections that would be balanced by the increase in reserves that the central bank would receive due to deposit flight).
7. The ECB and the Fed have not submitted their own proposals, although their various officials recognise the potential of the technologies related to digital money and highlight the importance to monitoring their development.
8. M. Bergara and J. Ponce (2018). 7. Central Bank Digital Currency: The Uruguayan e-peso case, in «Do We Need Central Bank Digital Currency?» n° 82.

# Banking and new forms of money

With the announcement of Libra, Facebook and another 27 companies have put the debate about cryptocurrencies and the operation of existing payment systems back on the agenda. After the fall in the value of Bitcoin and doubts about its ability to function as money, many see stablecoins as an alternative with greater potential for adoption. If this is the case, the two «traditional» forms of money (cash and bank deposits) should face up to this new competition. In this article, we will discuss the competition between different forms of money, the challenges it might entail for banks, and what actions they could undertake to address these issues.[1]

**Advances in payment technologies enable the emergence of new forms of money, which in the long term could lead to greater competition for bank deposits.**

- **Settlement systems ensure that money is debited from the payer's account and credited to the payee's, thereby registering the change in ownership**. With the exception of cash, all major payment infrastructures rely in some way on an entity that centralises the validation of these movements between accounts, whether it is the central bank of each jurisdiction, Visa or Mastercard for card payments, or AliPay and WeChat in their ecosystems in Asia, among others. This centralisation brings certain inefficiencies, especially in cross-border payments, such as delays in transfers and a lack of traceability regarding their status as a consequence of the fragmentation and lack of interconnection between these infrastructures. By eliminating the need to centralise the validation process, the use of DLTs[2] (blockchain is one example) can generate efficiency gains that would justify the cost of deploying new payment infrastructures and, on them, new currencies.
- **Countless cryptocurrencies have emerged to date, although those with the greatest potential to become a new form of money are those that back their value with some sort of asset**. One option is to back their value with legal tender, as is the case with Tether, USD Coin and Paxos, for instance. Their issuers set an exchange rate – for instance against the dollar – and define mechanisms to ensure that the prices of goods and services in both currencies are fixed. Another option is to peg it with a selection of currencies or other assets whose value fluctuates with the market. In this case, depending on when they are acquired, goods and services paid for in this currency would be either more or less expensive than if they were paid for in dollars. Libra is an example of this last type, along with cryptocurrencies backed by gold.
- **Unsurprisingly, deploying this new infrastructure from scratch is not a task that anyone can assume, and any private issuer with the capacity to do so should face considerable regulatory challenges.**[3] In any case, it is conceivable to imagine a future in which deposits could have to compete for the liquidity of economic players not only with cash but also with cryptocurrencies that have achieved sufficient adoption.

**For banks, customer deposits are a central part of their business model. Therefore, some[4] consider that greater competition presents a challenge to traditional financial institutions.**

- **Deposits are a stable source of funding for banks and a key element of bank intermediation**, the process by which financial institutions channel savings into productive investment by granting loans.
- **They are also a source of revenue** for financial institutions thanks to the collection and payment services that are associated with them, such as transfers, card purchases, direct debits and bill management, among others.

### *Advantages and disadvantages of Libra*

| | |
|---|---|
| **Store of value** | ✗ Not covered by a Deposit Guarantee Fund. No remuneration of funds. |
| **Unit of account** | ✗ The euro is the only legal tender in Spain (the only one with full legal status for the payment of debts). Exchange rate risk. |
| **Means of exchange** | |
| Acceptance | ✓ The Facebook ecosystem has 2,410 million active users.<br>✗ Good user experience when using current payment methods at physical points of sale. |
| Ease of use | ✓ Better suited to digital environments (smart contracts, possibility to add greater amounts of data associated with the transaction, etc.). |
| Speed | ✓ Payments with instant settlement to any part of the world, available 24/7/365 from anywhere with a connection. |
| Ubiquity | |
| Security | ✗ Does not currently enjoy the highest perception of security (whereas deposits and their associate payment methods do). |

***Source:*** *CaixaBank Research.*

1. This article only analyses the scenario of cryptocurrencies developed by private issuers. A scenario in which cryptocurrencies are developed by central banks would, by design, take into consideration the stability of the financial system and the role to be played by banks. Therefore, it would be a more favourable scenario for banks than that discussed here.
2. See the article «Blockchain and cryptocurrencies: welcome to the new digital paradigm» in this same Dossier.
3. See the article «Libra, the cryptocurrency of Facebook» in this same Dossier.
4. See BIS (2018), «Central bank digital currencies», and T. Adrian and T. Mancini-Griffoli (2019), «The Rise of Digital Money», FinTech Notes, FMI.

- **Finally, deposits and their associated means of payment are also a valuable source of information for banks**. For instance, the volume and frequency of these transactions are used to establish patterns of income and expenses or to estimate someone's capacity to repay a loan. This allows banks to improve their risk assessment, customise commercial offers and reduce fraud, among other benefits.
- Thus, **in a hypothetical scenario in which digital currencies were to significantly replace traditional forms of money, the banking business model would face a number of challenges**. Firstly, margin reduction (both in deposits and in collection and payment services) due to the increased competition. Secondly, greater volatility and a higher funding costs due to the potential replacement of retail deposits by other funding instruments. In turn, this greater volatility of liabilities could limit a bank's ability to grant new loans due to the need to comply with the liquidity ratios imposed by Basel III.[5] Finally, the loss of information generated by transactions in the new currency could limit the banks' capability to extend loans at the interest rate that best matches the risk posed by the customer. All this would tend to increase the cost of credit.

**In order to assess whether these challenges are important for banks, it is useful to analyse which elements would determine the intensity of the competition that deposits would face and to define where stablecoins could have a competitive advantage.**

- **Stablecoins have certain advantages in key aspects relating to their efficiency as a means of payment**. While it is true that in developed countries traditional money is largely a very efficient mechanism for carrying out domestic transfers or payments at points of sale, new forms of money would allow instant payments to be made to anywhere in the world, at any time and from any location with an Internet connection. Furthermore, in digital environments they would be easier to use, as they have a greater capacity for integration with these environments and for incorporating new features such as conditional payments, automated payments and automated reconciliation processes.
- **Nevertheless, there are various aspects that hinder the adoption of these new forms of money**. The most fundamental one is achieving a sufficiently high degree of trust among users. A digital currency will only be used as a means of payment or a form of savings if people trust in it, because it is issued and backed either by a central bank or by institutions that are subject to governance rules and legal structures that mitigate potential conflicts of interest. In the case of Libra, other disadvantages include the potential exchange rate risks for users, since it would have a variable rate of conversion with a legal tender currency and it would not provide a return in the form of interest.
- **All in all, the major challenge faced by these new forms of money is to generate sufficiently strong network effects to justify the adoption costs**. In the end, there is no use in having the money with the most efficient settlement technology in history if there is nobody to exchange it with. Traditional forms of money have an advantage because they are widely accepted. In the case of digital currencies, for the time being only Libra, thanks to Facebook's massive user base and its ecosystem conducive to e-commerce, could be in a position to take advantage of network effects and promote relatively rapid adoption.

**What options would banks have to deal with this increased competition?**

- **The main option for banks is to continue to innovate in order to make gains in efficiency and offer the best customer experience**. Changes in customers' behaviour and in commerce will drive the demand for new services such as invisible payments,[6] scheduled payments, services with high added value for e-commerce retailers, companies and individuals, instant cross-border payments or services for managing data privacy and confidentiality. In recent years, banks have dramatically improved their offer with new services, such as mobile payments and instant domestic payments between individuals.[7] In addition, some banks are also exploring the possibilities offered by DLTs and are experimenting with stablecoins for wholesale use in order to solve the low degree of interconnection between the different regional interbank markets and thus make instant cross-border payments possible.
- **There are many uncertainties that remain unresolved and it is possible that the Libra project will take some time to bear fruit, if it finally does so. But the speed with which this field is evolving requires the traditional banks to make use of all the possibilities offered by new technologies in order to improve the customer experience in the world of payments**. In the end, the speed of adoption of a new product or service largely depends on its capacity to solve the needs of its users: it must be cheaper, faster or easier to use than the current alternatives.[8] This is how banks must demonstrate their capacity to innovate and adapt in order to successfully address the challenges and opportunities that emerge from digital currencies: by listening to their customers and offering them what they need.

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5. The Net Stable Funding Ratio (NSFR) requires banks to maintain a certain percentage of stable funding relative to the loans they have issued. See M. Kumhof and C. Noone (2018). «Central bank digital currencies». Staff Working Paper n° 725. Bank of England.
6. The concept of invisible payments refers to the use of payment technologies that dispense with physical formats (such as cards or bank notes) to settle the transaction.
7. In Spain, Bizum, a solution for instant payments between individuals created in 2016, reached 4 million users in June 2019, which represents ~10% of the banked population.
8. See H. Van Steenis (2019). «Future of Finance». Bank of England.

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