



INTERNATIONAL ECONOMIES AND MARKETS

NUMBER 482 | OCTOBER 2023

FINANCIAL MARKETS

New scenario: international economy and market outlook

A first assessment of the external vulnerability of emerging market economies

INTERNATIONAL ECONOMY

US: the never coming recession

Change of gear in the Chinese economy: contagion channels and global implications

Quo vadis, globalisation? (part I and II)

SPANISH ECONOMY

New macroeconomic outlook: Spain's economic growth moderates

Productivity in Spain: a lot of scope for improvement

The Spanish agrifood sector is making headway in a challenging context



MONTHLY REPORT -ECONOMIC AND FINANCIAL MARKET OUTLOOK

October 2023

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

CaixaBank Research

www.caixabankresearch.com research@caixabank.com

Enric Fernández

Chief Economist

José Ramón Díez

Head of International Economies

and Financial Markets

Oriol Aspachs

Head of Spanish Economy

Sandra Jódar

Head of Strategic Planning

Adrià Morron Salmeron and

Nuria Bustamante

Monthly Report coordinators

BPI Research (UEEF)

www.bancobpi.pt / http://www.bancobpi.pt/grupo-bpi/estudose-mercados/mercados-financeiros deef@bancobpi.pt

Paula Carvalho

Chief Economist

Date this issue was closed: 4 October 2023

INDEX

- 1 EDITORIAL
- 3 KEY POINTS OF THE MONTH
- 4 FORECASTS

7 FINANCIAL MARKET

- 9 New scenario: international economy and market outlook
- 11 A first assessment of the external vulnerability of emerging market economies

Rita Sánchez Soliva and Beatriz Villafranca

14 INTERNATIONAL ECONOMY

- 16 US: the never coming recession Ricard Murillo Gili
- 18 Change of gear in the Chinese economy: contagion channels and global implications
 Luís Pinheiro de Matos
- 20 Quo vadis, globalisation? (part I): the long slowdown David del Val Gómez
- 22 Quo vadis, globalisation? (part II): the fragmentation of the global economy
 David del Val Gómez

26 SPANISH ECONOMY

- 28 New macroeconomic outlook: Spain's economic growth moderates
 Oriol Carreras
- 30 *Productivity in Spain: a lot of scope for improvement*Javier Garcia-Arenas
- 32 The Spanish agrifood sector is making headway in a challenging context
 Judit Montoriol and Sergio Díaz

35 PORTUGUESE ECONOMY



The resistance of the Spanish economy amid an adverse environment

The Spanish economy, as well as developed economies as a whole, continues to operate in an extremely complex environment. Economic activity is under pressure from multiple shocks that are both significant in magnitude and highly unusual, rendering it difficult to predict what path it will take next. Some of these shocks are still ramping up, while others seem to be now subsiding. In addition, they are affecting some sectors very differently to others.

On the one hand, the effects of the pandemic, such as the disruptions to global trade or the restrictions on international mobility, have virtually disappeared. In contrast, the underlying inflationary pressures are beginning to show a gradual downward trajectory, while the impact of the increase in interest rates is now noticeable but has probably not yet reached its peak. On the other hand, the execution of the European NGEU funds is helping to partially cushion these shocks, although the pace of execution is lower than initially anticipated and their impact in the short and medium term is difficult to assess.

The current environment is clearly complex and adverse across the globe. However, the Spanish economy faired better than expected during the first half of the year. It maintained a steady growth rate and, above all, surpassed expectations by accelerating the pace of job creation. The latest revision of the National Statistics Institute's historical series has reaffirmed this positive assessment, with figures that are somewhat better than initially estimated. This leads us to slightly revise up our growth forecast for the year as a whole, to 2.4%.

Nevertheless, the indicators available for the second half of the year show a change of tone. The impact of the adverse environment is finally materialising, as suggested by a number of signals, including the slower pace of job creation, the deterioration in business confidence and the slower march of household consumption. Yet it is equally important to note that the pace of growth, although weakened, remains positive to date.

All the indicators suggest that this weakness will persist in the closing stretch of the year and in the early stages of 2024, but without causing a recession. The first step for the Spanish economy in order to begin to recover some vigour will be dependant on the course of inflation and could be taken once there are convincing signs that the underlying pressures are fading, both in Spain and in the wider euro area. The next step will have to be taken by the ECB, when it decides to take on the challenge of easing the financial conditions. We expect all this to happen in the second half of next year. This is somewhat later than initially expected, so we have slightly revised down our forecasts for Spain's GDP growth for 2024 to 1.4%, a figure which will be highly subject to the knock-on effect derived from the weakness of the closing stretch of this year.

Given how complex the current environment is, the uncertainty surrounding this forecast is high. On inflation, the risks that it could be higher than expected have increased due to the drought, which is exerting upward pressure on the price of various foods, and also due to the surge in the oil price. If these tensions persist, then the improvement in economic activity will take longer to arrive. However, counterbalancing this is the fact that the latest data published by the National Statistics Institute concerning household income and savings have been better than expected. The sharp upturn in the savings rate which occurred in Q2 2023 is particularly noteworthy given its magnitude – it has risen to 10.2% of gross household disposable income (1.7 pps higher than the figure for Q1) – and also because it has occurred at a time of significant growth in household income (12.2% year-on-year). This places households as a whole in a less vulnerable financial position than expected, so consumption could end up being more buoyant than currently contemplated in our forecast scenario.

The path which fiscal policy ends up taking will also be key. Now that financial conditions are more demanding, investors' sensitivity to each country's fiscal position could increase. The entry into force of the new European fiscal rules next year could also put the health of public finances back in the spotlight. For now, the Spanish risk premium remains stable at around 110 bps. On the other hand, in recent months the Italian risk premium has increased by around 50 bps, while Portugal's has begun to move in the opposite direction, falling 25 bps since the start of the year. These changes do not merely penalise or benefit each country's public finances. Interest rates on public debt also have a significant influence on the conditions under which a country's businesses can obtain financing. In the current context, whether one path or the other is taken is of the utmost importance.

Oriol Aspachs
October 2023



Chronology

SEPTEMBER 2023

14 The ECB raises rates by 25 bps, placing the depo rate at 4.00% and the refi rate at 4.50%.

JULY 2023

- **26** The Fed raises rates by 25 bps, placing the target rate in the 5.25%-5.50% range.
- **27** The ECB raises rates by 25 bps, placing the depo rate at 3.75% and the refi rate at 4.25%.

MAY 2023

- 3 The Fed raises rates 25 bps, to the 5.00%-5.25% range.
- **4** The ECB raises rates 25 bp and places the depot rate at 3.25% and the refi rate at 3.75%.
- 5 The WHO declares the global COVID-19 health emergency over.

AUGUST 2023

14 The United Nations declares July 2023 the hottest month since records began (174 years ago).

JUNE 2023

- 13 The People's Bank of China cuts rates by 10 bps.
- 15 The ECB raises rates by 25 bps, placing the depo rate at 3.50% and the refi rate at 4.00%.

APRIL 2023

- **2** OPEC+ announces an additional production cut of 1.15 million barrels per day (bpd), bringing the total reduction to 3.66 bpd.
- 9 Kazuo Ueda becomes the new governor of the Bank of Japan.
- 19 The United Nations estimates that in 2023 India will overtake China to become the country with the biggest population in the world.

Agenda

OCTOBER 2023

- 3 Spain: registration with Social Security and registered unemployment (September).Portugal: industrial production (August).
- 10 Spain: financial accounts (Q2).
- 17 China: GDP (Q3).
- 19 Portugal: industrial production prices (September).
- 23 Spain: loans, deposits and NPL ratio (August).
- 26 Spain: labour force survey (Q3). Governing Council of the European Central Bank meeting. US: GDP (Q3).
- **26-27** European Council meeting.
- 27 Spain: GDP flash estimate (Q3).
- 30 Spain: CPI flash estimate (October).
 Portugal: business and consumer confidence indicator (October).
 - Euro area: economic sentiment index (October).
- 31 Portugal: GDP flash estimate (Q3).
 Portugal: CPI flash estimate (October).
 Euro area: GDP (Q3).
 - Euro area: CPI flash estimate (October).
- **31-1** Federal Open Market Committee meeting.

NOVEMBER 2023

- 3 Spain: industrial production (September). Spain: registration with Social Security and registered unemployment (October).
- 8 Portugal: employment (Q3).
- 9 Portugal: international trade (September).
- 14 Portugal: labour costs (Q3).
- 15 Japan: GDP (Q3).
- 17 Spain: Fitch rating. Portugal: Moody's rating.
- 24 Spain: loans, deposits and NPL ratio (September).
- 28 Portugal: loans and deposits (October).
- 29 Spain: CPI flash estimate (November). Euro area: economic sentiment index (November).
- **30** Spain: state budget execution (October). Portugal: GDP breakdown (Q3). Euro area: CPI flash estimate (November).



Higher interest rates for longer

The final weeks of the third quarter of the year confirmed the asymmetric slowdown in the world economy, with strong signs of cooling in Europe, a less marked adjustment in economic activity in the US – thanks to the strength of US consumption – and significant doubts over the performance of the Chinese economy despite the recent improvement in its activity indicators. As we enter an autumn in which the effects on growth of the recent monetary tightening will intensify and the mini supply shock of the rise in oil prices in recent months will have to be digested, economic agents' expectations continue to deteriorate, anticipating a weakening of demand in the short term.

In this context, with clear symptoms of economic cooling and the central banks' rate hikes nearing their conclusion, there has been a sharp rise in yields throughout the curve. This has included movements as significant as an almost 100-bp increase in the yield on the US 30-year bond, placing it close to the peak of 2007 (4.95% versus 1.2% in the summer of 2020), a new uptick in the Italian risk premium towards the 200-bp mark (trading 50 bps above that of Greece), a rise in real yields (2.3% in the case of the US inflation-indexed 10-year bond) and a widening of corporate fixed-income spreads, especially in high-yield segments, where the cost of financing is close to 9%.

We are thus entering a phase of heightened market sensitivity and discrimination, now that the central banks are managing to convey the message that interest rates will remain higher for longer, which will lead to extreme caution in the fiscal sphere. The case of Italy is a new warning for sailors, as the rise in yields to the 5% zone coincides with the new budget proposal, which includes a marked deterioration in the fiscal deficit estimates for 2023 (5.3%), 2024 (4.3%) and 2025 (3%).

Meanwhile, in the US much of the rebound in interest rates is explained by an increase in both real returns and the risk premium, since no changes in inflation expectations are detected. This reflects the challenging political context and very high short-term funding needs (7.6 trillion dollars in 2024). Yet despite the choppy waters of the current global economic and financial environment, the dollar has been the financial asset most favoured by the latest adjustment in the monetary narrative, appreciating significantly to trade below 1.05 against the euro (+6% since July) and touching the 150-yen mark against the Japanese currency (its highest level since

1990). All this reflects the fact that, in spite of the problems in the fiscal and political sphere, investors value the relative strength of the American economy, the attractiveness of the highest returns in a decade and a half, and the traditional safe-haven role of the US dollar.

This weakening of the euro against the currency used to pay for energy, just at a time when the price of crude oil is once again under stress, is not good news for an ECB which already has its work cut out for it over the coming months, as it will have to keep in check investors' expectations that are increasingly dependent on the data, as well as respond to any sources of financial instability and manage the effects on economic activity of the most intense monetary tightening process in recent decades. The key in the short term will be what happens with the second-round effects caused by feedback between business margins and wages and, therefore, the negative inertia which can occur at times like the present if economic agents decide to maximise their short-term returns. For now, beyond the noise in the data caused by fluctuations in the oil price, there are encouraging signs coming from the underlying measures of inflation in the euro area in recent months and it appears highly probable that the 3% zone can be reached during the next semester.

In short, the movement in the financial markets of recent weeks serves to consolidate the sensation that the interest rate regime will regain a degree of normality in the medium term, following the anomaly in the pattern of monetary policy in much of the last decade. This will mean higher real or equilibrium natural rates of interest than we have had in recent years.

José Ramón Díez



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

Financial markets

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
INTEREST RATES							
Dollar							
Fed funds (upper limit)	3.43	0.79	0.25	0.25	4.50	5.75	4.25
3-month SOFR	3.62	1.01	0.23	0.21	4.74	5.65	3.85
12-month SOFR	3.86	1.48	0.34	0.52	5.48	5.50	3.15
2-year government bonds	3.70	1.04	0.13	0.66	4.30	4.20	2.80
10-year government bonds	4.69	2.57	0.92	1.46	3.62	3.60	3.10
Euro							
ECB depo	2.05	0.20	-0.50	-0.50	1.77	4.00	3.50
ECB refi	3.05	0.75	0.00	0.00	2.27	4.50	4.00
€STR	_	-0.54	-0.56	-0.58	1.57	3.91	3.45
1-month Euribor	3.18	0.50	-0.56	-0.60	1.72	3.87	3.19
3-month Euribor	3.24	0.65	-0.54	-0.58	2.06	3.82	2.94
6-month Euribor	3.29	0.78	-0.52	-0.55	2.56	3.95	3.00
12-month Euribor	3.40	0.96	-0.50	-0.50	3.02	4.08	3.06
Germany							
2-year government bonds	3.41	0.35	-0.73	-0.69	2.37	3.15	2.50
10-year government bonds	4.30	1.54	-0.57	-0.31	2.13	2.70	2.60
Spain							
3-year government bonds	3.62	1.69	-0.57	-0.45	2.66	3.05	2.82
5-year government bonds	3.91	2.19	-0.41	-0.25	2.73	3.13	2.99
10-year government bonds	4.42	3.17	0.05	0.42	3.18	3.80	3.60
Risk premium	11	164	62	73	105	110	100
Portugal							
3-year government bonds	3.68	3.33	-0.61	-0.64	2.45	3.22	3.04
5-year government bonds	3.96	3.94	-0.45	-0.35	2.53	3.24	3.14
10-year government bonds	4.49	4.67	0.02	0.34	3.10	3.60	3.45
Risk premium	19	314	60	65	97	90	85
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.26	1.22	1.13	1.06	1.07	1.12
EUR/GBP (pounds per euro)	0.66	0.84	0.90	0.85	0.87	0.87	0.89
OIL PRICE							
Brent (\$/barrel)	42.3	80.1	50.2	74.8	81.3	85.0	79.0
Brent (euros/barrel)	36.4	62.5	41.3	66.2	76.8	79.4	70.5

Forecasts



Change in the average for the year versus the prior year average (%), unless otherwise indicated

International economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
GDP GROWTH							
Global	4.5	3.3	-2.8	6.3	3.5	3.0	2.9
Developed countries	2.7	1.4	-4.2	5.4	2.7	1.5	1.1
United States	2.7	1.8	-2.2	5.8	1.9	2.0	0.8
Euro area	2.2	0.8	-6.3	5.6	3.4	0.5	0.7
Germany	1.6	1.2	-4.2	3.1	1.9	-0.4	0.3
France	2.2	1.0	-7.7	6.4	2.5	0.8	0.7
Italy	1.5	-0.3	-9.0	7.0	3.8	0.7	0.6
Portugal	1.5	0.5	-8.3	5.5	6.7	2.4	1.8
Spain	3.7	0.6	-11.3	5.5	5.5	2.4	1.4
Japan	1.4	0.4	-4.3	2.3	1.1	1.3	1.1
United Kingdom	2.7	1.2	-10.4	8.7	2.5	0.6	0.5
Emerging and developing countries	6.5	4.9	-1.8	6.8	4.0	4.0	4.2
China	10.6	8.0	2.2	8.5	3.0	5.2	4.6
India	7.2	6.8	-6.7	9.0	7.3	6.0	6.7
Brazil	3.6	1.6	-3.3	5.0	2.9	2.2	1.8
Mexico	2.3	1.5	-8.7	5.8	3.9	2.7	1.9
Russia	_	1.4	-2.7	5.6	-2.1	1.0	1.3
Türkiye	5.5	4.5	1.9	11.4	5.6	2.4	3.2
Poland	4.2	3.7	-2.0	6.9	4.9	0.7	2.7
INFLATION							
Global	4.1	3.7	3.2	4.7	8.7	6.7	5.0
Developed countries	2.1	1.6	0.7	3.1	7.3	4.7	2.8
United States	2.8	1.8	1.3	4.7	8.0	4.2	2.4
Euro area	2.2	1.4	0.3	2.6	8.4	5.6	3.1
Germany	1.7	1.4	0.4	3.2	8.7	6.2	3.3
France	1.9	1.3	0.5	2.1	5.9	5.3	2.9
Italy	2.4	1.4	-0.2	1.9	8.7	6.6	2.9
Portugal	3.1	1.1	0.0	1.3	7.8	4.6	2.4
Spain	3.2	1.3	-0.3	3.1	8.4	3.7	3.6
Japan	-0.3	0.4	0.0	-0.2	2.5	2.5	1.5
United Kingdom	1.6	2.3	0.9	2.6	9.1	7.5	3.6
Emerging countries	6.7	5.6	5.2	5.9	9.8	7.9	7.0
China	1.7	2.6	2.5	0.9	2.0	0.7	2.0
India	4.5	7.3	6.6	5.1	6.7	5.3	5.0
Brazil	7.3	5.7	3.2	8.3	9.3	5.3	4.5
Mexico	5.2	4.2	3.4	5.7	7.9	6.5	4.6
Russia	14.2	7.9	3.4	6.7	13.8	5.6	5.2
Türkiye	22.6	9.6	12.3	19.6	72.3	46.4	34.9
Poland	3.5	2.0	3.7	5.2	14.3	11.7	6.7

Forecasts



Change in the average for the year versus the prior year average (%), unless otherwise indicated

Spanish economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
Macroeconomic aggregates							
Household consumption	3.5	0.0	-12.4	7.2	4.8	1.6	1.4
Government consumption	5.0	1.1	3.6	3.4	-0.2	2.4	1.3
Gross fixed capital formation	5.5	-1.4	-9.0	2.8	2.4	2.6	3.0
Capital goods	4.8	0.1	-12.6	4.4	1.9	0.2	3.9
Construction	5.5	-2.9	-9.2	0.4	2.6	4.3	2.4
Domestic demand (vs. GDP Δ)	4.4	-0.2	-9.0	6.6	2.9	1.7	1.6
Exports of goods and services	4.6	2.9	-20.1	13.5	15.2	2.9	0.4
Imports of goods and services	6.8	0.2	-15.0	14.9	7.0	1.1	1.0
Gross domestic product	3.6	0.6	-11.2	6.4	5.8	2.4	1.4
Other variables							
Employment	3.2	-0.4	-6.8	6.6	3.8	2.2	1.4
Unemployment rate (% of labour force)	10.5	19.5	15.5	14.8	12.9	12.1	11.8
Consumer price index	3.2	1.3	-0.3	3.1	8.4	3.7	3.6
Unit labour costs	3.0	0.6	8.3	1.0	0.9	4.4	3.0
Current account balance (% GDP)	-5.9	-0.3	0.6	0.8	0.6	1.8	1.5
External funding capacity/needs (% GDP)	-5.2	0.1	1.1	1.6	1.5	2.7	2.4
Fiscal balance (% GDP) ¹	0.3	-6.6	-10.1	-6.8	-4.7	-4.2	-3.6

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

Forecasts

Portuguese economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
Macroeconomic aggregates							
Household consumption	1.7	0.5	-7.0	4.7	5.7	1.1	0.8
Government consumption	2.3	-0.3	0.4	4.6	2.4	1.1	1.2
Gross fixed capital formation	-0.4	-0.7	-2.2	8.7	2.7	1.3	5.0
Capital goods	3.2	2.6	-5.4	13.9	5.9	-	-
Construction	-1.5	-2.6	1.0	5.5	1.0	-	-
Domestic demand (vs. GDP Δ)	1.3	0.1	-5.3	5.7	4.8	0.7	1.7
Exports of goods and services	5.3	4.0	-18.8	13.4	16.7	5.5	2.4
Imports of goods and services	3.6	2.7	-11.8	13.2	11.0	1.5	2.4
Gross domestic product	1.5	0.5	-8.3	5.5	6.7	2.4	1.8
Other variables							
Employment	0.4	-0.5	-1.9	2.7	2.0	1.1	0.4
Unemployment rate (% of labour force)	6.1	11.4	7.0	6.6	6.0	6.6	6.5
Consumer price index	3.1	1.1	0.0	1.3	7.8	4.6	2.4
Current account balance (% GDP)	-9.2	-2.9	-1.2	-0.8	-1.4	1.2	1.2
External funding capacity/needs (% GDP)	-7.7	-1.6	0.1	1.0	-0.4	2.3	2.6
Fiscal balance (% GDP)	-4.6	-5.1	-5.8	-2.9	-0.4	-0.1	-0.1

Forecasts



Autumn returns investors to an outlook of high rates

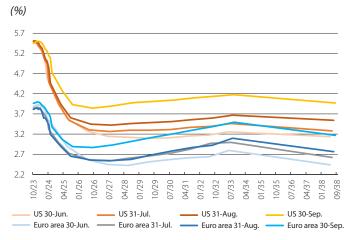
The Fed lands the economy so smoothly that it still cannot stow the air brakes. The September FOMC meeting confirmed the upward revision of interest rate expectations for the coming months (and years) on the part of several of its members. This accelerated the recent price adjustments in financial assets which, since the beginning of summer, have been trying to find their equilibrium in an environment in which rates are expected to remain higher for longer. The Fed's bias towards further tightening, coupled with the strong performance of the US economy, also contrasted with the situation in the rest of the world, since virtually all of Europe, China and Japan exhibited less economic buoyancy in September. Thus, although sovereign rates registered a widespread increase during the month, this movement was particularly intense in the case of the mid- and long-term US benchmarks, with the consequent steepening of the slope of the yield curve. On the other hand, while the dollar has continued to capitalise on this trend, prolonging the appreciation it has accumulated since mid-July, risky assets have been weighed down and the stock markets closed another month with losses, while the oil price rally continued, pushing it to a new peak for the year.

Central banks retake centre stage in the new academic year.

In the case of the Fed, despite taking a pause in the cycle of rate hikes and keeping them within the 5.25%-5.50% range, the new dot plot and a certain recognition by chairman Jerome Powell that the natural rate of the economy will have increased reinforced investors' expectations that interest rates will remain higher for longer. In the case of the ECB, it did implement a rate hike of 25 bps, placing the depo rate at 4.00% (and the refi rate at 4.50%), albeit explicitly signalling that the current level of rates is considered sufficiently restrictive, meaning that maintaining them at that level ought to be enough to continue to reign in inflation. Elsewhere in the world, the Bank of Japan was uninclined to significantly tighten its monetary policy in the coming months, wary of a rebound in inflation which it does not consider sufficiently persistent, and this further impacted the already depreciated yen. The Bank of England also surprised analysts with a pause in its cycle of rate hikes after inflation in August was lower than expected, despite the fact that it still remains very high.

Higher rates for longer. The higher for longer narrative pushed up the yield on US sovereign bonds during the month, reaching peaks not seen since before the 2008 financial crisis. The rally in longer-term US rates in Q3 has driven the 10-year benchmarks more than 70 bps above their June level, and more than 80 bps higher in the case of the 30-year benchmarks. This steepening of the yield curve is also driven by the resilience of the business cycle, which makes it difficult to envisage declines in the shorter-term sections of the curve,

Expectations for Fed and the ECB reference interest rates



Note: Forwards on the EFFR and the OIS of the euro area based on market yield curves. **Source:** CaixaBank Research, based on data from Bloomberg.

Evolution of 10-year real rates

Yield on inflation-indexed sovereign bonds (%)



Source: CaixaBank Research, based on data from Bloomberg

Evolution of 30-year sovereign rates



Source: CaixaBank Research, based on data from Bloomberg

MR10

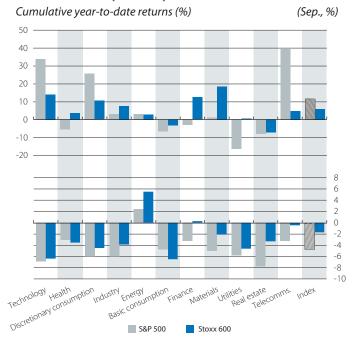
with 2-year yields currently above 5% and close to their peak since 2006. In the euro area, meanwhile, the rise in rates has been more homogeneous across the yield curve, with a less pronounced steepening of the slope (especially in the German yield curve), reflecting the weakness of the business cycle. On the other hand, the Italian risk premium rebounded more than 25 bps in the month after the government increased its fiscal deficit forecast for 2024. British sovereign rates were the big exception in the month, registering sharp declines in the short-term benchmarks.

A bad month in the international stock markets. The major international stock markets recorded yet another month of widespread losses in September, with the MSCI All Country World index down more than 4%. Although this fall was widespread across most sectors, the ones most affected were those that are more sensitive to interest rate rises, such as the tech sector. As a result, the Nasdaq index fell more than 5%, and this decline was also acutely felt in the S&P500. The main exception to this trend was the energy sector, supported in both Europe and the US by the sharp rise in the price of oil in recent months. In Spain, the IBEX showed a better relative performance, although it was still down –0.8% in the month. On the other hand, in Europe the DAX performed particularly poorly at –3.5%, weighed down by the German industrial sector.

The US dollar continues to capitalise on the environment of higher for longer rates. The dollar continues its rally and in September recorded yet another month of significant appreciation, particularly against the euro, the yen and the Swiss franc. The US currency is benefiting greatly from the spread in rates that is expected relative to these economies with less dynamic business cycles than the US, on the one hand, and from the lower risk appetite among investors, on the other. As for the euro, its weakness against the dollar was not as pronounced as with other currencies in the month, and its nominal effective exchange rate recorded a depreciation of 0.5%, in contrast with the –2.5% it reached against the dollar.

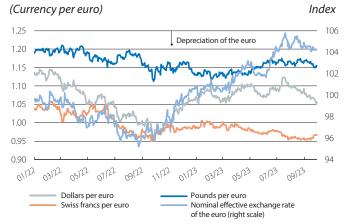
Supply cuts drive the oil and gas markets. Oil prices continued to climb in September, rising almost 10%, closing the guarter 27% above June levels and reaching a peak for the year at around 95 dollars a barrel. Production cuts in Saudi Arabia and Russia have achieved their goal in the face of steady growth in Chinese demand for crude oil and the rapid reduction in global oil inventories. This, together with the fact that the cuts have not yet found a counterweight in US shale producers, which are unable to boost production after several years of underinvestment, has resulted in a clearly upward trend in the market in recent months. As for natural gas, supply risks at different points (Australia, Norway, etc.) continue to generate significant volatility in the European benchmark, the Dutch TTF, and despite finding a stabilising factor in the good level of inventories for the time of year, the price rallied almost 20% in the month.

Stock market sector performance in the year (top) and the month (bottom)



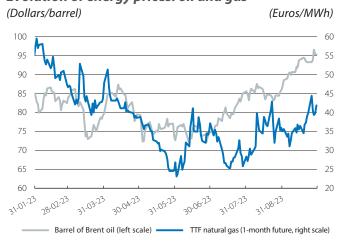
Source: CaixaBank Research, based on data from Bloomberg

Evolution of the euro against its main peers



Source: CaixaBank Research, based on data from Bloomberg.

Evolution of energy prices: oil and gas



Source: CaixaBank Research based on data from Bloomberg



New scenario: international economy and market outlook

After performing better than expected in the first half of 2023, global economic activity has experienced a slowdown in Q3 as a result of differing dynamics among the major economies. Below, we take a look at the outlook for the international economic environment.

Starting point: uneven slowdown

Global economic activity has felt the effects of the loss of steam in China, where the initial revival of Q1 2023 gradually gave way to indicators that fell consistently short of expectations, in addition to the persistent difficulties in the real estate sector. Among advanced economies, the weakness exhibited by industry since the end of 2022 has begun to dampen the performance of the services sector, albeit to differing degrees from region to region. Specifically, in the US the indicators have reflected a gentle slowdown in economic activity, with growth of around 0.5% quarter-on-quarter and consumption holding up remarkably well, while the weakness has been concentrated in residential investment and in modest contributions from the foreign sector. In contrast, euro area GDP has been sluggish, registering growth rates of around 0.1% guarter-onquarter, reflecting the weakness of consumption, investment and foreign demand. All these dynamics are clearly reflected in the data and expectations comparison set out in the second chart.

Key assumptions: disinflation, disinflation and disinflation

To understand the outlook for the slowdown in economies such as the US and, especially, the euro area, we must reiterate that both of them are emerging from a period of unusually pronounced distortions in demand and production capacity, first at the hand of the COVID-19 pandemic¹ and then with the war in Ukraine. Distortions on this scale take time to digest. Moreover, they have coexisted with transient tailwinds, such as the support from fiscal policy, the fading of the bottlenecks, a degree of a cyclical boost from services (with their definitive post-pandemic normalisation) and the savings buffers accumulated following COVID-19.

Inflation is the metric in which this digestion has become the most visible, suffering a rebound in the US as early as 2021 and accelerating a little later in the euro area. This rebound is taking place in three phases, beginning with the initial impacts (such as the bottlenecks associated with the pandemic or the energy crisis due to the war in Ukraine) and continuing with the resulting indirect

1. Not only did the pandemic freeze supply and demand, but it also led to major readjustments in the economy, such as in consumption patterns or in the decisive response from fiscal and monetary policies.

Forecasts for international economies and markets

Annual change (%), unless stated otherwise

	2022	2023	2024
Global GDP	3.5	3.0 (2.8)	2.9 (3.0)
US GDP	2.1	2.0 (1.7)	0.8 (0.5)
US inflation	8.0	4.2 (4.0)	2.4 (2.1)
Fed - fed funds rate (year end)	4.50	5.75	4.25
Euro area GDP	3.5	0.5 (0.7)	0.7 (1.0)
Euro area inflation	8.4	5.6 (5.3)	3.1 (2.7)
ECB - depo rate (year end)	2.00	4.00	3.50
12-month Euribor (average)	1.1	3.9	3.6
Chinese GDP	3.0	5.2 (5.7)	4.6 (4.9)
Brent oil (€/barrel, average)	94	76.3 (72.5)	73.9 (68.6)
Natural gas (TTF) (€/MWh, average)	132	43.1 (43.9)	50.4

Note: In brackets, previous forecast (only when different)

Source: CaixaBank Research.

Surprises in the publication of economic indicators



Note: Positive (negative) figures reflect that the indicators were better (worse) than expected by the consensus of analysts

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

effects (the rise in the price of goods and services which, although not directly impacted by the initial shock, are driven up by production costs and relative price adjustments). As the third chart shows, we are beginning to leave these two phases behind us and the most up-to-date indicators, such as momentum, reflect sharp disinflation relative to the most tense moments of 2022. However, there is a third phase which still lies ahead before we can celebrate the normalisation of inflation: that of second-round effects (i.e. the feedback loop



between prices, business margins and wages in response to the initial rise in prices themselves). This phase tends to give inflation inertia and could delay the final decline towards the target rate, but it is key that the process of disinflation proceeds as expected so that the central banks do not need to further weaken demand.

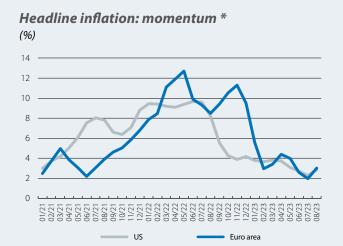
Outlook

In this context, and after more than a year of sharp interest rate rises, recently the Fed, the ECB and most of the world's central banks have reorientated their monetary policy strategy. Specifically, they have hinted at the end of the cycle of rate hikes, but at the same time they are also indicating their intention to keep rates around their current levels, which they consider sufficiently restrictive, for an extended period of time. Therefore, although they have not shut the door to the possibility of further adjustments, official interest rates may have reached the top of a plateau where, according to expectations implicit in the financial markets, they will remain for at least a large part of 2024.2

Given the persistence of the restrictive monetary conditions, and in an environment of weak foreign demand, we can expect economies such as the US and the euro area to show limited buoyancy over the coming quarters. In fact, the transmission of the tighter monetary policy is gradually seeping through to the wider economy and it is already visible in the weakness of the demand for credit and in the tightening of credit standards, two dynamics which explain the deterioration of so-called «credit impulse» (see fifth chart).³

However, there are some buffers in the forecast scenario, such as the strength shown by the labour market, and these should help the cooling of economic activity to materialise in the form of sluggishness rather than contraction.⁴ Thus, after a few quarters of relative stagnation, we expect the world economy to be reinvigorated in 2024, spurred on by a recovery in household purchasing power (thanks to the fall in inflation and the rise in wages).5

- 2. The ECB will have reached this plateau in September, when it placed the depo and refi rates at 4.00% and 4.50%, respectively, while the Fed could do so in November, when we expect it to set its target rate within the 5.50%-5.75% range.
- 3. Historically, this indicator has identified a close association between credit dynamics and GDP growth. See the Focus «Is monetary policy managing to cool economic activity? A first assessment» in the MR06/2023.
- 4. For example, our forecast scenario for the euro area projects quarteron-quarter GDP growth rates of around 0.0-0.1% through to Q1 2024. 5. The economy could also benefit from weaker headwinds, such as the inventory over-accumulation crisis that has weighed down industry in recent quarters.

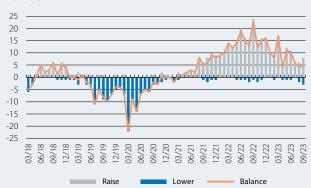


Note: * Momentum is defined as the annualised and seasonally adjusted change in the three-month average CPI compared to the previous three months

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

Central banks that raise or lower rates in a given month

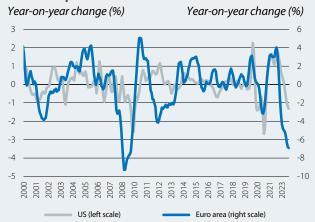
Number



Note: The sample consists of 35 central banks from North America, South America, Europe. Africa, Asia and Oceania

Source: CaixaBank Research, based on data from Bloomberg.

Credit impulse



Notes: Credit impulse is calculated as the change in the balance of outstanding credit minus its change in the previous year (as a percentage of nominal GDP). The changes used are three-month cumulative changes and the credit impulse plotted on the chart is smoothed out using a moving average

Source: CaixaBank Research, based on data from the ECB and the Fed.



A first assessment of the external vulnerability of emerging market economies

To date, most emerging countries are showing better economic and financial performance than expected, considering the significant tightening of financial conditions which we have witnessed across the global. However, this resilience should not lead us to complacency. One factor that often puts pressure on emerging economies is the appreciation of the dollar, and since the beginning of the year it has gained almost 3% in value against a large basket of currencies.

In this regard, recent IMF estimates indicate that a 10% appreciation of the dollar, in nominal effective terms, causes a 1.9% drop in the real GDP of these countries two quarters later (compared to a 0.5% drop for advanced countries) and the recovery of the lost growth takes around 10 quarters in emerging economies (versus three in developed economies).1 However, the agency itself points out that the impact of increased global risk aversion is not equal in all countries and past experience shows that the economies hardest hit were, above all, those with a more fragile external position involving very high and recurring current account deficits, high levels of foreign debt and/or an excessive reliance on short-term debt financing.2

External Vulnerability Tracker

Faced with this circumstance, we have produced a tracker which shows the external position of the major emerging countries,³ highlighting their weaknesses. It is not intended to be a model for assessing country risk, nor a tool for assigning probabilities of economic or financial crises, but it does offer important clues about each country's dependence on foreign savings (and, consequently, its relative vulnerability), based on a series of variables that are common to all of them. For instance, the fact that

External Vulnerability Tracker

2023	Current account balance	Foreign debt	S/T foreign debt	S/T foreign debt	DFI inflows	Risk premium of foreign debt issued in dollars	Foreign vulnerability ranking (*) (**)				
	(% of GDP)	(% of GDP)	(% of foreign debt)	(% of reserves)	(% of GDP)	(%)	2023	2018	2008	2007	2001
Turkey	-4.8	44.9	32.6	227.0	0.5	5.6	1	1	4	4	3
Argentina	-2.5	49.2	16.5	184.6	1.5	20.2	2	2	7	5	1
Malaysia	2.1	64.6	41.8	100.4	1.6	0.3	3	3	5	9	15
Hungary	-1.3	82.0	9.8	48.6	-0.8	4.0	4	5	1	1	8
Chile	-1.6	70.6	8.5	52.3	3.6	1.4	5	6	6	7	10
Egypt	-2.6	45.8	9.5	62.3	2.0	7.0	6	14	20	21	19
South Africa	-2.6	47.5	15.9	53.6	0.6	3.7	7	4	3	3	2
Colombia	-4.4	54.3	13.4	44.5	2.6	4.2	8	10	13	14	14
Thailand	0.3	39.9	37.1	37.7	-1.9	1.5	9	9	8	6	9
China	1.5	13.7	53.0	45.0	-0.5	1.3	10	8	15	12	17
Poland	1.1	48.3	15.4	38.1	2.4	0.2	11	7	2	2	12
Morocco	-0.3	47.5	14.0	27.7	1.0	3.0	12	13	19	18	16
Indonesia	-0.5	29.6	11.9	35.0	1.1	1.5	13	11	9	10	4
Mexico	-0.7	31.1	10.7	30.8	2.2	1.6	14	12	12	13	18
India	-1.6	17.9	20.8	23.8	0.7	1.5	15	15	11	15	21
Russia	2.2	28.3	15.0	18.3	-1.0	2.9	16	20	14	11	6
Brazil	-1.7	26.2	12.4	20.1	2.1	2.6	17	18	18	17	11
Philippines	-3.7	24.1	14.0	18.1	0.8	0.7	18	17	10	8	5
Peru	-2.0	33.0	-	-	3.3	2.1	19	19	16	16	13
Algeria	2.2	28.3	21.6	2.5	0.5	4.8	20	16	17	20	20
Saudi Arabia	4.2	20.6	19.8	10.1	-0.8	-	21	21	21	19	7

Notes: * The vulnerability ranking assigns a position depending on the average value of the variables included in the table for each country: the top spot corresponds to the highest average

Source: CaixaBank Research, based on data from Oxford Economics, via Refinitiv.

⁽greatest external vulnerability) while the 21st position corresponds to the lowest average (lowest external vulnerability).
** The comparison dates are years in which the main emerging countries experienced major financial crises, resulting either from idiosyncratic risks such as currency devaluations or changes in government, or from significant monetary policy shifts in advanced economies.

^{1.} See IMF (July 2023). External Sector Report: «External Rebalancing in Turbulent Times».

^{2.} See IMF (June 2017). «Assessing Country Risk: Selected Approaches».

^{3.} The countries chosen belong to the IMF's «emerging market economies» classification. In addition, we have included Morocco and Algeria due to their relevance to Spain's foreign market.



China appears in 10th position out of 21 countries does not mean that the tracker is giving its external financial position a «bad score»; it simply indicates that there are variables which are in a less favourable position than in the other countries considered. Indeed, the IMF, in its External Sector Report, places China in the group of economies with an external position that is consistent with its medium-term fundamentals.⁴

The traditional variable for determining an economy's funding needs (or lending capacity) is the current account balance:⁵ if it is negative, the country pays more to other countries than it receives, and the opposite if it is positive. In other words, domestic savings do not cover the country's investment needs. However, whether the balance is positive or negative is not necessarily conclusive *per se*, as it may reflect very different situations. As an example, Turkey and Colombia have large current account deficits, but they have very differing degrees of external vulnerability.

In fact, to understand the fragility of a country's external position, it is also necessary to take into account each country's economic situation, together with other variables that capture their financial links with other countries. In this regard, it is important to know a country's level of foreign debt, understood as the amount of its debt (both sovereign and private) which is in foreign hands, expressed in dollars and in terms of GDP. The higher this ratio, the more vulnerable a country is to a change in sentiment among foreign investors, as the outflow of capital could potentially jeopardise its ability to meet its pre-existing obligations with its creditors, as well as weakening the local currency's exchange rate. Similarly, the higher the percentage of that debt which is due to mature in the short term, and the higher it is relative to the country's foreign currency reserves, the greater those fears will be.

Another variable that provides a good indicator of investor sentiment is the risk premium of sovereign debt, understood as the «extra» return which investors demand from issues of debt denominated in dollars carried out by a given country compared to an issue with a similar maturity horizon carried out by the US Treasury. Finally, we include foreign direct investment (FDI), in terms of GDP, since it provides information on the behaviour of a particular source of financing over the medium and long term, which is less volatile in the face of episodes of financial instability and thus helps to reduce external vulnerability.

What information does the tracker give us?

First of all, leading the vulnerability ranking we find the «usual suspects». These are countries whose economic and financial imbalances have become chronic over the last 20 years as a result of ineffective economic policies, with

4. The IMF assesses the extent to which a country's external position is in line with its medium-term fundamentals, taking into consideration aspects such as structural and fiscal reforms, as well as the flexibility of the local currency exchange rate in helping the economy to absorb external shocks.

5. The current account balance encompasses all of a country's transactions with the outside, in a given period, arising from the exchange of goods and services (trade balance), the collection or payment of investment dividends (income balance) and transfers.

unstable governments that are highly prone to taking on debt and to intervening in the foreign exchange markets. In short, these aspects have degraded these countries' credit ratings and exacerbated their external vulnerability, with Turkey and Argentina topping the list. In fact, in both cases their currencies have depreciated by 30% and 50% against the dollar, respectively, so far this year. Malaysia is an exceptional case, since despite historically having a current account balance in surplus, 6 in recent years its foreign debt has increased significantly and, in the short term, it will reach levels that would be difficult to cover with the country's existing foreign currency reserves. As a result, its currency is now at its weakness ever against the dollar. However, the country still enjoys the confidence of foreign investors (inflows of FDI have increased in recent years) and the main rating agencies assign it the highest scores within the «investment grade» category.

Secondly, the top five positions in the ranking are held by countries whose short-term debt exceeds 50% of the level of their reserves, a threshold which signals a high risk of default on their foreign debt. This drives up the premiums demanded by investors, and the worse the country's credit rating, the bigger the increase in the premium.

Thirdly, several of the top-ranking countries have received some form of financial assistance from the IMF since the pandemic, such as Argentina, Egypt, or South Africa, which highlights the weakness of their external positions and their difficulties in accessing international capital markets.

In addition, if we look at changes in the ranking over time, we see improvements in the case of countries where major fiscal consolidation reforms have been introduced (such as Saudi Arabia), in those which have benefited from commodity export earnings (such as Brazil and Angola), or those that have reduced their vulnerability to foreign exchange rates by increasing debt issues in their local currency (such as Russia).

In short, this tracker provides key information on the structural external vulnerability of a number of countries. However, this is not the only potential source of financial instability and there are other factors that also provide information about a country's fragility, such as geopolitical risks and the rise in the price of essential goods, among others. We also cannot overlook the sharp rise in debt levels, both globally and in emerging economies. Indeed, the IMF itself warns that almost 20% of emerging economies have sovereign bonds that are being traded under unfavourable conditions (with currencies that are very weak against the dollar, with very high risk premiums and with difficulties in accessing international capital markets) and that over half of low-income countries are either over-indebted or exposed to a very high risk of overindebtedness.⁷ However, this issue is important enough that it deserves to be addressed in another report.

Rita Sánchez Soliva and Beatriz Villafranca

6. Since 2008, its current account surplus ratio has fallen by almost 14 pps due to the negative impact of the fall in global demand on Malaysian exports (which are heavily commodity-focused), following the successive crises experienced in recent years and the fall in commodity prices.

7. See IMF (13 September 2023). «Global debt is returning to its rising trend».



Interest rates (%)

	30-September	31-August	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Euro area					
ECB Refi	4.50	4.25	25	200.0	450.0
3-month Euribor	3.95	3.80	16	182.0	412.8
1-year Euribor	4.23	4.10	13	93.7	326.7
1-year government bonds (Germany)	3.69	3.54	15	109.1	330.7
2-year government bonds (Germany)	3.20	2.98	23	43.9	268.7
10-year government bonds (Germany)	2.84	2.47	37	26.8	160.7
10-year government bonds (Spain)	3.93	3.48	45	27.0	165.9
10-year government bonds (Portugal)	3.60	3.19	41	1.7	133.3
US					
Fed funds (upper limit)	5.50	5.50	0	100.0	375.0
3-month Libor	5.66	5.66	-1	89.0	336.4
1-year government bonds	5.45	5.38	6	76.2	278.8
2-year government bonds	5.04	4.86	18	61.8	221.1
10-year government bonds	4.57	4.11	46	69.6	169.1

Spreads corporate bonds (bps)

	30-September	31-August	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	80	70	10	-10.4	-40.1
Itraxx Financials Senior	91	81	9	-8.6	-41.2
Itraxx Subordinated Financials	166	148	18	-6.5	-85.8

Exchange rates

	30-September	31-August	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.057	1.084	-2.5	-1.2	1.5
EUR/JPY (yen per euro)	157.950	157.820	0.1	12.5	12.0
EUR/GBP (pounds per euro)	0.867	0.856	1.3	-2.1	0.6
USD/JPY (yen per dollar)	149.370	145.540	2.6	13.9	10.5

Commodities

	30-September	31-August	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	548.6	552.8	-0.8	-1.1	-7.0
Brent (\$/barrel)	95.3	86.9	9.7	10.9	2.5
Gold (\$/ounce)	1,848.6	1,940.2	-4.7	1.3	2.1

Equity

	30-September	31-August	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	4,288.1	4,507.7	-4.9	11.7	12.1
Eurostoxx 50 (euro area)	4,174.7	4,297.1	-2.8	10.0	21.1
lbex 35 (Spain)	9,428.0	9,505.9	-0.8	14.6	15.3
PSI 20 (Portugal)	6,090.3	6,174.0	-1.4	6.4	0.6
Nikkei 225 (Japan)	31,857.6	32,619.3	-2.3	22.1	22.8
MSCI Emerging	952.8	980.3	-2.8	-0.4	-4.0



An end of the year with more questions than answers in the international economy

Upward revision of global growth for 2023, to 3.0%; downward revision for 2024, to 2.9%. On the one hand, the macroeconomic outlook for developed economies will continue to be restrained by tighter monetary conditions, coupled with the impact of less expansionary fiscal policies. In this regard, we have cut the euro area's growth outlook for 2023 and 2024 to 0.5% and 0.7% (-0.3 pps in both cases), in contrast to the increased optimism for the US economy, where we now expect growth of 2.0% for 2023 and of 0.8% for 2024 (both +0.3 pps). In emerging economies, the main reduction in the growth forecasts affects China (-0.5 pps, to 5.2% in 2023; and -0.3 pps, to 4.6% in 2024), which contrasts with the better performance of other large emerging economies, such as Brazil, Russia, India, South Africa or Indonesia. Overall, the outlook for the coming quarters is marked by a slowdown in growth, while inflation is expected to moderate. All this will take place in an environment marked by risks, which include uncertainty regarding the effects of monetary policy and the persistence of inflation, latent financial vulnerabilities in several countries and concerns over the recent «protectionist shift» that could affect global trade flows. In the same vein, the OECD has revised global growth for 2023 up by 0.3 pps, to 3.0%, and has cut the forecast for 2024 by 0.2 pps, to 2.7%.

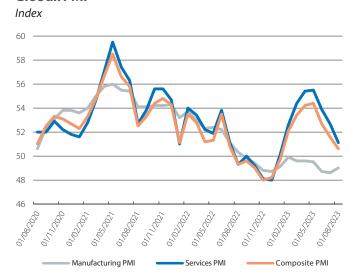
The last few months have seen a slowdown in global growth.

This is reflected in the global composite Purchasing Managers' Index (PMI), which stands at 50.6 points in August, its lowest level since January (49.7 points), driven mainly by the loss of steam in the services sector which has registered three consecutive months of sharp declines, dropping from 55.5 points in May to 51.1 in August. On the one hand, some large emerging economies (such as Brazil, Russia, India and China) have recently seen improvements on the manufacturing side. However, the euro area continues to show particularly visible and persistent weakness. Indeed, despite the improvement in the euro area composite PMI in September, it still remains in contractionary territory (up 0.5 points to 47.2), weighed down by the fragility of the manufacturing sector (-0.1 points, to 43.4) and the lack of momentum in services (+0.8 points, to 48.7). The difficulties in Europe's manufacturing sector are also reflected in the PMI of its two largest economies: in France, it fell in September to a low point since the outbreak of the pandemic (-1.8 points, to 44.2) and in Germany, despite the recovery, it remains well within contractionary territory (+0.5 points, to 39.6).

(De)inflationary dynamics will continue to determine the macroeconomic environment in advanced economies. In

August, headline inflation climbed to 3.7% (+0.5 pps) in the US, pushed up by fuel prices, while in the euro area, where the data for September is already available, it fell to 4.3%. On the other hand, the rate of decline in core inflation (which excludes energy and food) on both sides of the Atlantic, which stood at 4.3% in the US and at 4.5% in the euro area, will not provide

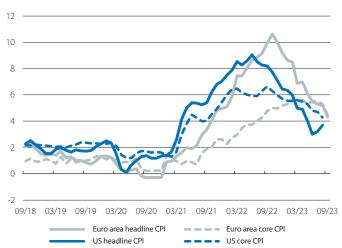
Global: PMI



Source: CaixaBank Research, based on data from S&P Global, via Refinitiv.

US and euro area: CPI

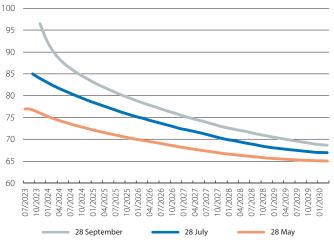
Year-on-year change



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

Brent oil price futures

(Dollars per barrel)



Source: CaixaBank Research, based on data from Bloomberg.

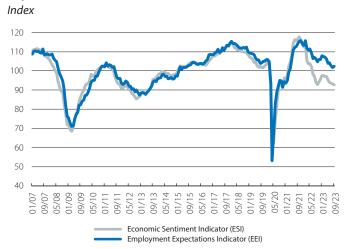
MR10

any respite for the central banks. In addition to the risks of persistent inflation and the intensification of second-round effects, there are fears regarding the effects of the increase in the oil price. Since the end of May, Brent oil has risen by 30%, to around 95 dollars a barrel. The recent tightening of this market, which is explained by a pronounced deterioration in supply conditions and by the global demand for crude oil proving more resistant to the macroeconomic conditions than expected, is also reflected in the medium-term outlook for prices being well above those of prior to the summer.

The duality between the labour market and other macroeconomic data persists, as the focus reverts to fiscal policy. The European Commission's Economic Sentiment Index (ESI) for the EU fell to 92.8 points (compared to an all-time average of 100 points), marking a new low since August 2020 and underscoring the economic weakness of the European economy as a whole. However, the Employment Expectations Index (EEI) has remained significantly above the ESI, specifically around 10 points higher in the last year (compared to practically no difference in the pre-pandemic period). Of course, in recent months it has followed a similar declining trend to that of the ESI, and stood at 102.4 points in September. On the other hand, the economy will continue to depend upon the fiscal stance, as Member States will have to begin normalising their fiscal policies ahead of the reinstatement of the European fiscal rules in 2024. Indeed, even if negotiations between Member States continue, the new European fiscal framework is expected to maintain the existing fiscal targets (such as the deficit target of 3.0%), even if greater control is offered at a national level on how nominal targets are to be met, for example, by drawing up multi-year plans.

While the performance of the BRICS countries has been one of the positive surprises of recent months, China still has some work to do. Emerging from the pandemic is proving particularly tortuous for the Asian giant, which is having to deal with both structural challenges and the «economic scars» left by the pandemic. On the one hand, the level of non-financial corporate debt has reached a new high, standing at 160% of GDP, especially concentrated in sectors such as real estate and in local government financing vehicles (LGFVs). On the other hand, the «stellar» performance of Chinese exports during the pandemic is now being reversed, while geo-economic tensions accumulate and domestic consumption fails to pick up despite the savings accumulated by many households. Nevertheless, it is not all bad news. The figures for August were better than expected, with a particularly strong performance in the growth of industrial production (+4.5% vs. 3.7% in July) and retail sales (+4.6% vs. 2.5% in July). In part, this improvement is due, on the one hand, to the intervention of the Chinese authorities through a loosening of monetary policy and through the «fiscal machine» being put into gear. On the other hand, the recent relaxation of regulations in the real estate sphere ought to help sustain the sector over the coming months. Still, in the medium term the lack of investor and consumer confidence in China will continue to put the country's economic outlook under pressure.

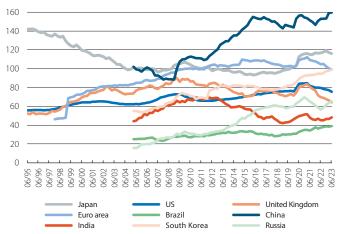
Euro area: economic sentiment and employment expectations



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

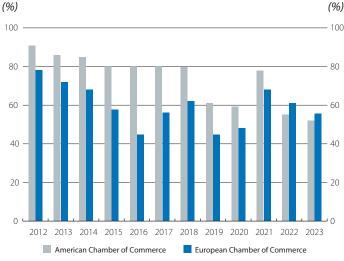
Global: corporate debt of non-financial institutions

(% of GDP)



Source: CaixaBank Research, based on data from the Institute of International Finance

Proportion of firms that feel optimistic about the business outlook in China



Source: Capital Economics.



US: the never coming recession

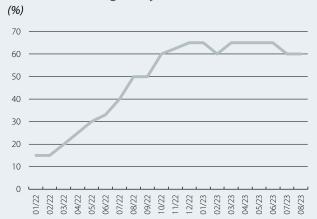
In February, we wrote that we could expect to see a cooling of the US economy at some point in 2023, a view shared by most analysts. The uncertainty layed in how pronounced this cooling process would be and, therefore, whether the economy would make a soft or a hard landing. However, what we have seen in the year to date is an economy that continues to grow with unusual strength considering the current environment of high interest rates. Analysts have thus begun to revise downwards the probability assigned to a recession occurring in the US within the next year (see first chart). Not only this, but the latest economic indicators suggest strong GDP growth in Q3 too, placing it between 0.5% quarter-on-quarter, according to the New York Federal Reserve's nowcasting model, and 1.3%, according to the Atlanta Fed.

The factors that support a recession

Unsurprisingly, the goal of the Fed's tightening of monetary policy since early 2022 is to cool an economy that was showing signs of overheating (especially visible in the inflation rally). Since then, the factors related to the pandemic which had caused the mismatch between aggregate supply and demand have been resolved (e.g. bottlenecks in global supply chains, mass pent-up savings and changes in consumption patterns between goods and services) and this has supported a decline in inflation and a moderation in many economic indicators. However, the lags with which monetary policy often affects the economy suggest that there is still further margin for cooling over the coming quarters. One of the main channels affected by the central banks' rate hikes is that of financial and credit conditions. As we described in a previous article,² credit standards have tightened as the Federal Reserve intended, while demand for credit has also weakened. In fact, our estimates pointed to a tightening of credit conditions that would be associated with a 0.7-pp drop in economic activity.

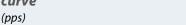
There are also various signals which, when triggered, have historically anticipated forthcoming recessions. One of the most well known is the inversion of the sovereign yield curve. It is now more than 300 days since the spread between 10-year and 3-month treasuries was inverted, which has historically been the best predictor of recessions. In fact, according

US: probability of recession according to the Bloomberg analyst consensus



Source: CaixaBank Research, based on data from Bloomberg

US: recessions and the slope of the yield curve





Notes: The shaded areas denote periods of recession according to the NBER. We show the spread between the yield on 10-year and 3-month debt. **Source:** CaixaBank Research, based on data from Bloomberg and the NBER.

to our model, the current inversion of the yield curve has an associated probability of recession which fluctuates between 70% and 80%, depending on the specification used.³

What is sustaining the US economy?

If all the indicators suggest that the US economy ought to be contracting (or doing so soon), what is preventing such a scenario? We can answer this question, firstly, by looking at GDP from different perspectives. If we look at GDP from the demand side, we see how public consumption has served as an important buffer for economic activity, with quarter-on-quarter increases of 1% on average over the past four quarters, the same

^{1.} It was Milton Friedman who first introduced the now famous concept that monetary policy affects the economy with «long and variable lags». Estimates suggest that these lags could range from between 6 and 12 quarters.

^{2.} See the Focus «Is monetary policy managing to cool economic activity? A first assessment» in the MR06/2023.

^{3.} See the Focus «On the likelihood of a recession in the US» in the MR05/2018.



as non-residential investment. Private consumption, which is often the main driver of the economy, grew in line with GDP, averaging 0.6% quarter-on-quarter, while the foreign sector made a rather more modest contribution to GDP growth. The component that has weighed down GDP growth has been residential investment, which has been declining now for nine consecutive guarters (-22% cumulative decline). On the other hand, if we look at GDP from the supply side and analyse how much value added was provided by the various sectors, the arts and leisure, information and mining sectors stand out as providing the most. At the more disappointing end of the spectrum we find finance and insurance, manufacturing and construction, which represent 19%, 11% and 3%, respectively, of total production and have been stagnant or in decline for four quarters now.

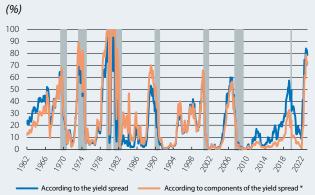
And to add further confusion... mixed signals in the labour market and the real estate sector

One indicator that also suggests the US economy is in good health is the labour market, with the unemployment rate standing at 3.8% and the ratio of job vacancies per unemployed person at 1.4 (versus a historical average of 0.7). However, we also already find various signs of normalisation, such as monthly job creation, which stands at 150,000 workers on average over the past three months. This is well below the 400,000 average in 2022 and even somewhat below the average between 2015 and 2019 (190,000). Moreover, if we look at the sectors that are contributing to this job creation, we see that education and health, which accounts for 16% of the workforce, is contributing over 50% to new job creation. This is a significant statistic, as the education and health sector is not the best thermometer for measuring the state of the business cycle. Other sectors such as manufacturing, the professional and business sector or catering and leisure could be more indicative of the dynamics and trends in the demand for employment.

The real estate sector, as we have already mentioned, has been on the decline for nine consecutive quarters, first due to expectations of a more restrictive monetary policy and then with its confirmation. However, in recent months we have been witnessing a recovery in its activity: the number of home sales and new construction licences have begun to pick up this summer and could now be emerging from the rut they fell into in early 2022, potentially marking the beginning of the sector's recovery.

With this cocktail of indicators pointing in opposite directions, forecasting economic growth has become an even more difficult task. All in all, we believe we are

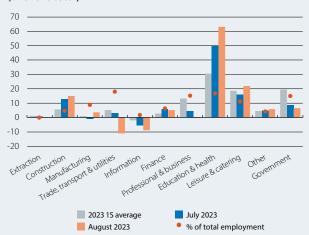
US: probability of recession according to the yield curve



Notes: The shaded areas denote periods of recession according to the NBER. * The components of the yield spread are obtained using a model which separates the pure rate expectations component and the time premium from the observed interest rate. See T. Adrian, R.K. Crump and E. Moench (2013), *Pricing the term structure with linear Regressions*, Journal of Financial Economics.

Source: CaixaBank Research, based on data from Bloomberg, the New York Fed and the NBER.

US: monthly job creation by sector (% of the total)



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

going to witness a gradual cooling of economic activity and a soft landing with the US economy remaining close to stagnation for several quarters.

Ricard Murillo Gili



Change of gear in the Chinese economy: contagion channels and global implications

China's economic history in recent decades is one of multiple successes, with rapid GDP growth, a sharp reduction in poverty and the country's emergence as the world's largest exporter of goods. But China's economic development model, anchored in the strength of the external sector and the rapid accumulation of capital, has also developed imbalances, such as a rapid accumulation of debt and an excessive dependence on the real estate sector. On the other hand, China's high global market share makes it more difficult to continue expanding its exports, particularly in an environment of geo-economic fragmentation. The Chinese authorities also seem willing to tolerate a slower pace of growth, prioritising economic security. What implications will this new macroeconomic environment have for China and what will be the ramifications globally?

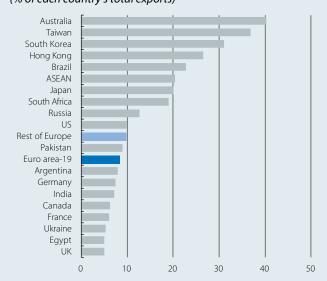
Slowdown in China and global contagion channels

This «new era» of growth in China will undoubtedly entail a significant slowdown compared to the growth rates recorded over the past few decades. Between 2000 and 2019, for example, China sustained an average growth rate of 9%. But various headwinds are accumulating. Beyond those already mentioned, there are also demographic factors; the difficulty in rebalancing the economy and stimulating domestic consumption as a driver of growth; foreign competition, particularly from other emerging Asian economies; the recent «regulatory reform» directly affecting some of the fastest growing sectors (such as big tech), and heightened trade tensions. Thus, the IMF forecasts that China's growth will converge towards 3% by the end of this decade.

Although a gradual transition to lower growth rates would act through different channels compared to a «hard landing», and would have different global implications, recent estimates suggest that a slowdown in China would generate ramifications for the global economy in both cases. The ECB estimates that in a scenario with a gradual slowdown in growth, every 1 pp of less growth in China would deduct between 0.1 and 0.4 pps from euro area GDP growth. The Bank of England, meanwhile, estimates that a gradual slowdown in Chinese growth would have a similar impact on the British economy, while a «hard landing» would lead to 1 pp less growth in the year of the impact,

1. See A. Dieppe *et al.* (2018). «The transition of China to sustainable growth — implications for the global economy and the euro area», ECB Occasional Paper n° 206. The authors estimate that a gradual slowdown in growth in China, as a result of the introduction of more ambitious structural reforms by the authorities in order to rebalance the economy (assuming a stimulus to consumption and a reduction in the investment-to-GDP ratio), would produce lower growth in China in the short term (approximately 1 pp less per year), leading to a cumulative drop of 3.4% in China's GDP level after three years. This shock would produce a cumulative negative impact of 0.3% on euro area GDP, which could be as high as 1.1% depending on the response from the Chinese authorities and on whether the strength of the different transmission mechanisms intensified.

Exports to China (% of each country's total exports)



Notes: The rest of Europe includes the following countries: Czech Republic, Denmark, Hungary, Iceland, Norway, Poland, Sweden, Switzerland, Turkey, Belarus, Bulgaria, Croatia, Romania and Ukraine. The chart uses the average between 2015 and 2020 and only includes countries with exports to China in excess of 5% of their total.

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

although this figure could even double if it were to significantly impact global financial markets.²

In both scenarios, traditional contagion channels to other economies would be activated. On the one hand, there would be an activation of financial channels, which have historically played an important role in the transmission of international shocks. Despite China's size in the global economy, its financial system is still not very directly integrated with the global financial system.³ However, indirect financial channels could be more important, through a perception of increased risk among investors and a deteriorating in the earnings outlook for many large corporations for whom the Chinese market represents an important source of revenues.

Another channel of contagion is through commodity markets, as China accounts for a significant fraction of the global production and consumption of some of these products and a drop in demand could have substantial

2. See R. Gilhooly et al. (2018). «From Middle Kingdom to United Kingdom», Bank of England Quarterly Bulletin (Q2 2018). The scenario with a gradual slowdown is estimated to be a slowdown of 2 pps in China's growth in the first year and of 1 pp in the second, reducing China's GDP level by 3% after three years. In this scenario, British GDP would be 0.5% lower in the third year. The «hard landing» scenario assumes a rapid 8-pp drop in China's level of growth in the first year, and despite a rebound from the second year onwards this would lead to 10% lower GDP in China in the third year. In this scenario, British GDP would be between 1.4% and 2.8% lower after three years, depending on the extent to which global amplification channels are activated, such as financial turbulence or sharp corrections in asset and currency prices. 3. China's share of global foreign assets and liabilities is estimated to be around 5%. China's banking ties with most countries are also limited, with the exception of close ties with the United Kingdom, through Hona Kona



implications for prices. For net commodity importing countries, such as the euro area, this effect could partly offset the negative impacts through other channels, boosting consumption while producing a disinflationary effect.

Finally, a shock in the Chinese economy would affect the rest of the world through international trade flows and the reduction of China's foreign demand. We can make an initial approximation of the importance of this channel by assessing a region's direct trade exposure to China. Standing above the rest of the world is almost all of the Asian region, for which China accounts for over 20% of exports, or other countries located geographically nearby, such as Australia (40%). In the US and the euro area this figure is around 10%. These direct trade links would suggest a significant, albeit limited, impact, but we must also add the indirect links, derived from China's status as the world's second largest economy and its central role in global value chains.

Contagion through international trade: the case of the euro area

In this regard, we must consider the fact that the euro area is also directly exposed to countries which themselves have a high exposure to China, so a slowdown in the Chinese economy would reverberate in the European economy indirectly through its trade connections with those countries. For instance, over 10% of euro area exports go to ASEAN countries, Japan, South Korea, Taiwan or Hong Kong, all of which have, in turn, direct exposures to China in excess of 20%. On the other hand, almost half of the euro area's total exports go to the US or the rest of Europe and the slowdown in these countries due to lower exports to China would also affect the euro area.

To illustrate the total impact, including both direct and indirect trade effects, we consider two scenarios of slowdown in the Chinese economy: one with a 10% fall in China's imports and another with a gradual decline of 2% per year over five years. In the first scenario, the direct impact on euro area exports is -0.8%, explained simply by the relative weight of exports to China in the European bloc. On the other hand, we estimate the indirect impact at 0.9%, bringing the total impact of a 10% fall in China's imports to 1.8% of European exports.

Thus, when we consider the indirect impacts, the total impact of China's slowdown on the European economy through international trade more than doubles. Taking a concrete example from this exercise, a 10% drop in China's imports would lead to a 2% drop in the exports of ASEAN countries, resulting in an additional 0.08-pp drop in euro area exports.⁴ On the other hand, even if the US' exposure to China is lower, the euro area's closer trade ties with the Asian country would result in the additional indirect impact being approximately double, at 0.15 pps.

To translate the impact into GDP terms, we must bear in mind that a portion of the euro area's gross exports

4. We assume that each country would reduce its imports from the rest of the world in the same proportion as the reduction in its total exports to China (we do not take into account the potential increase in exports to other countries or regions).

Exposure to China and impacts of a slowdown in China for the euro area

	Exposure of the euro area (%)	Exposure to China (%)	Estimated impact on euro area exports (pps) Scenario with 10% drop	Estimated annual impact on euro area exports (pps) Scenario with gradual slowdown
Direct impact				
China	8.4	-	-0.84	-0.17
Indirect impact			-0.92	-0.18
Australia	1.3	40.2	-0.05	-0.01
Taiwan	1.0	36.8	-0.04	-0.01
South Korea	2.0	31.1	-0.06	-0.01
Hong Kong	0.7	26.5	-0.02	0.00
Brazil	1.8	22.8	-0.04	-0.01
ASEAN	3.8	20.4	-0.08	-0.02
Japan	2.9	20.1	-0.06	-0.01
South Africa	0.7	19.1	-0.01	0.00
Saudi Arabia	1.4	16.2	-0.02	0.00
Russia	3.1	12.7	-0.04	-0.01
US	14.8	9.9	-0.15	-0.03
Rest of Europe *	25.2	9.9	-0.25	-0.05
India	2.1	7.2	-0.02	0.00
Canada	1.8	6.3	-0.01	0.00
UK	11.5	5.0	-0.06	-0.01

Notes: * The rest of Europe includes the following countries: Czech Republic, Denmark, Hungary, Iceland, Norway, Poland, Sweden, Switzerland, Turkey, Belarus, Bulgaria, Croatia, Romania and Ukraine. The euro area's exposure is calculated as the percentage of euro area exports to each country or region. The exposure to China is calculated as the percentage of each country's exports to China. The indirect impacts should be read as a sum, in pps, of the indirect impacts of a slowdown in China on euro area exports, through each country. The total impact, as a %, is the sum of the direct and indirect impacts. Countries such as Kazakhstan, Pakistan, Argentina, Ukraine and Egypt, all of which have exposures to China in excess of 5%, are not included in the table as they represent a low exposure for the euro area (below 1%).

Source: CaixaBank Research, own estimates based on data from the OECD.

incorporate intermediate goods and services that are imported from other countries. Thus, overall, we estimate that a sharper slowdown in China would have an impact, through the contraction of international trade flows, of 0.7% on euro area GDP, while a gradual slowdown could have an annual impact of between 0.1 and 0.2% on annual growth. These figures are consistent with the ranges suggested by the ECB and the Bank of England (given that our estimates are partial and the other channels mentioned would need to be added).

Global implications of a slowdown in China

Regardless of what shape the slowdown of the Asian giant takes, the global economy will feel its effects through multiple contagion channels, and these will act with different intensities depending on the nature of the shock. Furthermore, there are two additional difficulties in precisely estimating the magnitude of the global impact: on the one hand, the monetary and fiscal policy response to a slowdown in the Chinese economy, both from China and among trading partners, is unpredictable. On the other hand, if this really is a «new era» for China, then the rest of the world will also be sailing in uncharted waters.

Luís Pinheiro de Matos

5. According to OECD data, 18% of the value added in European exports originates abroad. The relative weight of exports in GDP in the euro area is 47%.



Quo vadis, globalisation? (part I): the long slowdown

In the last decade, the debate regarding the configuration and consequences of globalisation has gained prominence, with numerous voices advocating a rethink to either limit, reverse or reconfigure it. In this and the following article we analyse the course of these debates and the health of globalisation. To do this, we first analyse the aggregate, longer-term structural trends, before moving on to the more partial supporting evidence from the latest available data. Our goal is to unravel the main dynamics that are occurring in such a complex and, of course, global process.

The gradual slowdown of globalisation...

The clearest hallmark of the economic globalisation that gathered pace in the 1980s was the boom in global trade, but since the global financial crisis this has been showing signs of slowing down, although not stagnating. Focusing on the trade in goods, which is the only form of trade for which we have data in real terms and has been the main protagonist of globalisation to date, it reached its peak with respect to GDP in 2008, after almost 25 years of rapid expansion. It is worth noting that the timing of this slowdown pre-dates the time when the political debate surrounding globalisation gained prominence, suggesting that this slowdown has more complex and diverse causes.

... uneven by country but less so by type of product...

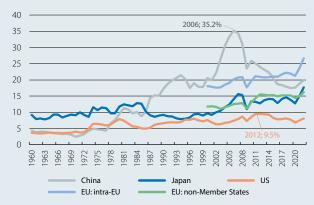
The steady slowdown in trade has not occurred equally across the world's major economies, as one would expect in a scenario of «radical» deglobalisation (i.e. occurring at the roots). The main culprits of this slowdown among the major exporting economies include the normalisation of China's growth (an economy now more oriented towards domestic consumption) and a relative stagnation of the US foreign sector. This reduced importance of the foreign sector will also have facilitated a relatively painless trade decoupling for these economies, as explained in the following Focus.

In any case, the foreign sector remains highly important to economies such as the EU and Japan, where exports relative to GDP have continued to increase. However, the recent upturn in this ratio could be distorted by the effects of COVID, both due to the shifts in consumption patterns and because of lower economic growth.

If we look at the trend across different products, on the other hand, the picture is quite different and the slowdown is mainly due to manufactured goods. Having been the driving force of globalisation, in the last decade the growth rates of trade in these goods have been

Evolution of the ratio of exports of goods to GDP, by region

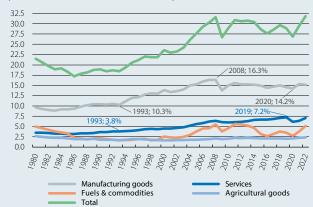
(% of nominal GDP)



Source: CaixaBank Research, based on data from the WTO and the World Bank.

Evolution of the ratio of exports of goods and services to GDP

(% of world GDP in nominal terms)



Source: CaixaBank Research, based on data from the WTO and the World Bank.

similar to those of world GDP in current prices, meaning its relative weight has stabilised at around 15% of GDP. Fluctuations in the relative weight of commodities, which are reflected in the ratio of exports to GDP in nominal terms but not in real terms, are due to changes in price more than in volume, while exports of services, which could be another growth vector for globalisation in the coming years, continue to gradually gain importance.

... and driven largely by the financial environment

The slowdown in the trade of manufactured goods would be of particular concern for the health of globalisation if it were due to the decoupling of global value chains (GVCs). To evaluate the evolution and length of GVCs we can use a measure that has been proposed



by some authors,¹ namely the ratio between value added and gross production, which adds the value of all intermediate inputs to gross value added. When companies in a given country specialise and production becomes more diversified and is increasingly relocated offshore, the ratio between gross domestic value added and gross production decreases. This ratio is therefore inversely proportional to the length, or complexity, of GVCs.

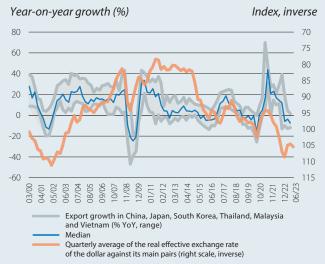
Indeed, in global aggregate terms, and as is the case with the trade in goods, the expansion of GVCs has already reached a ceiling, having remained virtually stable over the last 10 years. Nevertheless, it is also difficult for now to see a clear and widespread reversal. However, as we will set out in the next article, we are beginning to see concrete signs of fragmentation and relocation to more similar economies.

On the other hand, the evolution of the macro-financial environment does appear to be contributing more directly to the slowdown in the trade of manufacturing goods. According to several authors, the development of GVCs facilitated production methods – such as the famous «just in time» method – which demanded very high current investment and financing. Relocating a production chain offshore involves a higher level of working capital for any company (i.e. inventories in transit at any given time between the different stages of the process) and, therefore, a higher financing cost, and this increases with each new phase of offshoring. Therefore, the development of GVCs was heavily dependant on global financial conditions and, therefore, on the strength of the US dollar (USD).

Thus, even if a strong dollar could make US imports cheaper, it would also hinder the financing of complex production and exporting processes in the rest of the world, weighing down global trade. In fact, since the early 2000s, the strength of the USD and the buoyancy of the global trade in goods have shown a close correlation.

This correlation is also observed with exports from the major Asian economies, so the recent appreciation of the dollar against their currencies, resulting from higher interest rate expectations in the US given the resilience of the country's economy, could pose an impediment for international trade in the remainder of the year.

Export growth of the major Asian economies and evolution of the dollar



Source: CaixaBank Research, based on data from Bloomberg.

Trade globalisation has been showing signs of slowing down for 15 years now, although this is not the case across all countries. In addition, for now and in aggregate terms, it does not seem to be due to a shortening of GVCs. One possible explanation for this trend, raised by some of the studies cited, is that the widespread offshoring of manufacturing to Asia or to countries of the former Soviet bloc, driven by the arbitration offered by skilled and cheap labour, appears to have been exhausted. This could be due to the economic development of these countries as well as because of the process itself reaching maturity, causing firms to reassess the convenience and profitability of offshoring based on their decades of accumulated experience and depending on the needs of the various parts of the production process. On the other hand, financial conditions, which were able to support and encourage the process at the beginning of the century, have not been so favourable in recent years, and even less so after the latest cycle of interest rate hikes since 2022.

David del Val Gómez

^{1.} See Richard Baldwin (2022). «Globotics and Macroeconomics: Globalisation and Automation of the Service Sector». ECB. Forum on Central Banking 2022.

^{2.} See V. Bruno and H.S. Shin (2021). «Dollar and Exports». CEPR Discussion Papers 16311.

^{3.} See S. Kim and H.S. Shin (2023). «Theory of supply chains: a working capital approach». BIS Working Papers 1070, Bank for International Settlements.



Quo vadis, globalisation? (part II): the fragmentation of the global economy

Trade globalisation has shown great resilience following the COVID crisis and through to 2022, within the context of an underlying long-term slowdown. As we discussed in the previous Focus, this slowdown can be explained as the logical maturation of a long process involving the opening up of markets, as well as being affected by a tightening of financial conditions. Both of these trends would dismiss the thesis that we could see deglobalisation occur at the root level. In this second Focus, we analyse the evidence from recent months which, although still partial and indicative, is nonetheless relevant as it affects the main economies. Specifically, this evidence points to a growing fragmentation of globalisation, which could have wide-ranging consequences.

The successful decoupling of the US from China

Despite not making as many headlines as in the past, the US-China trade war persists, as evidenced by the high tariffs that both economies continue to impose on their counterpart. In addition, all the indicators suggest that the US' decoupling-from-China policy is achieving its goals, reducing the trade deficit with China in terms of GDP while reducing the Asian country's market share in US imports in favour of the US' main trading partners, particularly Mexico.

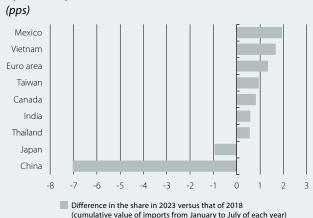
Moreover, there does not appear to be a diversion of trade flows, as there are no major signs of Chinese exports seeking alternative routes or of Chinese firms relocating in order to circumvent the tariffs. Whereas the value of Chinese products being imported by the likes of India or Vietnam has increased by more than these countries' exports to the US, this is not the case for Mexico, Canada, Taiwan or the euro area. In terms of FDI, Chinese investment volumes in these economies have also not yet reached the levels of those trading partners with whom they have more in common.

On the other hand, not only does it appear that the US is switching suppliers but, as several recent studies point out, the country is also managing to relocate part of its production processes previously located in China to more like-minded partners, such as Mexico or Vietnam, or even to the US itself.²

1. See C.P. Bown and M. Kolb (2023). <u>«Trump's Trade War Timeline: An up-to-date guide. Peterson Institute for International Economics</u>».

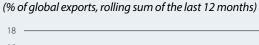
2. See L. Alfaro and D. Chor (2023). <u>«Global Supply Chains: The Looming «Great Reallocation»</u>. National Bureau of Economic Research, n° w31661.

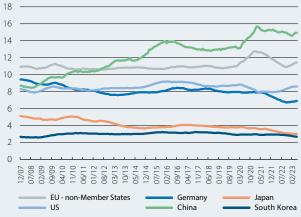
Change in the share of US imports, by country



Source: CaixaBank Research, based on data from S&P Global, via Refinitiv.

Share of global exports, by country





Source: CaixaBank Research, based on data from the IMF and from S&P Global, via Refinitiv.

A process with little impact on both economies

Given that both of the US' two main political parties share the goal of decoupling with China, we can expect this process to continue and for the trend of fragmentation in the global economy to increase. Moreover, to date this decoupling process is not damaging US economic growth, nor that of its exporters, which have not lost their share in global trade, unlike the Germans or the Japanese.

On the other hand, China has lost global market share since the rebound it experienced in the first year of the pandemic, although it still exceeds the level it held in 2018 and we will have to wait a little while to see the impact of its post-COVID reopening process. The country



has avoided a greater impact of the trade war with the US, replacing the US market with the European one. In fact, relative to GDP, as the US was limiting its exposure to China, the EU's exposure only increased, at least up until the end of last year. While it is true that the EU has suffered a slower post-pandemic recovery in GDP than the US, which could be distorting this trend, the fact is that China is becoming increasingly able to export high value-added products to the EU (e.g. electric vehicles).

Another derivative of the US-China decoupling process which is threatening the health of further globalisation is the aggressive industrial and subsidies policies of both countries, which could alter the conditions for competition with industry in the rest of the world.

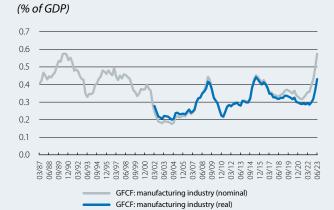
In the case of the US, the major public stimulus packages aimed at boosting green and digital industries³ are triggering a sharp increase in investment in manufacturing which, even relative to GDP, is as high as anything seen in the past two decades. This uptick in investment is being directed towards the construction of new factories in the electronics industry, which ought to favour sustained productivity growth over the coming years.

In the case of China, the country's industrial policy is focusing on boosting the production of electric vehicles, which is allowing it to gain significant market share in Europe. This is already causing trade tensions, and in fact the European Commission has just announced that it will open an investigation into public subsidies which electric vehicle manufacturers in China may be receiving and which could be distorting the EU market. If so, the EU could impose higher tariffs (currently at 10%) on Chinese vehicles, demonstrating the risks which the uncoordinated use of public subsidies for industrial development pose to globalisation (among other problems).

While the aggregate data for global trade are not yet showing signs of any radical deglobalisation, but rather a gradual slowdown due to the process of the opening up of markets running out of steam, there is nonetheless increasing evidence of a growing fragmentation of the world economy in recent quarters. Although this fragmentation could end up having beneficial effects for some of the world's regions that have been less involved in globalisation to date, such as Latin America, thus avoiding a significant drop in the aggregate trade data, its effect is yet to be fully felt. What seems clear is that globalisation is mutating. Trade in manufacturing goods will not continue to expand in the regions where it did

3. Channelled in three large packages: the Inflation Reduction Act, the Chips and Science Act and the Infrastructure Investment and Jobs Act.

Effects of industrial policy: manufacturing investment in the US



Source: CaixaBank Research, based on data from S&P Global, via Refinitiv.

Production and exports of electric vehicles in China

(Millions of vehicles)



Source: CaixaBank Research, based on data from S&P Global, via Refinitiv.

over the past 30 years, although the trade in services could still expand significantly. At least, it could do so if the global market remains relatively unified and connected – an assumption which an increasing number of indicators are calling into question.

David del Val Gómez



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

UNITED STATES

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Activity									
Real GDP	5.8	1.9	1.7	0.7	1.7	2.4	_	_	_
Retail sales (excluding cars and petrol)	15.8	9.4	9.3	7.5	5.9	3.3	4.7	3.6	
Consumer confidence (value)	112.7	104.5	102.2	104.2	105.5	106.1	114.0	108.7	103.0
Industrial production	4.4	3.4	3.5	1.8	1.3	1.0	0.0	0.2	
Manufacturing activity index (ISM) (value)	60.7	53.5	52.2	49.1	48.3	47.8	46.4	47.6	49.0
Housing starts (thousands)	1,606	1,551	1,446	1,405	1,375	1,378	1,447	1,283	
Case-Shiller home price index (value)	267	307	310	304	303	302	313.7		
Unemployment rate (% lab. force)	5.4	3.6	3.6	3.6	3.5	3.5	3.5	3.8	-3.1
Employment-population ratio (% pop. > 16 years)	58.4	60.0	60.0	60.0	60.1	60.2	60.4	60.4	
Trade balance ¹ (% GDP)	-3.6	-3.7	-3.8	-3.7	-3.6	-3.5	-3.1		
Prices									
Headline inflation	4.7	8.0	8.3	7.1	6.7	6.3	3.2	3.7	
Core inflation	3.6	6.2	6.3	6.0	5.7	5.6	4.7	4.3	

JAPAN

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Activity									
Real GDP	2.2	1.0	1.5	0.4	2.0	1.6	_	_	_
Consumer confidence (value)	36.3	32.2	31.0	30.4	30.7	31.2	37.1	36.2	35.2
Industrial production	5.8	0.0	3.7	0.7	-1.8	-1.8	-2.4	-3.7	
Business activity index (Tankan) (value)	13.8	9.5	8.0	7.0	1.0	5.0	_	_	_
Unemployment rate (% lab. force)	2.8	2.6	2.6	2.5	2.5	2.5	2.7	2.7	
Trade balance 1 (% GDP)	-0.3	-3.7	-3.0	-3.8	-4.0	-4.0	-3.0	-2.7	
Prices									
Headline inflation	-0.2	2.5	2.9	3.9	4.1	3.9	3.3	3.1	
Core inflation	-0.5	1.1	1.5	2.8	3.0	3.2	4.3	4.3	

CHINA

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Activity									
Real GDP	8.4	3.0	3.9	2.9	4.5	6.3	-	-	-
Retail sales	12.4	-0.8	3.5	-2.7	5.8		2.5	4.6	
Industrial production	9.3	3.4	4.8	2.8	3.2	4.5	3.7	4.5	
PMI manufacturing (value)	50.5	49.1	49.5	48.1	51.5	49.0	49.3	49.7	50.2
Foreign sector									
Trade balance 1,2	681	896	913	896	943	940	916.6	903.6	
Exports	30.0	7.1	10.0	-6.8	0.1	-5.4	-15.4	-9.5	
Imports	30.0	0.8	0.1	-6.7	-7.0	-6.7	-12.3	-7.3	
Prices									
Headline inflation	0.9	2.0	2.7	1.8	1.3	0.1	-0.3	0.1	
Official interest rate ³	3.8	3.7	3.7	3.7	3.7	3.6	3.6	3.5	
Renminbi per dollar	6.5	6.7	6.9	7.1	6.8	7.0	7.2	7.3	7.3

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

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



EURO AREA

Activity and employment indicators

Values, unless otherwise specified

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Retail sales (year-on-year change)	5.4	1.0	-0.5	-2.5	-2.4	-2.0	-1.0		
Industrial production (year-on-year change)	9.9	2.2	3.4	2.0	0.3	-1.1	-2.2		
Consumer confidence	-7.5	-21.9	-26.9	-26.9	-26.9	-26.9	-15.1	-16.0	-17.8
Economic sentiment	110.7	101.9	96.5	96.5	96.5	96.5	94.6	93.6	93.3
Manufacturing PMI	60.2	52.1	49.3	47.1	48.2	44.7	42.7	43.5	43.4
Services PMI	53.6	52.1	49.9	49.0	52.8	54.4	50.9	47.9	48.7
Labour market									
Employment (people) (year-on-year change)	1.5		1.9	1.6	1.6	1.3	_	_	_
Unemployment rate (% labour force)	7.7	6.7	6.7	6.7	6.6	6.5	6.5	6.4	
Germany (% labour force)	3.6	3.1	3.1	3.0	3.0	3.0	3.0	3.0	
France (% labour force)	7.9	7.3	7.2	7.2	7.1	7.3	7.4	7.3	
Italy (% labour force)	9.5	8.1	8.0	7.9	7.9	7.6	7.5	7.3	
Real GDP (year-on-year change)	5.8	3.4	2.3	1.7	1.1	0.5	_	_	_
Germany (year-on-year change)	3.3	1.9	1.2	0.8	-0.3	-0.1	_	_	_
France (year-on-year change)	6.8	2.6	1.2	0.7	0.8	1.0	_	-	_
Italy (year-on-year change)	7.3	3.9	2.5	1.5	2.0	0.4	_	_	_

Prices

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
General	2.6	8.4	9.3	10.0	8.0	6.2	5.3	5.2	4.3
Core	1.5	3.9	4.4	5.1	5.5	5.5	5.5	5.3	4.5

Foreign sector

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Current balance	3.1	-0.9	-0.4	-0.9	-0.6	0.0	0.5		
Germany	7.7	4.2	4.7	4.2	4.4	5.1	7.1		
France	0.4	-2.0	-1.2	-2.0	-1.9	-1.8	-2.3		
Italy	3.1	-1.2	-1.1	-1.2	-1.0	-0.4	-0.2		
Nominal effective exchange rate (value)	94.3	90.9	89.0	91.8	93.1	94.3	95.9	95.9	95.1

Credit and deposits of non-financial sectors

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Private sector financing									
Credit to non-financial firms ²	3.5	6.7	8.4	7.9	5.7	3.9	2.2	0.6	
Credit to households 2,3	3.8	4.4	4.5	4.0	3.2	2.1	1.3	1.0	
Interest rate on loans to non-financial firms 4 (%)	1.2	1.8	1.8	2.9	3.8	4.5	4.9	5.0	
Interest rate on loans to households for house purchases 5 (%)	1.3	2.0	2.1	2.9	3.7	4.3	4.6	4.7	
Deposits									
On demand deposits	12.8	6.3	6.3	1.4	-3.9	-8.1	-10.5	-11.9	
Other short-term deposits	-0.8	4.5	5.3	12.0	17.6	22.5	23.9	23.7	
Marketable instruments	11.6	3.7	4.1	7.5	19.3	21.9	21.1	20.4	
Interest rate on deposits up to 1 year from households (%)	0.2	0.5	0.4	1.1	1.9	2.5	2.8	3.0	

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.

 $\textbf{\textit{Source:}}\ \textit{CaixaBank Research, based on data from the Eurostat, European Central Bank, European Commission, national statistics institutes and Markit.}$



The growth of the Spanish economy moderates

The recovery following the pandemic was more intense than previously estimated in view of the National Statistics Institute's revision of the GDP series since 2021. According to the new growth path, GDP grew by 6.4% in 2021, 0.9 pps more than originally estimated, and by 5.8% in 2022, 0.3 pps more than before. Based on this new data series, GDP reached the pre-pandemic level of Q4 2019 in Q3 2022, rather than in Q2 2023. Also, the National Statistics Institute has revised upwards the quarter-on-quarter GDP growth for Q1 and Q2 2023 by 0.1 pps, to 0.6% and 0.5%, respectively. Thus, GDP in Q2 2023 is 2.0% above the level of Q4 2019, rather than the 0.4% previously estimated. These revisions in 2022 and in the first half of 2023 lead us to raise our growth forecast for this year as a whole by 10 pps to 2.4%.

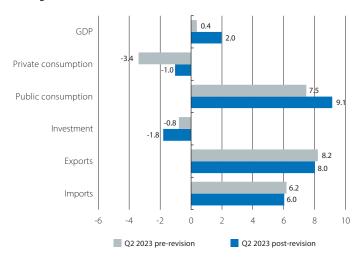
The latest indicators point to a moderation of growth in Q3.

As we emerged from the summer, we found an economy in the midst of a slowdown compared to the significant growth rates recorded in the first half of 2023. Job creation in terms of Social Security affiliates, while still positive, has gone from growing at a rate of over 1% quarter-on-quarter in Q2 2023 to more moderate rates, at 0.2% quarter-on-quarter in Q3 2023. In terms of consumption, average retail sales in July and August grew by 0.8% compared to the average for Q2 2023 (+1.9% quarter-on-quarter in Q2), suggesting that consumption continued to grow in Q3, albeit at a more modest pace than in the previous quarter. In addition, the early indicators based on surveys, such as the Purchasing Managers' Indices (PMIs), reveal that the weakness shown by the manufacturing sector in recent quarters has persisted. Specifically, the manufacturing PMI scored 47.7 points in September, placing it in contractionary territory (below the 50-point threshold) for the sixth consecutive month. This was due to a fall in production and new orders, while the services PMI rose slightly in September up to 50.5 points, placing it back in expansionary territory following the negative parenthesis of August (49.3 points).

Job creation slows in September. In September, the average number of registered workers increased by 18,294 people, falling short of last year's increase (+29,286) but exceeding the September monthly average (+14,300 on average in 2014-2019). Correcting for seasonality, employment rose by 12,921 workers, the weakest growth in the last three months. That said, the Spanish economy's capacity to continue to generate employment in an adverse context should not be overlooked. In terms of registered unemployment, it increased in September for a second consecutive month, this time by 19,768 people and placing the total unemployment figure at 2.722 million people. This increase is higher than in September last year (+17,679) but lower than the average for the period 2014-2019 (+21,801).

Spain: GDP and its components

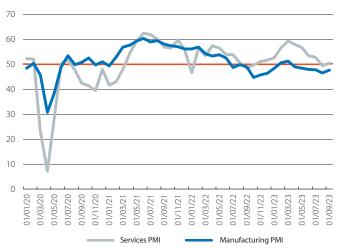
Change: Q2 2023 versus Q4 2019 (%)



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

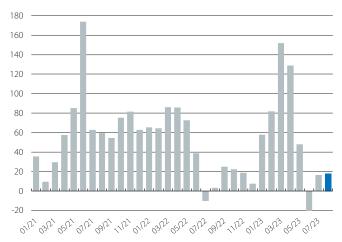
Spain: PMI

Level



Source: CaixaBank Research, based on data from IHS Markit.

Spain: registered workers affiliated with Social Security Month-on-month change (thousands) *



Note: * Seasonally-adjusted data

Source: CaixaBank Research, based on data from the Ministry of Inclusion, Social Security and Migration (MISSM).



Headline inflation in Spain picks up in September, in line with expectations, due to a base effect in the energy component, but core inflation continues to moderate.

The provisional headline inflation index for September stood at 3.5% (0.9 pps higher than in August). On the other hand, core inflation, which excludes energy and fresh food, stood at 5.8%, 0.3 pps below the figure for August. The increase in the headline index is due to electricity prices and, to a lesser extent, fuel. Both components recorded sharp declines in September 2022.

The price of housing grew steadily in Q2. In particular, prices based on valuations continued to show positive growth in Q2 2023, although the pace of progress was more modest than in the previous quarter (0.3% quarter-on-quarter compared to 2.2% in Q1). In year-on-year terms, growth remained practically unchanged (3.0% compared to 3.1% in Q1). The price of housing is showing remarkable resistance in the short term despite the sharp rise in interest rates, no doubt due to the scarce supply of housing in the market.

The household savings rate increased thanks to the significant growth of gross disposable income in Q2.

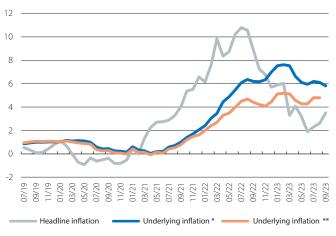
Specifically, the household savings rate stood at 20.1% of gross disposable income in Q2 (static figure, not corrected for seasonality). This is a higher level than in Q2 2022 (14.8%) and also compared to pre-pandemic levels (17.1% on average in the Q2 periods of 2015-2019). This rebound corresponds to gross disposable income growing much faster in Q2 (12.2% year-on-year) than household spending (5.2%). In the trailing last four quarters on a cumulative basis, the savings rate climbed to 10.2% from 8.5% in the previous quarter.

Budget execution data up to July place the Spanish budget deficit at 2.2% of GDP. The consolidated general government deficit, excluding local government corporations, was similar to July 2022 and July 2019 (both 2.0%). Consolidated public spending, on the other hand, rose by an alarming 7.7% year-on-year in the cumulative period to July, exceeding the increase in government income (6.7%). Of particular note is the slowdown in tax revenues (+4.6% year-on-year in the cumulative period to July, compared to +6.1% to June) due to the fall in the collection of indirect taxes in July (–6.6% year-on-year).

The tourism sector shines brightly. The tourism sector continues to perform well, with a cumulative surplus in the balance of tourism services between January and August of 37.5 billion euros, compared to 27.7 billion in January-August 2022. The tourism sector enjoyed a strong month of August, with the arrival of 10.08 million foreign tourists during the month, who spent 13.5 billion euros. These figures are 0.45% below the level recorded in the same month of 2019 in the case of arrivals (+2.6% in July) and 15.0% above in the case of spending (+16% in July).

Spain: CPI

Year-on-year change (%)



Notes: * Underlying inflation excludes unprocessed food and energy.

** Underlying inflation excludes food and energy.

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

Spain: gross disposable income

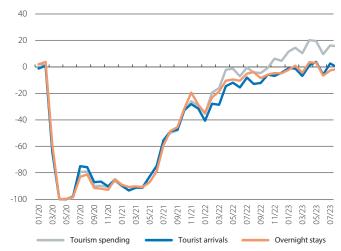
Year-on-year change, static figure (%)



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

Spain: foreign tourism

Change versus the same month of 2019 (%)



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



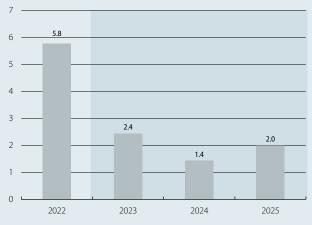
New macroeconomic outlook: Spain's economic growth moderates

In the last year and a half, our economy has been besieged by a three-headed hydra. The hydra is the outbreak of the war between Russia and Ukraine, and the three heads are the different manifestations of this shock: an energy crisis, a strong inflationary episode and the consequent tightening of monetary policy. The first, besides the recent rally in oil prices, is now behind us. The second is what we are still going through. And the third is now beginning to rear its head. Over the next 12 months we will see whether the dose of monetary policy that has been administered will be sufficient to tame inflation, as well as what damage it will have done to economic activity. In this article we present our outlook.

Brief overview of recent dynamics

As we emerged from the summer, we found an economy in the midst of a slowdown compared to the significant growth rates recorded in the first half of 2023. Job creation, while still positive, has gone from growing at quarter-on-quarter rates of around 1% in the first half of the year to more moderate rates of 0.1% in Q3 to date (adjusting, of course, for seasonal effects). In addition, the early indicators based on surveys, such as the Purchasing Managers' Indices (PMIs), reveal that in addition to the weakness shown by the manufacturing sector in recent quarters there is now a loss of momentum in the services sector. In August, both the manufacturing and services PMIs stood below the growth threshold. While we should not draw hasty conclusions from such readings, they are a clear indication of a slowdown. Based on these indicators, our estimates suggest that GDP could grow by around 0.2% quarter-on-quarter in Q3 2023, compared to rates of 0.5%-0.6% observed in the first half of the year.

Spain: GDP growth forecast Annual change (%)



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

The international context is not helping matters either. Our main trading partners in the euro area are also showing signs of slowing down, and since mid-July a combination of demand and supply factors have been driving the oil price back up again. Whereas in June the average price of a barrel of Brent stood at 75 dollars, in the first two weeks of September it recorded an average price of 91 dollars – an increase of just over 20%. This increase in the oil price has been reflected in inflation, which since June has been back on the rise, partly due to the strong momentum of the fuel component.

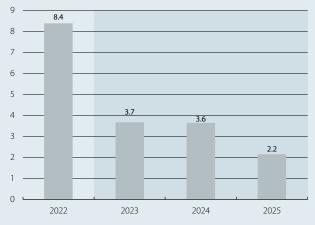
Changes in the underlying assumptions behind the forecast scenario: energy and interest rates

Against a backdrop of slowing economic activity, assumptions about the evolution of oil prices and interest rates which underlie the forecast scenarios have also tightened.

The recent dynamics in the oil market have led us to revise our projection for the Brent barrel price higher. Whereas in our July forecast we expected to see an oil price of around 80 dollars a barrel at the end of 2023 and an average price of 78 dollars in 2024, in our current forecast scenario we expect the current year to close with the oil price at 85 dollars and the 2024 average to stand at 81 dollars. However, with the Brent oil price recently hovering around the 95-dollar mark, the risks surrounding the forecast are skewed to the upside.

In the case of the euro area's core inflation (which excludes energy and food), this is the key variable that the ECB is monitoring and it is still too high (5.3%). Moreover, the rate at which it is descending is insufficient, in the opinion of the top European

Spain: inflation forecast Annual change (%)



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



authority. Thus, at its last meeting in September, the ECB raised the depo rate to 4.0% (and the refi rate to 4.5%), noting that, although it probably would not continue to raise rates, it would maintain them at their current levels for an extended period of time in order to ensure inflation converges towards its medium-term target of 2%. Market expectations are therefore that the ECB will not begin to lower rates until the second half of 2024 and that, when it eventually does, it will do so gradually. Our own forecast is that the central bank's reference rates will remain at their current levels until the end of next summer. Anticipating this turning point, it is logical to expect market rates such as the 12-month Euribor to fall below their current levels by early 2024, after which they will follow a downward trend.

Future outlook

Against this backdrop, we expect that the Spanish economy will experience a period of modest growth during the next two quarters, with GDP growth rates of around 0.3% quarter-on-quarter, mainly affected by the impact of the cycle of interest rate hikes which began in July 2022 and by the marked weakness of our main export markets. Although the tourism sector will continue to act as a driving force for growth, its contribution will no longer be as high as in recent quarters, since activity levels equal to or higher than those of 2019 have already been reached. As such, domestic demand is expected to provide the biggest contribution to growth in these coming quarters.

In particularly, although it is also affected by the higher interest rates, domestic demand will enjoy certain supporting factors. Firstly, with an assumed growth rate in employment of around 1.5% in 2024 and with wages growing in the 3%-3.5% range, in line with the guidelines recommended by the agreement between unions and business associations, we expect household gross disposable income to grow above inflation (forecast average growth of 3.6% in the year), despite the gradual increase in net interest payments.² It should be recalled that, in the midst of a cost-of-living crisis, the fact that the economy continues to generate jobs is in itself a major source of support for economic activity, insofar as it gives households a degree of certainty. Secondly, the European NGEU funds are expected to continue to support growth and, in particular, investment. Specifically, we expect these funds could contribute around 0.4 pps to GDP growth in 2024, assuming a slight acceleration in the pace of execution.

Inflation dynamics, meanwhile, should follow a pattern of moderation. To understand this moderation process, it is useful to divide the inflationary episode of the last two years into three phases. The first phase saw the materialisation of the direct impact of the sharp rise in energy and food prices. This shock, although not completely behind us - particularly on the food side and, more recently, with the rise in oil prices – has already run much of its course. In the second phase, which was more predominant in the closing stages of 2022 and in 2023, we saw the materialisation of the contagion effect of the higher costs of energy inputs and food on other products. While we believe these indirect effects have not yet run their course entirely, there cannot be much life left in them. Thirdly and finally are the dreaded second-round effects, which could lead to even more persistent inflation. These effects capture the impact of a possible decoupling of medium-term inflation expectations and the vicious circle of price increases that could be triggered by sharp rises in wages or corporate margins. Since the data available to date do not show any signs of concern in these regards, our forecast scenario assumes a limited impact from second-round effects. Thus, to the extent that the direct impact has already largely faded, that the contagion effect is gradually exhausted in the remainder of 2023 and in 2024 and that few second-round effects are expected, we should see a moderation in inflation rates during the course of 2024.

That said, our forecast is that average annual inflation in 2024 will be similar to that of 2023 (3.7% in 2023 and 3.6% in 2024). This is due to the impact of the withdrawal – expected in early 2024 – of the fiscal measures that were implemented to tackle the rise in energy and food prices (the VAT cut on electricity and food and the public transport subsidy). We estimate that the withdrawal of these measures will add around 1 pp to headline inflation during 2024. However, if we look at the forecast for core inflation (i.e. that which excludes energy and unprocessed foods), the forecast is one of gradual moderation: from 6.1% on average in 2023 to 3.1% in 2024.

Overall, we expect the economy, after growing 2.4% in 2023, to moderate its growth rate to 1.4% in 2024, albeit with a gently accelerating profile throughout the year. This forecast for 2024 is 0.3 pps lower than that contemplated in our previous scenario, due to the impact of the change in the underlying assumptions. Looking ahead to 2025, thanks to the anticipated gradual decline in interest rates and the convergence of inflation towards its 2% target, the Spanish economy ought to follow a growth path that is more in line with its potential growth rate, placing the growth forecast at 2%.

Oriol Carreras

^{1.} We expect euro area GDP to grow by just 0.7% in 2024.

^{2.} We expect gross disposable income, including the impact of higher interest payments, to grow by 5.3% in 2024.



Productivity in Spain: a lot of scope for improvement

Productivity is often defined as a «magic ingredient», the main source of economic prosperity in the medium term. However, productivity is not an ingredient, but a result, and its nature and fundamentals are topics that are rarely discussed. Let us look at what productivity really is, how it can be measured and where Spain lies in the international context. This Focus opens a collection of articles of a structural nature on the fundamentals of the Spanish economy, which will continue in the monthly reports of the coming months.

Simply put, productivity is the level of output generated with a certain level of inputs. An optimal combination or management of resources (inputs) results in more efficiency, leads to greater productivity and ultimately allows for the creation of greater wealth.

Labour is one of the most important factors of production and the ratio of the amount of the labour factor that is used to generate a unit of GDP is the most widely used means of measuring productivity. The indicator developed by Eurostat, which divides an economy's GDP by the number of hours worked (the so-called apparent labour productivity), expresses the value that is created per unit of work used (hour of work), and it is more precise than other measures which compare output with the number of workers.

The problem with this measure is that it can be contaminated by various elements. For instance, if an economy gives more capital to its workers, they will produce more and the apparent labour productivity will rise. But this increase in productivity will be due to the accumulation of capital, rather than these workers being more productive with the same amount of capital and with other conditions being equal. To avoid this confusion, the concept of total factor productivity (TFP) appears. This variable captures the increase in production that is not due to an increase in the accumulation of other factors of production, such as capital, labour, etc. It is a cleaner measure of productivity, but one that is more difficult to measure, since it is not directly observable.

In recent years, the growth of the Spanish economy has been determined by a high contribution from the labour factor, given the abundance of labour that has traditionally characterised our economy, while the contribution from productivity has been more moderate. Specifically, the average growth of the Spanish economy in 2014-2019 was 2.4% in real terms, which is broken down into labour factor growth of 1.6%, 0.5% growth for the capital factor and just 0.3% in the case of TFP (see first chart).

Spain: breakdown of GDP growth, contributions from the factors of production

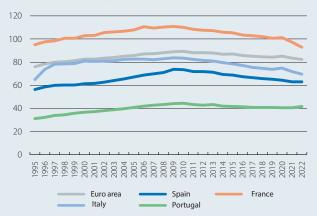
(pps)



Note: TFP refers to total factor productivity. **Source:** CaixaBank Research, based on data from EUKLEMS.

Productivity per hour worked relative to Germany

Index (100 = Germany)



Source: CaixaBank Research, based on data from Eurostat.

If we focus on Spain's apparent labour productivity, a metric for which more recent data is available than for TFP, its average growth between 2014 and 2022 in real terms was 0.3%, below the 0.9% for the EU as a whole. Delving into an international comparison, we see (second chart) that there is a significant gap between Spain's productivity level and that of the euro area and the main European economies. In 2022, nominal GDP per hour worked in Spain (already taking into account the September 2023 revision of Spain's historical GDP series) was 76% of the value recorded in the euro area, and just 63% of that of Germany. More worrisome than the gap itself is the fact that this gap has barely narrowed in the last two decades (in 2000, GDP per hour worked in Spain was 74% of the value recorded in the euro area and 61% of that of Germany).

What explains these differences? One of the keys to productivity lies in the quality of an economy's human capital. Workers with a higher educational level and who are technically more qualified are more productive. According to a study by the Bank of Spain (see third chart), there is a significant deficit in the level of education and training of Spanish workers and entrepreneurs compared to the euro area average.¹

On the other hand, another key aspect for productivity is the size of an economy's companies. In Spain, the productivity level of large corporations is more than double that of micro-enterprises. However, the relative weight of medium- or large-sized companies in the Spanish economy is lower than in other countries. In Spain, around 35% of employment is in companies with over 50 employees, whereas this proportion stands at 66% in Germany. Spain needs to further boost the growth of its micro-enterprises and SMEs.

Several studies point out that large corporations have a greater propensity to invest in intangible assets and highlight this type of investment as a catalyst for increased productivity.² Intangibles which help to boost productivity include, for instance, management and organisational efficiency models, marketing, brand value, databases, specific training developed in-house and software. In highly developed economies that are close to the technological cutting edge, these aspects are even more determinant in productivity growth. Thus, when we talk about the future of productivity in Spain, it is essential to analyse the relative weight of investment in research and development in the economy. Specifically, the portion of GDP that is allocated to research and development (see fifth chart) in Spain is 1.3%, well below the 2.0% euro area average.

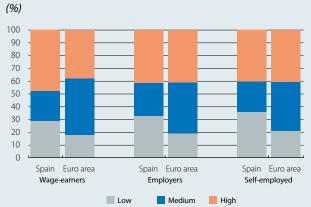
In short, achieving a substantial improvement in productivity in the Spanish economy will require us to focus, among other determining factors, on education, business size and innovation.

Javier Garcia-Arenas

1. See Á. Gavilán (2022). «El crecimiento de la productividad en la economía española: ¿síntoma o problema?». CEPYME conferences: El problema de la productividad en la empresa español.

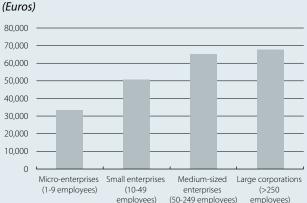
2. See C. Corrado, J. Haskel, C. Jona-Lasinio et al. (2018). «Intangible investment in the EU and US before and since the Great Recession and its contribution to productiv ity growth». Journal of Infrastructure Policy and Development.

Spain and the euro area: distribution by educational level of those in employment (2019)



Source: Bank of Spain, based on data from Eurostat

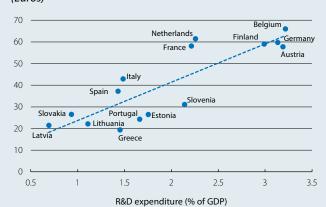
Spain: value added per worker according to company size



Note: Data for 2021.

Source: OECD Compendium of Productivity Indicators 2023.

Productivity per hour worked (Euros)



Note: Data for 2021.

Source: CaixaBank Research, based on data from the OECD and Eurostat.



The Spanish agrifood sector is making headway in a challenging context¹

In 2022, Spanish crop production recorded a sharp drop in volume (–13.6%), curtailing the upward trend of previous years. Although the decline was widespread across all European crops and countries, Spain registered a bigger drop than the EU as a whole (–4.6%). The Spanish agrifood sector not only had to cope with a sharp increase in production costs, which began in 2021 with the reopening of the economy after the pandemic and was accentuated with the war in Ukraine, but it has also been impacted by the prolonged drought which the Iberian peninsula continues to endure.

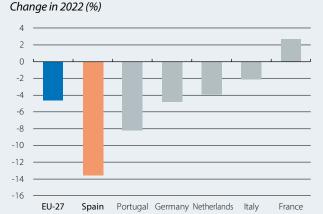
Estimates for the 2023 harvest are once again particularly weak for our country, in contrast to a more positive trend for the EU average. Winter grain production is expected to be the hardest hit, with some 9 million tons (Mt) in 2023 (compared to 14.4 Mt in 2022 and 19.3 Mt in 2021).² This represents a very significant fall in grain yields (over 30%), in contrast to the better performance in the case of the EU average.³ Olive oil production also fell significantly from 1,489,351 tons last season to 675,093 tons in 2022-2023, marking a 55% drop in output which drove up the price.⁴

Moderating production costs will help contain food price inflation

The outlook is somewhat more favourable in terms of production costs in the sector, thanks to the sharp decline in agricultural commodity and energy prices in international markets relative to last year's record levels.⁵ The World Bank's Agricultural Commodity Price Index fell by 31.5% between its peak in May 2022 and August 2023 (latest available data). Of particular note is the fact that, although Russia announced in July that it would not extend the Black Sea Grain Initiative, agricultural commodity prices in international markets have remained relatively stable since then. This is largely due to the slowdown in global economic activity, especially in China, the redirecting of the international trade in commodities from other producers, as well as a very positive outlook for global agricultural production next year.

- 1. For a more detailed analysis, see the 2023 Agrifood Sector Report.
- 2. See Ministry of Agriculture, Fisheries and Food. «Avance de Superficies y producciones de cultivos», May 2023.
- 3. See «Crop monitoring in Europe», JRC MARS Bulletin, vol. 31, nº 8, 21 August 2023.
- 4. See Ministry of Agriculture, Fisheries and Food. «Avance de la situación de mercado del sector del aceite de oliva, aceituna de mesa y aceite de orujo de oliva. Campaña 2022/2023», August 2023.
- 5. The recent rise in oil prices, if it ends up being more persistent than expected, could limit the reduction in energy costs.

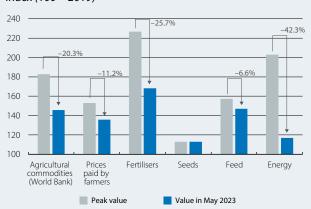
Spain and EU: crop production



Note: Change at constant prices.

Source: CaixaBank Research, based on data from the Ministry of Agriculture, Fisheries and Food

Spain: agricultural sector production costs *Index* (100 = 2019)



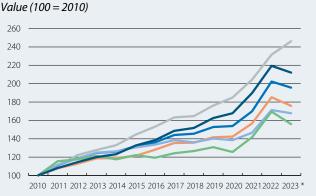
Source: CaixaBank Research, based on data from the Ministry of Agriculture, Fisheries and Food.

This global drop in prices is beginning to be reflected in the prices paid by farmers in Spain. The costs of agricultural inputs fell by 11.2% between August 2022 (when they peaked) and May 2023 (latest available data), especially energy (–42.3%) and fertilisers (–25.7%). Despite this decline, costs are still around 35% higher than the 2019 average.

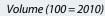
However, the fall in the price of livestock feed, which is the biggest single component in the primary sector's cost structure (54.4% of the total in 2022), is still very limited (–6.6% versus the peak of November 2022). Given that Spain imports around half of the grain destined for animal feed, the decline in international grain prices should help to contain the cost of feeding livestock in the coming months.

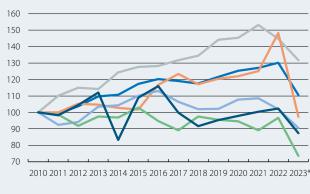


Spain: agrifood exports



EU-27





Note: * Un to lune

Source: CaixaBank Research, based on data from DataComex and Eurostat

The moderation of agricultural input costs should ease inflationary pressures on the food prices paid by end consumers. In August 2023, the food CPI rose 10.1% year-on-year: while still higher than normal, this marks a considerable moderation from the peak of 15.7% registered in February 2023. This, together with the gradual recovery of household purchasing power in recent quarters, ought to boost household demand for food.

The Spanish agrifood sector remains competitive, despite the challenging conditions

One current source of concern is the impact that higher costs could have on the agrifood sector's competitiveness. However, when we compare the evolution of Spanish agrifood exports with that of other European powers (France, Italy, Germany and the Netherlands) we see that Spain has performed relatively well.

Spanish agrifood exports in terms of value have continued to register strong growth over the last two years, supported by the high prices of most products in international markets. In terms of volume, in contrast, these exports have amassed setbacks of 5.5% in 2022 and 9.1% in 2023 (year-on-year to June), although these declines have been less pronounced than in the major European countries or in the EU as a whole (–15.1%).

Further proof of the strength of our agrifood sector is its high share of global trade and its relative good evolution over time. Based on data for 2021 (latest available from the WTO), Spain is seventh in the global ranking of exporters and fourth among European countries (behind the Netherlands, Germany and France, but ahead of Italy), accounting for 3.8% of global exports, which is a much higher share than we represent in the total trade of all goods (1.7%).

In addition, since 2010 we have improved our global market share in agrifood exports (+0.3 pps), which is a considerable feat when compared with other powers such as the US (which has seen its market share drop by 0.8 points in the same period), France (–1.2 points) or the Netherlands (–1.1 points). If we focus the analysis on the top 5 European powers, Spanish exports have grown as a portion of the total, going from 10.9% in 2010 to 16.1% in 2023 (with data up to June).

In short, Spain's agricultural output fell sharply in 2022 and estimates suggest that it has fallen once again in 2023, due to the sharp rise in costs and the effects of climate change, one of the major challenges facing the sector. Nevertheless, despite the fall in production, agrifood exports have evolved relatively well and the sector's competitiveness indicators do not seem to have suffered too much for the time being.

Judit Montoriol and Sergio Díaz



Activity and employment indicators

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Industry									
Industrial production index	8.8	2.8	4.7	0.8	1.4	-1.7	-1.8		
Indicator of confidence in industry (value)	0.6	-0.9	-5.0	-5.3	-4.4	-5.3	-9.6	-6.5	-8.8
Manufacturing PMI (value)	57.0	51.0	49.2	45.6	50.1	48.5	47.8	46.5	47.7
Construction									
Building permits (cumulative over 12 months)	4.7	15.4	8.8	2.6	-1.8	-			
House sales (cumulative over 12 months)	9.6	28.9	22.9	17.2	10.0	3.3			
House prices	3.7	7.4	7.6	5.5	3.5		_	_	_
Services									
Foreign tourists (cumulative over 12 months)	64.7	129.8	208.8	129.8	90.7	40.6	31.5	25.9	
Services PMI (value)	55.0	52.5	51.0	50.8	56.3	56.0	52.8	49.3	
Consumption									
Retail sales	5.1	0.9	0.2	1.9	6.7	6.1	7.3	7.2	
Car registrations	158.0	-3.0	3.1	2.6	45.5	9.9	10.7	7.8	
Consumer confidence index (value)	-12.9	-26.5	-32.9	-28.1	-22.7	-18.9	-11.6	-15.1	-20.2
Labour market									
Employment ¹	3.0	3.1	2.6	1.4	1.8	2.9	_	_	_
Unemployment rate (% labour force)	14.8	12.9	12.7	12.9	13.3	11.6	_	_	-
Registered as employed with Social Security ²	2.5	3.9	3.5	2.7	2.5	2.8	2.7	2.8	2.7
GDP	6.4	5.8	5.4	3.8	4.2	2.2	_	_	_

Prices

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
General	3.1	8.4	10.1	6.6	5.1	3.1	2.3	2.6	3.5
Core	0.8	5.1	6.2	6.5	7.6	6.2	6.2	6.1	5.8

Foreign sector

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	21.2	22.9	23.3	22.9	20.5	12.3	10.2		
Imports (year-on-year change, cumulative over 12 months)	24.8	33.4	38.1	33.4	24.0	10.7	7.1		
Current balance	11.5	7.3	6.1	7.3	21.5	28.8	31.0		
Goods and services	17.9	18.5	14.4	18.5	34.1	43.3	45.8		
Primary and secondary income	-6.4	-11.2	-8.3	-11.2	-12.6	-14.5	-14.8		
Net lending (+) / borrowing (–) capacity	22.4	19.2	18.0	19.2	35.1	42.7	44.8		

Credit and deposits in non-financial sectors³

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

	2021	2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	07/23	08/23	09/23
Deposits									
Household and company deposits	6.1	4.9	5.3	3.8	1.7	0.4	-0.5		
Sight and savings	10.3	7.9	8.2	5.0	0.3	-4.0	-6.6	-7.2	
Term and notice	-24.4	-19.7	-19.2	-7.3	7.7	40.1	63.4	69.9	
General government deposits	15.5	9.6	6.6	-3.2	7.4	6.8	12.3	6.9	
TOTAL	6.7	5.2	5.4	3.2	2.1	0.8	0.4		
Outstanding balance of credit									
Private sector	0.3	0.7	1.3	0.5	-0.9	-2.2	-3.0	-3.5	
Non-financial firms	1.1	0.9	2.4	0.9	-1.0	-2.7	-3.9	-5.0	
Households - housing	0.2	1.0	1.1	0.2	-1.2	-2.4	-3.3	-3.4	
Households - other purposes	-1.2	-0.6	-0.9	-0.1	-0.1	-0.4	0.1	0.2	
General government	15.3	0.2	-3.5	-1.1	-0.2	-3.3	-5.1	-4.5	
TOTAL	1.1	0.7	1.0	0.4	-0.9	-2.3	-3.2	-3.6	
NPL ratio (%) ⁴	4.3	3.5	3.8	3.7	3.5	3.5	3.5		

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, slowing down throughout 2023

The National Statistics Institute revised its GDP series upwards, raising growth for 2021 and 2022 to 6.2% and 6.9%, respectively. Although the economy showed significant strength in the first half of this year, with an average GDP growth of 0.8% quarter-on-quarter, the slowdown that is beginning to be reflected in the main economic activity indicators, as the rate hikes increasingly take their toll, leads us to cut our GDP growth forecast for 2023 as a whole by 20 basis points, to 2.4%.

The indicators for Q3 show that the economy continues to grow, albeit at a slower pace: car sales remain strong, but have fallen since the previous quarter, and sentiment indicators have weakened.

Although the labour market remains healthy, some indicators suggest a certain loss of buoyancy. The unemployment rate fell by 0.1 pps, to 6.2%, in August. Employment, meanwhile, rose by 0.1% monthly and 1.3% year-on-year, reaching almost 4.95 million, the highest level since the National Statistics Institute's monthly series began in 1998. However, other indicators for August show a less rosy trend: (i) registered unemployment increased for the second consecutive month (4.4% year-on-year), (ii) the number of people made redundant exceeded 3,600 and (iii) job offers decreased by 24.7% year-on-year in August, to 16,034.

Inflation recovers its declining trend in in September.

Headline inflation fell to 3.6% (previously 3.7%) and core inflation, to 4.1% (vs. 4.5%). We have revised slightly down our forecast for average inflation in 2023 (from 4.7% to 4.6%), taking into account the extension of the zero VAT measure on various food products until the end of this year. The main risk for the coming months will continue to be the pressure on the energy front, with the oil production cuts announced by Saudi Arabia and Russia.

The economy's lending capacity improved in Q2. In cumulative terms for the trailing 12 months to June, net lending stood at 1.6% of GDP. Of particular note was the 7-pp recovery of the non-financial private sector compared to the previous quarter: firms reduced their net borrowing to 1.3% of GDP, due to the improvement in the gross operating surplus, while households' net lending improved to 0.5% of GDP thanks to the greater level of savings generated. For 2023 as a whole, we expect the economy to register a net lending capacity, something not seen since 2019.

Home prices grew faster than expected in Q2 2023. The National Statistics Institute's Home Price Index shows that prices grew by a significant 3.1% quarter-on-quarter in Q2 2023, a rate not seen since a year earlier. For the first time, the average value of homes sold surpassed 200,000 euros, even in a context of a sharp fall in the number of sales (–3% quarter-on-quarter and –23% year-on-year). This dynamic introduces upside risks to our current average price growth forecast for this year (4%).

Portugal: employed population * (Millions of people)

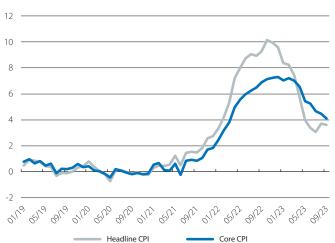


Note: * Seasonally-adjusted data.

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

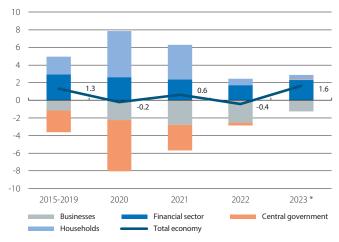
Portugal: CPI

Year-on-year change (%)



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

Portugal: lending capacity of the economy (% of GDP)



Note: * Data to June.

 $\textbf{\textit{Source:}} \ \textit{CaixaBank Research, based on data from the National Statistics Institute of Portugal.}$



Activity and employment indicators

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

	2021	2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	07/23	08/23	09/23
Coincident economic activity index	3.5	5.7	4.1	3.9	4.1		4.3	4.3	
Industry									
Industrial production index	4.5	0.4	-0.3	1.0	-5.0		-3.2		
Confidence indicator in industry (value)	-5.3	-3.4	-6.3	-5.0	-5.6	-9.4	-8.9	-9.6	-9.7
Construction									
Building permits - new housing (number of homes)	13.5	6.2	13.6	8.8	-3.0		-7.7		
House sales	20.5	1.3	-16.0	-20.8	-22.9		-	-	_
House prices (euro / m² - valuation)	8.6	13.8	13.6	12.9	9.1		7.6	8.8	
Services									
Foreign tourists (cumulative over 12 months)	51.5	158.9	158.9	117.2	52.6		38.5	30.5	
Confidence indicator in services (value)	0.1	15.1	9.9	11.1	13.4	5.8	8.2	6.3	2.8
Consumption									
Retail sales	4.9	4.8	0.0	1.7	3.0		3.8	-0.4	
Coincident indicator for private consumption	4.9	4.0	2.0	2.4	3.2		3.7	3.8	
Consumer confidence index (value)	-17.2	-29.7	-37.0	-35.1	-29.4	-22.8	-23.7	-21.9	-22.9
Labour market									
Employment	2.8	2.0	0.5	0.5	1.6		1.3	1.3	
Unemployment rate (% labour force)	6.6	6.0	6.5	7.2	6.1		6.3	6.2	
GDP	5.7	6.8	3.4	2.5	2.5		_	_	_

Prices

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

	2021	2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	07/23	08/23	09/23
General	1.3	7.8	9.9	8.0	4.4	3.5	3.1	3.7	3.6
Core	0.8	5.6	7.2	7.1	5.7	4.4	4.7	4.5	4.1

Foreign sector

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

	2021	2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	07/23	08/23	09/23
Trade of goods									
Exports (year-on-year change, cumulative over 12 months)	18.3	23.2	23.2	21.6	11.8		8.3		
Imports (year-on-year change, cumulative over 12 months)	22.0	31.7	31.7	24.5	12.6		9.3		
Current balance	-1.6	-2.8	-2.8	-1.2	1.5		1.9		
Goods and services	-5.5	-4.7	-4.7	-2.8	-0.3		-0.3		
Primary and secondary income	3.9	1.9	1.9	1.6	1.9		2.2		
Net lending (+) / borrowing (–) capacity	2.1	-0.5	-0.5	1.5	4.5		5.1		

Credit and deposits in non-financial sectors

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

	2021	2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	07/23	08/23	09/23
Deposits ¹									
Household and company deposits	9.3	6.4	6.4	0.5	-2.1		-2.3	-2.2	
Sight and savings	16.3	7.3	7.3	-3.1	-9.0		-9.6	-10.5	
Term and notice	1.2	5.2	5.2	5.4	7.5		8.0	9.5	
General government deposits	-4.1	12.4	12.4	11.1	1.4		6.5	2.4	
TOTAL	9.0	6.5	6.5	0.8	-2.0		-2.0	-2.0	
Outstanding balance of credit 1									
Private sector	2.9	1.8	1.8	0.0	-1.2		-1.4	-1.7	
Non-financial firms	2.2	-0.4	-0.4	-2.1	-3.5		-3.5	-3.6	
Households - housing	3.3	3.2	3.2	1.5	0.1		-0.4	-0.7	
Households - other purposes	3.0	2.9	2.9	0.0	0.4		0.4	-0.1	
General government	3.8	-2.7	-2.7	-2.0	0.6		-3.0	-2.1	
TOTAL	2.9	1.7	1.7	-0.1	-1.1		-1.5	-1.7	
NPL ratio (%) ²	3.7	3.0	3.0	3.1	3.1		_	_	_

Notes: 1. Residents in Portugal. The credit variables exclude securitisations. 2. Period-end figure.

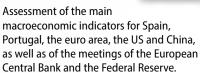
Source: CaixaBank Research, based on data from the National Statistics Institute of Portugal, Bank of Portugal and Refinitiv.



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

We recommend:

Brief Notes on Economic and Financial Developments





Consumption tracker

Monthly analysis of the evolution of consumption in Spain using big data techniques, based on expenditure with cards issued by CaixaBank, non-customer expenditure registered on CaixaBank POS terminals and cash withdrawals from CaixaBank ATMs.



A summary of the current economic situation and future outlook for Spain's Autonomous Community regions, based on a range of indicators and internal consumption data.

Agrifood Sector Report 2023

The Spanish agrifood sector is suffering the effects of the prolonged drought and the sharp rise in production costs. Even so, the sector has shown a moderate growth trend which we expect to continue in the coming quarters.



The tourism sector has been a source of good news for the Spanish economy so far in 2023, showing great resilience to the macroeconomic uncertainty of the main source markets amid the current inflationary environment.



The Spanish real estate market is slowing, albeit at a gentler rate than expected, and it continues to enjoy significant sources of support despite the fact that we continue to expect a decline in sales and a slowdown in housing price growth.



Follow us on:









The Monthly Report is a publication drawn up jointly by CaixaBank Research and BPI Research (UEEF) which contains information and opinions from sources we consider to be reliable. This document is provided for information purposes only. Therefore, CaixaBank and BPI shall take no responsibility for however it might be used. The opinions and estimates are CaixaBank's and BPI's and may be subject to change without prior notice. The Monthly Report may be reproduced in part, provided that the source is adequately acknowledged and a copy is sent to the editor.

- © CaixaBank, S.A., 2023
- © Banco BPI, 2023





