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MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK
JANUARY 2023

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BPI

MONTHLY REPORT - ECONOMIC AND FINANCIAL MARKET OUTLOOK

January 2023

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

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Date this issue was closed:
10 January 2023

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Perspectives in Perspective

It is not easy to find a word that sums up the outlook for the Portuguese economy. It certainly doesn't look as if we are about to enter a cycle of high GDP and employment growth. But nor does it look like the economy is about to enter a deep or prolonged recession. The shocks of recent years and the various elements pushing the economy in opposite directions make current circumstances particularly difficult to assess.

Overall, GDP and employment growth are likely to remain positive but modest. Specifically, for 2023-2024, we expect GDP growth of close to 3% cumulatively over the two years and employment growth of around 1%. Inflation, a key variable in the current context, is expected to continue to moderate and could average around 4% over the two years.

Among the elements that will continue to drive growth in activity and employment are the use of NGEU funds and the recovery of international tourism, especially long haul tourism. On the other hand, the rise in interest rates and inflation, which, although moderating, will remain high, will act in the opposite direction.

Uncertainty surrounding the outlook remains very high. The final weight of each of these elements could be decisive. For example, inflation may moderate more rapidly if pressure on energy prices eases sooner than expected. The fall in oil and gas prices in recent weeks could point in that direction. If sustained, this would be a significant relief for domestic consumption. Yet it also looks like the ECB will raise interest rates more than we expected ahead of its December meeting.

Comparing where this scenario would leave us in relation to what we expected last year, or before the pandemic, can help us situate ourselves better. In terms of growth, the picture is quite positive. Under the current scenario, GDP in 2024 will be just over 5 percentage points above the 2019 level, while a year ago, before the start of the war in Ukraine, we expected GDP in 2024 to be around 2.5 percentage points above the 2019 level. In our growth forecasts from early 2020, before the outbreak of the pandemic, we expected GDP to have grown by more than 5% in 2024 during these years.

The message from the employment data is similar. Under the current scenario, employment will be 2.5% above 2019 levels in 2024, which is a much more positive figure than BPI Research expected in early 2020, before the start of the pandemic and the war in Ukraine. Despite the adversities of recent years, employment performance has been and is expected to continue to be very resilient.

Finally, the biggest surprise has been the prices of goods and services consumed by families. Under the current scenario of gradual inflation moderation, the consumer price index in 2024 will be around 20% above 2019 levels. A year ago, the increase in this period was expected to be 7.5%, slightly higher than the value of 5.8% expected at the beginning of 2020.

Properly assessing the situation we find ourselves in requires looking back. Our evaluations can differ in accordance with the reference point we take or the variable we refer to. The evolution of inflation has surprised us negatively, but growth and employment are resisting the adversities in a very positive way.

Chronology

DECEMBER 2022

14 The Fed raises official interest rates by 50 bps.
15 The ECB raises official interest rates by 50 bps and announces that it will reduce reinvestments under the APP.

NOVEMBER 2022

2 The Fed raises official interest rates by 75 bps.
15 The world's population reaches 8 billion people.

OCTOBER 2022

5 OPEC agrees to cut crude oil production by 2 million barrels a day compared to August 2022 levels.
23 Xi Jinping receives a third term as general secretary of the Chinese Communist Party.
27 The ECB raises official interest rates by 75 bps.

SEPTEMBER 2022

8 Queen Elizabeth II dies after a 70-year reign.
16 The death of Mahsa Amini sparks a wave of mass protests in Iran.
27 Sabotage on the Nord Stream 1 and 2 gas pipelines.
30 The European Council approves measures to reduce energy demand.

AUGUST 2022

Summer 2022 Heat waves and drought in Europe and other countries around the world.
Summer 2022 Disruptions in the supply of Russian energy to Europe.
31 Mikhail Gorbachev, the last president of the USSR, dies.

JULY 2022

7 Boris Johnson resigns as prime minister of the United Kingdom.
8 Assassination of Shinzō Abe, former Japanese prime minister.
28 Mario Draghi resigns as prime minister of Italy.

Agenda

JANUARY 2023

3 Spain: registration with Social Security and registered unemployment (December).
6 Portugal: employment and unemployment (November).
Euro area: economic sentiment index (December).
9 Portugal: turnover in industry (November).
11 Spain: financial accounts (Q3).
23 Spain: loans, deposits and NPL ratio (November).
26 US: GDP (Q4 and 2022).
Spain: labour force survey (Q4).
27 Spain: GDP flash estimate (Q4).
30 Portugal: business and consumer confidence indicator (January).
Spain: CPI flash estimate (January).
Euro area: economic sentiment index (January).
31 Portugal: GDP flash estimate (Q4).
Portugal: CPI flash estimate (January).
Euro area: GDP (Q4).
31-1 Federal Open Market Committee meeting.

FEBRUARY 2023

2 Spain: registration with Social Security and registered unemployment (January).
8 Portugal: employment and unemployment (Q4).
9 Portugal: turnover in industry and services (December).
10 Portugal: labour costs (February).
14 Japan: GDP (Q4).
16 Spain: foreign trade (December).
24 Spain: loans, deposits and NPL ratio (December).
27 Euro area: economic sentiment index (February).
28 Spain: CPI flash estimate (February).
Spain: balance of payments (December).
Portugal: GDP breakdown (Q4).
Portugal: CPI flash estimate (February).

Looking for a smooth landing

The international economy entered the new year with symptoms that reflect the accumulation of negative shocks since the beginning of 2020. Despite signs of improvement in the evolution of macroeconomic imbalances, we are still waiting for an end of the cooling in activity taking place in the three main economic areas (USA, China and the eurozone). The positive news is the diminishing likelihood of an intense slowdown in growth ending in a global recession in the short term, as feared in late summer. Behind this stabilisation in the outlook is the strength of the labour market, the good performance of energy prices in the last quarter, the containment of negative sentiment after the deterioration that occurred with the start of the war in Ukraine, and the support of fiscal policy.

What may tip the balance of the scenarios towards a relatively controlled economic landing, leaving the dreaded stagflation behind, is the turnaround in inflation behaviour since its autumn peaks. While we are still a long way from the central bank's targets and underlying inflation has not yet started to decline, and we have entered the phase of maximum risk for potential second-round effects (or so the ECB seems to think), the accumulation of positive surprises in the latest price readings is a change from the situation just a few months ago, reflecting cooling demand, the gradual removal of bottlenecks, and the effectiveness of energy policy responses in Europe. If the gap between global supply and demand continues to narrow, the first part of the price correction process could be completed by the summer of this year, with inflation approaching 4% both in the US and in the eurozone. Whether this will be enough for central banks is another question, especially if there is no positive news about the evolution of those components with most impact on the overall trendline in the coming months. The doubts that the monetary authorities seem to have about the second phase of the disinflationary process (especially the ECB at its last meeting) are the other side of the coin when it comes to adjusting the economic outlook for 2023. Interest rates close to 4% in the eurozone and above 5% in the US could change the profile and intensity of growth, shifting the cooling of activity to the second half of the year. For the time being, judging by the behaviour of the markets in the first sessions of the year, this is not the scenario that investors are anticipating, given the valuations of the equity indices and the falls in interest rates that are occurring all along the yield curve.

All in all, the beginning of 2023 looks more hopeful than expected at the end of the summer, as suggested by the upward revisions to the growth forecasts that we have seen in recent weeks. Even so, we must be aware that the scenario remains extremely complex, taking into account the potential interaction of factors such as: the last steps of the global monetary tightening process, the end of the Covid zero policy in China, and the evolution of the war in Ukraine. This is precisely what a polycrisis like the current one consists of: the accumulation of a diverse range of disturbances with a joint destabilising potential greater than the sum of their parts. But for now, the ability of the world economy to absorb all these shocks has been quite remarkable.

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	0.81	0.25	0.25	4.50	4.75	3.50
3-month Libor	3.62	1.01	0.23	0.21	4.74	4.75	3.50
12-month Libor	3.86	1.48	0.34	0.52	5.47	4.50	3.50
2-year government bonds	3.70	1.04	0.13	0.62	4.30	4.00	3.00
10-year government bonds	4.70	2.57	0.93	1.45	3.62	3.50	3.00
Euro							
ECB depo	2.05	0.20	–0.50	–0.50	2.00	2.50	2.00
ECB refi	3.05	0.75	0.00	0.00	2.50	3.00	2.50
€STR	–	–0.54	–0.56	–0.58	1.58	2.47	2.17
1-month Euribor	3.18	0.50	–0.56	–0.60	1.72	2.53	2.23
3-month Euribor	3.24	0.65	–0.54	–0.58	2.06	2.59	2.29
6-month Euribor	3.29	0.78	–0.52	–0.55	2.56	2.66	2.40
12-month Euribor	3.40	0.96	–0.50	–0.50	3.02	2.73	2.51
Germany							
2-year government bonds	3.41	0.35	–0.73	–0.69	2.37	2.25	2.25
10-year government bonds	4.31	1.54	–0.57	–0.31	2.14	2.70	2.70
Spain							
3-year government bonds	3.62	1.69	–0.57	–0.45	2.66	2.77	2.80
5-year government bonds	3.91	2.19	–0.41	–0.25	2.73	3.04	3.05
10-year government bonds	4.42	3.17	0.05	0.42	3.19	3.80	3.70
Risk premium	11	164	62	73	105	110	100
Portugal							
3-year government bonds	3.68	3.33	–0.61	–0.64	2.45	3.02	3.08
5-year government bonds	3.96	3.94	–0.45	–0.35	2.53	3.28	3.30
10-year government bonds	4.49	4.68	0.02	0.34	3.10	3.85	3.75
Risk premium	19	314	60	65	97	115	105
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.26	1.22	1.13	1.06	1.05	1.10
EUR/GBP (pounds per euro)	0.66	0.84	0.90	0.85	0.87	0.86	0.85
OIL PRICE							
Brent ($/barrel)	42.3	80.1	50.2	74.8	81.5	94.0	83.0
Brent (euros/barrel)	36.4	62.5	41.3	66.2	76.9	89.5	75.5

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	–3.0	6.0	3.1	2.7	3.4
Developed countries	*2.6*	*1.4*	*–4.4*	*5.2*	*2.6*	*1.0*	*1.7*
United States	2.7	1.7	–2.8	5.9	1.6	1.1	1.7
Euro area	2.2	0.8	–6.3	5.3	3.2	0.2	1.6
Germany	1.6	1.2	–4.1	2.6	1.8	–0.2	1.2
France	2.2	1.0	–7.9	6.8	2.5	0.6	1.5
Italy	1.5	–0.3	–9.1	6.7	3.7	–0.2	1.1
Portugal	1.5	0.5	–8.3	5.5	6.7	0.5	2.0
Spain	3.7	0.6	–11.3	5.5	4.5	1.0	1.9
Japan	1.4	0.4	–4.6	1.7	1.5	1.7	1.2
United Kingdom	2.6	1.3	–11.0	7.5	4.3	–1.5	–0.4
Emerging and developing countries	*6.5*	*4.9*	*–1.9*	*6.6*	*3.5*	*3.9*	*4.5*
China	10.6	8.0	2.2	8.1	3.0	5.2	5.0
India	7.2	6.8	–6.7	9.0	7.3	6.0	6.7
Brazil	3.6	1.6	–3.9	4.6	1.8	0.9	1.8
Mexico	2.4	1.9	–8.1	4.8	1.9	1.4	2.5
Russia	7.2	1.3	–2.7	4.8	–8.1	–3.2	3.0
Turkey	5.5	4.5	1.9	11.4	3.1	3.0	3.2
Poland	4.2	3.6	–2.1	6.0	4.1	1.0	4.8
INFLATION							
Global	4.1	3.7	3.2	4.7	8.6	6.0	4.1
Developed countries	*2.1*	*1.6*	*0.7*	*3.1*	*7.2*	*4.0*	*2.0*
United States	2.8	1.8	1.2	4.7	8.0	3.4	2.0
Euro area	2.2	1.4	0.3	2.6	8.4	5.1	2.1
Germany	1.7	1.4	0.4	3.2	8.7	5.2	2.2
France	1.9	1.3	0.5	2.1	5.9	4.1	2.0
Italy	2.4	1.4	–0.1	1.9	8.7	4.8	2.0
Portugal	3.1	1.1	0.0	1.3	7.8	5.7	2.2
Spain	3.2	1.3	–0.3	3.1	8.4	4.5	2.3
Japan	–0.3	0.4	0.0	–0.2	2.2	1.9	1.0
United Kingdom	1.6	2.3	0.9	2.6	8.9	5.5	2.3
Emerging countries	*6.7*	*5.6*	*5.1*	*5.9*	*9.7*	*7.4*	*5.6*
China	1.7	2.6	2.5	0.9	1.9	1.8	1.6
India	4.5	7.3	6.6	5.1	6.7	5.3	5.0
Brazil	7.3	5.7	3.2	8.3	10.5	5.1	4.0
Mexico	5.2	4.2	3.4	5.7	7.2	4.7	3.8
Russia	14.2	7.9	3.4	6.7	14.7	7.5	6.8
Turkey	22.6	9.6	12.3	19.6	69.3	36.4	29.0
Poland	3.5	1.9	3.7	5.2	11.9	7.0	3.7

Forecasts

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

Portuguese economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
Macroeconomic aggregates							
Household consumption	1.7	0.5	–6.9	4.7	5.9	0.9	1.5
Government consumption	2.3	–0.3	0.4	4.6	2.1	0.3	0.2
Gross fixed capital formation	–0.4	–0.7	–2.2	8.7	1.2	1.2	8.1
Capital goods	3.2	2.6	–5.4	13.9	–	–	–
Construction	–1.5	–2.6	1.0	5.5	–	–	–
Domestic demand (vs. GDP Δ)	1.3	0.1	–5.3	5.8	4.5	0.8	2.5
Exports of goods and services	5.3	4.0	–18.8	13.5	17.1	4.3	6.0
Imports of goods and services	3.6	2.7	–11.8	13.3	10.9	4.8	7.0
Gross domestic product	**1.5**	**0.5**	**–8.3**	**5.5**	**6.7**	**0.5**	**2.0**
Other variables							
Employment	0.4	–0.5	–1.9	2.7	1.6	–0.3	0.5
Unemployment rate (% of labour force)	6.1	11.4	7.0	6.6	5.9	6.4	6.1
Consumer price index	3.1	1.1	0.0	1.3	7.8	5.7	2.2
Current account balance (% GDP)	–9.2	–2.9	–1.2	–1.1	–2.7	–2.3	–1.7
External funding capacity/needs (% GDP)	–7.7	–1.6	0.1	0.7	2.1	2.1	2.3
Fiscal balance (% GDP)	–4.6	–5.1	–5.8	–2.9	–1.5	–1.3	–0.7

Forecasts

Spanish economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
Macroeconomic aggregates							
Household consumption	3.6	0.0	–12.4	6.0	1.9	0.7	2.3
Government consumption	5.0	1.1	3.5	2.9	–1.8	0.7	0.7
Gross fixed capital formation	5.6	–1.4	–9.7	0.9	5.2	1.7	2.1
Capital goods	4.9	0.1	–13.3	6.3	6.2	0.5	3.1
Construction	5.7	–2.9	–10.2	–3.7	4.3	2.5	1.5
Domestic demand (vs. GDP Δ)	4.9	–0.3	–4.5	4.9	1.6	0.9	1.9
Exports of goods and services	4.7	2.9	–19.9	14.4	17.9	2.3	1.9
Imports of goods and services	7.0	0.2	–14.9	13.9	9.3	2.4	1.9
Gross domestic product	**3.7**	**0.6**	**–11.3**	**5.5**	**4.5**	**1.0**	**1.9**
Other variables							
Employment	3.2	–0.4	–6.8	6.6	3.7	0.6	1.3
Unemployment rate (% of labour force)	10.5	19.5	15.5	14.8	12.8	13.1	12.8
Consumer price index	3.2	1.3	–0.3	3.1	8.4	4.5	2.3
Unit labour costs	3.0	0.6	7.7	0.3	0.7	3.1	2.0
Current account balance (% GDP)	–5.9	–0.3	0.6	1.0	0.5	0.5	1.1
External funding capacity/needs (% GDP)	–5.2	0.1	1.1	1.9	1.5	1.5	2.0
Fiscal balance (% GDP)[1]	0.3	–6.5	–10.3	–6.9	–4.5	–4.3	–3.6

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

Forecasts

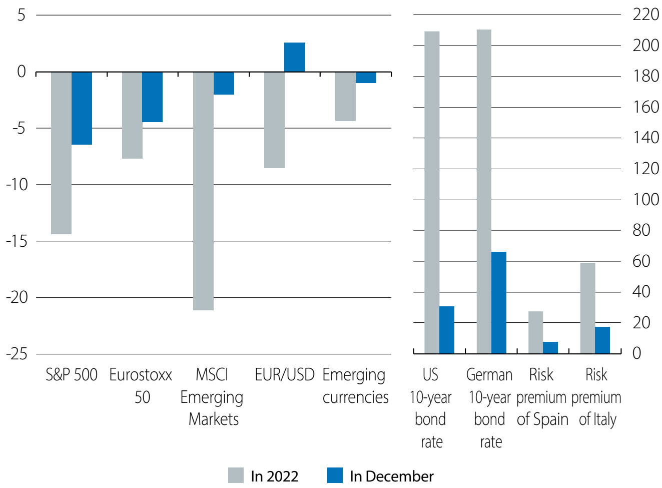
A red year-end in the financial markets

Investors' focus in December shifts from «pivot» to hard landing. The closing weeks of 2022 were marked by reduced risk appetite and declines in the main financial assets, reducing the gains that had been registered for much of the autumn. The main factor was that central banks hardened their hawkish rhetoric, as they reiterated their intention to continue raising official rates in the coming months and lowered expectations of a possible end to the monetary tightening process. Meanwhile, the expectations of higher rates, along with the signs of cooling in most of the economic data, revived fears among investors about a possible global recession, or hard landing, which in turn exacerbated the losses in international stock markets, government bonds and other fixed-income assets. On the upside, the commodity markets ended the year with some stabilisation in the price of the main benchmarks, albeit still subject to the volatility and uncertainty associated with the prolongation of the war in Ukraine.

The ECB, leading the hawks. Among the major central banks, the ECB stood out with a significant tightening of its hawkish narrative during its last meeting in mid-December. Despite moderating the pace of its official rate hikes from 75 bps to 50 bps (with the depo rate at 2.00% and the refi rate at 2.50%), the institution surprised the markets by stating that additional hikes will be necessary. Moreover, these hikes are expected to be significant and will be introduced at a sustained rate, consistent with a terminal depo rate above 3.0%, according to ECB president Christine Lagarde. In addition, the ECB announced guidelines for the reduction of its bond portfolio under the asset purchase programme (APP) beginning in March (at an initial rate of 15 billion per month). Together with the maturities and early payments of the TLTRO loans, this will result in a significant reduction in the size of the balance sheet (see the Focus «The reduction of the ECB's balance sheet in 2023» in this same report). These announcements were reflected in an upward revision of expectations for implicit rates in the money markets and in a rise in sovereign bond yields, which was most pronounced in peripheral debt. On the other hand, other European central banks, such as the Bank of England, Sweden's Riksbank and Norway's Norges Bank, also announced more moderate rate hikes in December, albeit indicating that further adjustments would follow in the coming months.

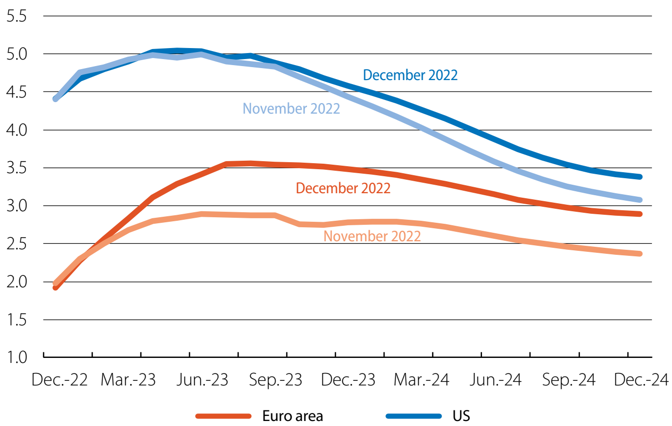
The Fed also hints at further rate hikes, although investors have doubts. In a similar vein, the Federal Reserve also raised official interest rates by 50 bps, placing them in the 4.25%-4.50% range, and announced that further increases would follow during 2023. Specifically, and according to the dot plot, most FOMC members expect that it will be necessary to raise

Selected financial variables
Change (%) *(bps)*



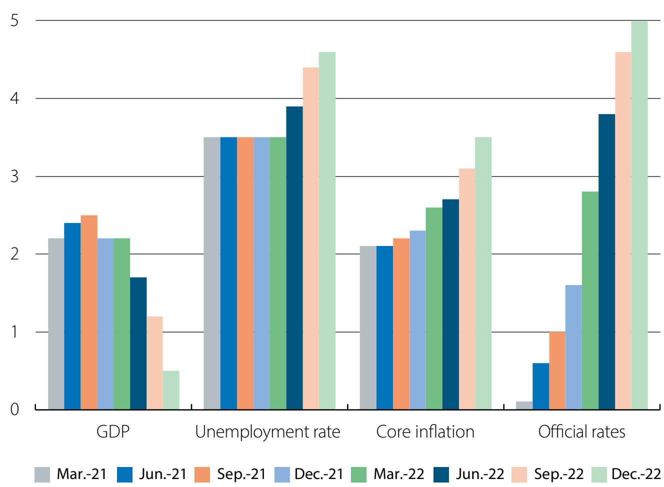
Source: *BPI Research, based on data from Bloomberg.*

Expectations for Fed and ECB reference interest rates
(%)



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

Fed: macroeconomic forecasts for 2023
(%)



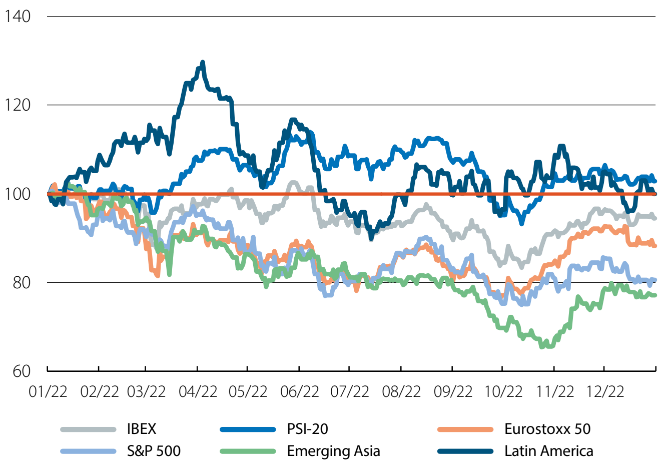
Source: *BPI Research, based on data from the Federal Reserve.*

official rates by 75 bps up to the 5.00%-5.25% range, slightly higher than expected in September and much higher than anticipated just a year ago. The announcement was in line with what had already been signalled in the messages from the FOMC members, so it did not significantly alter investors' expectations regarding the future path of official rates. In fact, the money markets continue to reflect expectations that the rate-reduction cycle will likely begin in the second half of the year. As for the dollar, despite the lower risk appetite it remained virtually flat in December; against the euro it was trading at around 1.06, the highest level since the summer and far from the parity seen in recent months. Meanwhile, the Japanese yen appreciated significantly during the month following the Bank of Japan's unexpected decision to ease some of the parameters of its yield curve control policy, with an increase in the upper limit applied to the yield on the 10-year government bond from 0.25% to 0.50%.

Significant losses in the stock markets. In this context, the autumn rally in equities gradually lost steam and the main stock market indices ended the year with losses. Among advanced economies, the US indices led the decline (S&P 500 –6% in December and –20% in the year), followed by the European indices (EuroStoxx50 –4% and –12%, respectively), as the more defensive sectoral composition of the indices in Europe compared to in the US (i.e. less sensitive to the business cycle) cushioned the declines for the year as a whole. There were also big losses registered in emerging economies, with Chinese shares falling by around 20% amid slower economic growth and deteriorating investment flows from foreign portfolios. Looking ahead to the rest of the new year, the consensus of analysts anticipates slower growth in corporate earnings in both the US and Europe as a result of weaker aggregate demand and the extension of restrictive interest rates, which could undermine the positive effect of China's reopening.

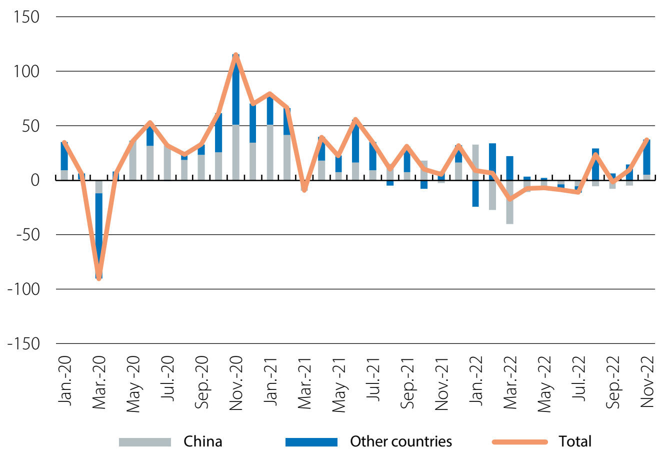
Energy prices moderate. Unlike what happened for much of the year, energy prices stabilised in December and during the first sessions in January. European gas prices fell back to 2021 levels, due to milder-than-expected temperatures in the northern hemisphere and the high levels of gas reserves in Europe, which dispelled the risks of supply rationing. In addition, in December the EU agreed to set a cap on the price of gas, which will be activated if, for at least three consecutive sessions, the gas price (Dutch TTF) surpasses 180 euros per MWh and if the gap with respect to liquefied natural gas prices exceeds 35 euros. The Brent oil price, meanwhile, fell in the first few days of January to 80 dollars a barrel due to the combination of increased production in the US and Nigeria and doubts surrounding the possible weakening of demand in the face of the rise in COVID infections in China. Russia's announcement of a 6% reduction in oil output during 2023 and a ban on exports to countries participating in the cap on its oil prices had little impact on the price.

Main international stock markets
Index (100 = January 2022)



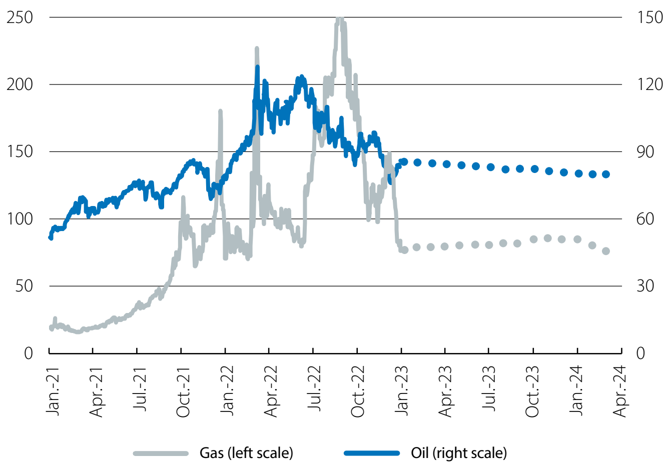
Note: *Data as of 31 December.*
Source: *BPI Research, based on data from Bloomberg.*

Net capital flows to emerging economies
(USD billions)



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

Oil and gas prices
(€/MWh) *($/barrel)*



Notes: *TTF Natural Gas and Brent Crude. The dotted lines indicate prices of oil and gas futures contracts for the months of January 2023 to April 2024 at the close of 30 December 2022.*
Source: *BPI Research, based on data from Bloomberg.*

The reduction of the ECB's balance sheet in 2023

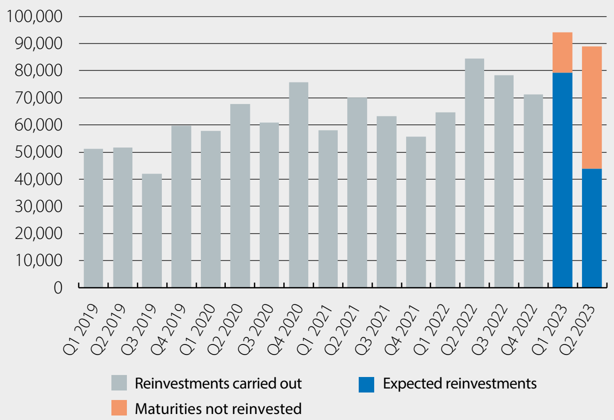
The ECB's balance sheet reached almost 70% of euro area GDP in mid-2022, a substantial increase from its usual size before it began large-scale purchases of long-term assets and loans (e.g. 20% at the end of 2014). With these unconventional measures, the euro area has lived for years in an environment of ultra low interest rates. That was until 2022 arrived and the ECB raised its official rates by 250 bps between July and December. In 2023, not only will these rate hikes continue, but the ECB will also reduce the size of its balance sheet. How will this reduction work and what consequences could it have for sovereign debt?

Two means of reducing the size of the balance sheet: TLTRO-III and the APP

By the end of 2022, the ECB's balance sheet had already reduced in size by around 10% due to various early repayments of TLTRO-III loans,[1] after their conditions were modified in October 2022. The portfolio of TLTRO-III loans will continue to wind down in 2023, both due to new early repayments and simply due to them reaching maturity. In addition, there will be a reduction in the portfolio of bonds acquired since 2015 under the asset purchase programme (APP). The APP represents almost 40% of the ECB's balance sheet[2] and the majority (80%) of these assets consist of sovereign debt bonds of euro area countries. Although the ECB ceased net purchases in July 2022, so far the stock of the assets held on the balance sheet has remained stable due to reinvestments: when a bond held by the central bank matures, the central bank uses the payments received to purchase new bonds and keep the size of its portfolio constant. However, on 15 December the ECB announced the beginning of the end of these reinvestments: between March and June 2023 the ECB will allow bonds worth 15 billion euros (monthly average) to expire without reinvesting them, meaning that it will reduce the reinvestments by around 50% (see first chart).

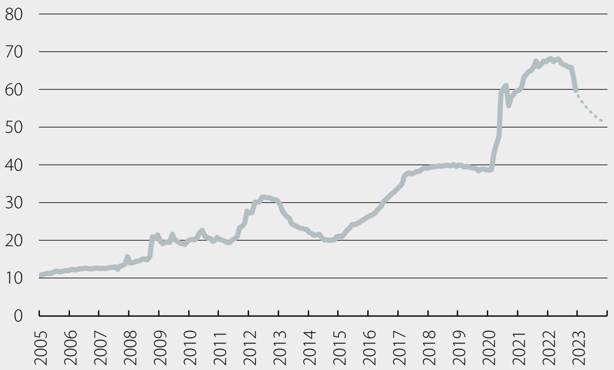
Beyond June 2023, the ECB will adjust this 15-billion benchmark and, in a context of monetary tightening, the threshold can be expected to be raised until the reinvestments reach zero. This, coupled with further repayments of TLTRO-III loans, could reduce the ECB's balance sheet by 15% during the course of 2023. This would bring it down to 50% of the euro area's GDP,

ECB: maturities and reinvestments under the APP
(EUR millions)



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

ECB: balance sheet size
(% of euro area GDP)



Note: *For 2023, the chart shows estimates based on our internal GDP forecasts and assuming an end to reinvestments under the APP and TLTRO-III repayments.*
Source: *BPI Research, based on internal estimates using data from the ECB.*

which is still above pre-pandemic levels (see second chart).[3]

Consequences: funding needs and interest rates

The expansion of the balance sheet turned the ECB into a major player in the bond market and, moreover, this trend was accompanied by lower interest rates. Thus, its reduction in 2023 leads us to ask what impact it might have on sovereign funding needs and on interest rates.

Using the above projection regarding the balance sheet as a starting point, we can compare sovereign funding needs between 2022 and 2023. The key difference

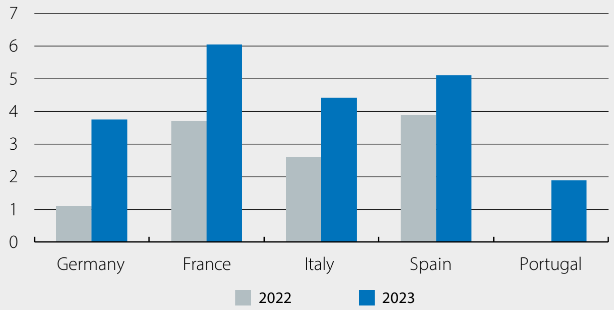
1. TLTROs (Targeted Longer-Term Refinancing Operations) are long-term loans granted by the ECB to the banking sector.
2. The other major purchasing programme, the PEPP (Pandemic Emergency Purchase Programme), was launched during the pandemic and accounts for 20% of the balance sheet. In total, under the PEPP and the APP, sovereign bonds held by the Eurosystem rose to 4.2 trillion euros by the end of 2022.

3. This projection assumes that the ECB reduces reinvestments under the APP to 30% in Q3 2023 and to 0% in Q4 2023. This explains 20% of the projected reduction in the size of the balance sheet. As for the TLTRO-III loans, which account for the remaining 80%, the projected reduction only contemplates the repayment of all the loans that will fall due in 2023 (the majority).

between these two years is that in 2022 the ECB was still carrying out net purchases under the APP and PEPP, so it was absorbing both gross funding needs (with reinvestments) and net funding needs. In 2023, in contrast, not only will the ECB no longer be carrying out net purchases, but by reducing the reinvestments it will also no longer be covering a portion of the issues that are carried out to make repayments. As shown in the third chart, with the ECB's withdrawal from the market, more issues of treasury bonds will need to be placed with other agents.[4] The impact of this is by no means negligible, but the figures ought to be manageable. For example, net funding needs in the Spanish market stand at 5% of GDP; this is above the average for 2015-2019 (–1.3%, at a time when the ECB was actively buying up debt and the deficit was not so high) but it is below the average needs for the period 2008-2014 (6.9%). In addition, it should be borne in mind that in 2023 the ECB will remain very much present in the markets through its reinvestments under the PEPP. Furthermore, national treasuries have a good track record of placing issuances in recent years, in a period that in a period that has not exactly been free of volatility.

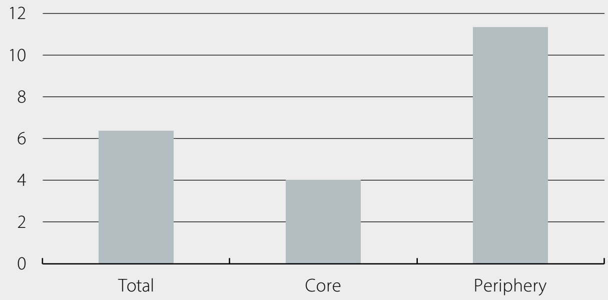
In turn, the increase in debt placement needs can generate some pressure on market interest rates. To quantify this pressure, we use our macro – or fair value – interest rate model.[5] The idea behind these models is that the interest rate on public debt depends on the macroeconomic fundamentals of the country in question and on the global economic environment. For instance, a country's ability to service its payments depends on its level of indebtedness, expectations about its public surplus or deficit, and the future growth of the economy. Also, the state of the European economy as a whole determines the monetary policy that is set by the ECB, which it uses to influence the myriad of other interest rates. With these ingredients, and on the basis of the historical relationships between them, we can estimate what sovereign interest rate would be consistent with the macroeconomic fundamentals.[6,7] This «macro rate» allows us to study the sensitivity of interest rates to changes in the economic scenario, such as a deterioration

EU treasuries: net bond issuance ± ECB *
(% of GDP)



Notes: ** Issuance net of repayments. In 2022, the ECB's net purchases (QE under the PEPP + APP) are deducted, while in 2023 the bond maturities in the ECB's portfolio that will not be reinvested are added (QT under the APP). The ECB begins the reduction of its APP portfolio in March 2023 and reduces its reinvestments to 55% up to June (as announced), and it is assumed that they will fall to 30% in the following three months before then dropping to 0%.*
Source: *BPI Research, based on internal estimates and data from the national treasuries, Bloomberg and AMECO.*

Euro area: impact of QT on 10-year sovereign rates
(bps)



Notes: *The total corresponds to the weighted average of Germany, Austria, Belgium, France, the Netherlands (core), and Spain, Ireland, Italy and Portugal (periphery). Estimates based on 10-year fair value interest rate models for each country using indicators of global financial conditions, conventional and unconventional ECB monetary policy, public debt ratios, and growth and inflation expectations. The impact is estimated as the difference between the fair value rate with QT and without QT.*
Source: *BPI Research, own estimates based on data from Refinitiv, the ECB, Eurostat and Consensus Economics.*

in the growth outlook or, as in the present case, a reduction in sovereign debt held by the Eurosystem. According to this exercise, the end of reinvestments under the APP ought to apply contained pressure on sovereign interest rates in 2023, in both the core and the peripheral economies.

Thus, overall the analysis suggests that in 2023 the reduction of the ECB's balance sheet will accompany, rather than intensify, the tightening of monetary conditions triggered by the official rate hikes. While the experience of other institutions, such as the US Fed, shows that episodes of volatility can occur in the markets when central banks withdraw,[8] it also makes it clear that the monetary authorities have tools at their disposal to restore the proper functioning of the markets if necessary.

4. Unlike in the other countries, the heightened stress in Germany and France is accentuated by increases in the budget deficit.
5. See the Focus «The macroeconomic fragility of interest rates» in the MR10/2020.
6. We estimate individual regressions for the 10-year sovereign rates of Germany, Austria, Belgium, Spain, France, Ireland, Italy, the Netherlands and Portugal with the following explanatory variables: 3-month Euribor expectations, real GDP growth and inflation expectations, the government-debt-to-GDP ratio, an indicator of stock market volatility, the US 10-year sovereign rate, the asset purchases which the ECB has accumulated on its balance sheet since 2015 and an indicator of stress in the euro area (a binary variable which is equal to 1 if a sovereign risk premium is significantly stressed).
7. The estimated impact is partial. i.e. it considers the direct effect of a reduction in the volume of bonds held by the ECB, but not the indirect effect which this may have on global financial conditions or on the outlook for GDP and inflation, nor does it contemplate indirect effects of TLTRO-III repayments.

8. See the case of the US repo market in September 2019. Anbil, Sriya, Alyssa Anderson and Zeynep Senyuz (2020). «What Happened in Money Markets in September 2019?». FEDS Notes. Washington: Board of Governors of the Federal Reserve System.

On the uncertainty of the neutral interest rate

The intensification of inflationary pressures, in the context of COVID-19 and Russia's invasion of Ukraine, has resulted in the sharpest tightening of monetary policy seen in advanced economies since the 1980s, with official rate hikes of around 300 bps and the cessation of net asset purchase programmes.

Despite what has already been announced, the truth is that there is still a lot of uncertainty surrounding what level official rates will settle at, both in the current cycle of rate hikes and in the long term. In the euro area, the ECB has stated that it will continue to raise official rates until they are in «restrictive territory», that is, above the level which would neither stimulate nor contract the economy, or the neutral rate, as it is usually called. In the US, meanwhile, it is estimated that official rates are already at these restrictive levels, and the Fed is expected to continue to raise them in the coming months, albeit at a slower pace.

Given the important role it plays in the financial markets and in the economy in general, in this Focus we pose the question: what is this so-called neutral rate and at what level does it lie?

Estimates of neutral rates

According to economic theory, the neutral interest rate is that which balances an economy's aggregate demand with its aggregate supply. Put in other words, it is the interest rate set by the central bank which would allow the economy to operate at full employment and with price stability.

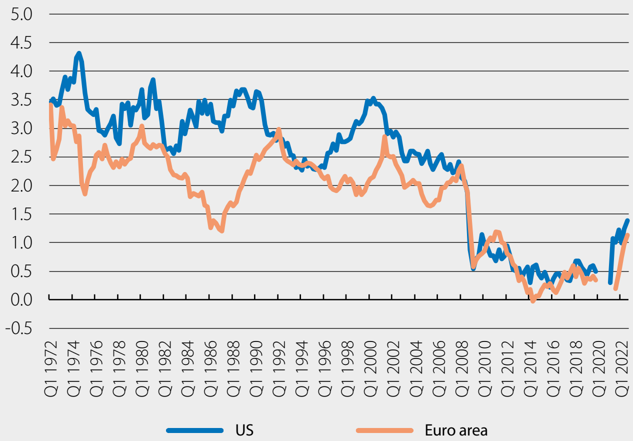
Delving deeper into this definition, it is worth pointing out that price stability is usually associated with inflation fluctuating at around 2.0% year-on-year, according to the statutes of advanced countries' central banks. In addition, achieving full employment would require using all the resources available in the economy, which in other words means that GDP would grow in accordance with its long-term potential rate and the output gap would be non-existent.

Thus, the definition of the neutral interest rate is closely linked to each economy's productive capacity and, therefore, to the evolution of the factors of production (such as labour, capital and technological progress) which determine potential growth.[1] Thus, countries with a higher potential growth (e.g. due to greater technological innovation or more favourable demographic dynamics) can be expected to have a higher neutral rate.

1. For further information on potential GDP and its determining factors, see the article «Potential GDP and the output gap: what do they measure and what do they depend on?» in the Dossier of the MR05/2013.

Real neutral interest rate *

(%)



Note: ** Due to the extraordinary volatility of real GDP during the COVID-19 pandemic, estimates for the period between Q1 2020 and Q4 2020 for the US, and between Q1 2020 and Q2 2021 for the euro area, are not shown.*
Source: *BPI Research, based on K. Holston et al. (2017).*

However, unlike other macroeconomic variables, potential GDP and, therefore, the neutral interest rate are not observable, so they have to be estimated. For the US, the median FOMC voter places the neutral (nominal) rate at around 2.5%, albeit with an estimate range between 2.3% and 3.3%, according to the latest forecasts in the dot plot.[2] The implicit rates in the money markets, meanwhile, reflect a (nominal) rate converging towards 3.0% in the long run. However, these estimates are slightly lower than the rate suggested by a model used by the New York Fed, known as the Holston-Laubach-Williams (HLW) model, which allows short-term fluctuations in the real neutral rate to be captured.[3] Using the open-source code of this model,[4] we estimate that the real neutral rate in the US ended Q3 2022 at 1.4%, which would be compatible with a nominal equilibrium rate of around 3.5% (see first chart).

For the euro area, meanwhile, the members of the ECB have alluded to estimates of a neutral (nominal) rate of around 2.0%, although its president Christine Lagarde herself has warned about the high level of uncertainty involved in estimating it. Indeed, some voices within the Governing Council have pointed out that the neutral rate is likely to have increased this year, reflecting a positive output gap in the face of the imbalance between

2. See the «Summary of Economic Projections» of December 2022.
3. This model uses a Kalman filter based on estimates of potential growth and of the output gap. The model uses quarterly series of real GDP, core inflation and monetary interest rates as a starting point. For further details, see K. Holston, T. Laubach and J. Williams (2017). «Measuring the Natural Rate of Interest: International Trends and Determinants». Journal of International Economics.
4. See https://www.newyorkfed.org/research/policy/rstar.

demand and supply against the backdrop of the war in Ukraine. In this regard, the implicit rates in the money markets reflect a long-term nominal rate converging at around 2.5%.

To test this hypothesis, we replicated the HLW model for the euro area, based on the algorithm published by the Fed. The model suggests that the real neutral rate in the euro area has risen from approximately 0.0% in the run-up to the pandemic to 1.0% in Q3 2022 (see first chart), which is consistent with a nominal equilibrium rate of 3.0%. According to this model, the output gap in the euro area economy has been widening, reaching around 3.0% of potential GDP in Q3 2022, its highest level since the beginning of the series (1972).

But: short-term or long-term balance?

As its authors themselves point out, the usefulness of the HLW model is based on its ability to estimate the real neutral rate that would be necessary to balance aggregate supply and demand in a given period. In other words, it can be used to estimate the real interest rate at which, in theory, GDP would operate at its potential (output gap = 0) and with price stability.

However, rather than operating according to their potential, economies tend to fluctuate according to the business cycle, with periods in which their unused capacity is absorbed and they grow above potential, and others where the opposite occurs. In this regard, a relatively high estimated neutral rate for the US and the euro area this year is an indication of the interest rate that is required in order to resolve the current mismatch between supply and demand and thus curb the upward pressure on prices. It should come as no surprise that, in this context, the central banks have decided to raise rates so abruptly.

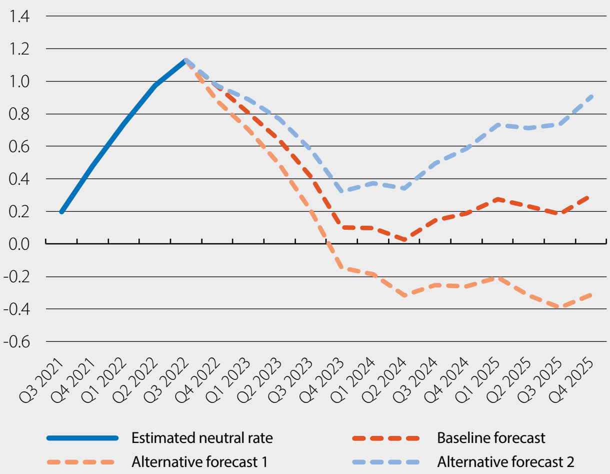
However, while these estimates are particularly useful for understanding monetary policy measures in the current context, the fact is that in such volatile times they are not indicative of the long-term equilibrium interest rate, once economic growth converges on its potential. In fact, if we extend the estimates using our forecasts for the euro area (for growth, inflation and interest rates), the model suggests that the real equilibrium rate would converge to the 0.0%-0.5% range, that is, between 2.0% and 2.5% in nominal terms.

The key factor in these estimates is what is assumed about the evolution of potential growth, and this, in turn, incorporates assumptions about the labour force (demography and participation in the labour market), the stock of capital (and, therefore, investment) and technological innovation, among other factors. Thus, in an alternative scenario in which potential growth is half that of our baseline forecast (0.6% versus 1.2%), for instance due to a permanent destruction in physical capital or a structurally lower labour participation rate, the real neutral rate would lie at around –0.3%, or 1.7% in nominal terms. In contrast, with a potential growth 1.5 times higher (1.8% versus 1.2%), as a result, for example, of more rapid technological development or more profound structural reforms, the neutral rate would be higher (see second chart).

In short, the neutral interest rate is a key indicator for the orientation of monetary policy, the evolution of the financial markets and, in general, the formation of economic agents' expectations. Estimating it, however, is subject to great uncertainty, linked, among many other factors, to assumptions about the evolution of each economy's productive capacity. Today, the current economic environment has caused the neutral rate to be higher than has been observed in recent years. Looking further ahead, however, the level at which these rates converge will depend on how optimistic one is about the outlook and the structure of growth in the long term.

Euro area: real neutral interest rate *

(%)



Notes: ** The baseline forecast scenario is compatible with our growth, inflation and interest rate forecasts for the euro area. The alternative scenarios 1 and 2 assume that potential growth is half the level (0.6%) and 1.5 times higher (1.8%), respectively, compared to the rate consistent with our forecasts (1.2%).*
Source: *BPI Research, based on K. Holston et al. (2017) and internal forecasts for the euro area.*

Interest rates (%)

	31-December	30-November	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Euro area					
ECB Refi	2.50	2.00	50	250.0	250.0
3-month Euribor	2.13	1.97	16	270.4	270.2
1-year Euribor	3.29	2.83	46	379.2	379.0
1-year government bonds (Germany)	2.60	2.18	42	324.0	322.4
2-year government bonds (Germany)	2.76	2.13	64	338.4	336.4
10-year government bonds (Germany)	2.57	1.93	64	274.8	268.9
10-year government bonds (Spain)	3.66	2.95	72	309.8	306.6
10-year government bonds (Portugal)	3.59	2.88	71	312.1	307.5
US					
Fed funds (upper limit)	4.50	4.00	50	425.0	425.0
3-month Libor	4.77	4.78	–1	455.8	455.8
12-month Libor	5.48	5.57	–9	489.9	489.9
1-year government bonds	4.69	4.69	0	431.1	430.3
2-year government bonds	4.43	4.31	12	369.4	365.8
10-year government bonds	3.87	3.61	27	236.5	224.7

Spreads corporate bonds (bps)

	31-December	30-November	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	91	92	–1	42.7	43.0
Itraxx Financials Senior	99	103	–4	44.4	44.4
Itraxx Subordinated Financials	172	185	–12	64.1	64.1

Exchange rates

	31-December	30-November	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.071	1.041	2.9	–5.8	–5.2
EUR/JPY (yen per euro)	140.410	143.680	–2.3	7.3	7.8
EUR/GBP (pounds per euro)	0.885	0.863	2.6	5.2	5.6
USD/JPY (yen per dollar)	131.120	138.070	–5.0	13.9	13.7

Commodities

	31-December	30-November	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	554.8	564.3	–1.7	–4.1	–4.1
Brent ($/barrel)	85.9	85.4	0.6	10.5	8.8
Gold ($/ounce)	1,824.0	1,768.5	3.1	–0.3	1.3

Equity

	31-December	30-November	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	3,839.5	4,080.1	–5.9	–19.4	–20.0
Eurostoxx 50 (euro area)	3,793.6	3,964.7	–4.3	–11.7	–12.4
Ibex 35 (Spain)	8,229.1	8,363.2	–1.6	–5.6	–6.1
PSI 20 (Portugal)	5,726.1	5,862.7	–2.3	2.8	1.6
Nikkei 225 (Japan)	26,094.5	27,969.0	–6.7	–9.4	–9.4
MSCI Emerging	956.4	972.3	–1.6	–22.4	–22.5

What can we expect in 2023?

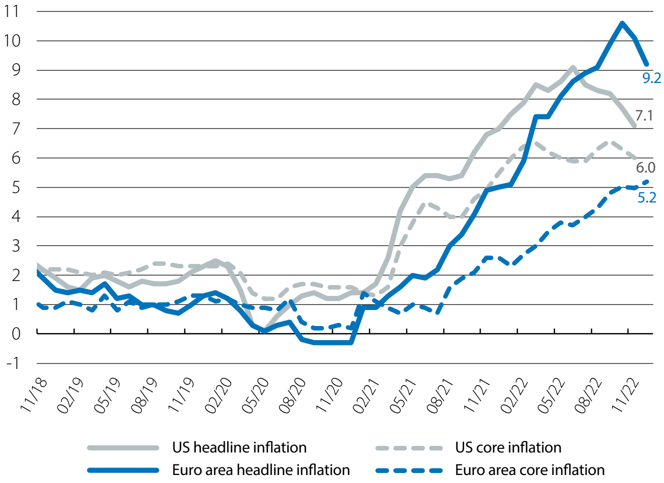
The key themes for 2023: continued high inflation, rising interest rates and geopolitical risks. As we leave 2022 behind us, we look back on a year which promised a return to normality but delivered an unprecedented series of episodes: the war in Ukraine and the consequent energy crisis, inflation at historic highs and the abrupt end of the ultra-low interest rate era. These factors will continue to shape the economy in 2023, with the euro area facing the most challenging outlook among the major advanced economies. Inflation will also be one of the major players this year, as its evolution, especially in the core component, will determine the agenda of the central banks. While we believe inflation will recede over the course of the year in developed economies, this correction will remain incomplete and inflation will persist well above the central banks' targets. In any case, the uncertainty we face as we enter into 2023 is very high and the geopolitical situation will continue to play a key role in shaping developments in the financial markets and the economy, particularly the war in Ukraine. All in all, this is a year in which the outlook for growth is skewed to the downside, while upside surprises in inflation cannot yet be ruled out.

The US could dodge a recession. Weighed down by the tightening of financial conditions, the global environment of uncertainty and the erosion of purchasing power caused by inflation, for the US economy the year ahead looks set to bring a loss of buoyancy and modest growth, as the latest sentiment indicators have already been showing (e.g. in December the composite PMI fell once again and stood at around 45 points). Given the sensitivity of investment to the Fed's rate hikes, the resilience of private consumption and the labour market will be key. Indeed, the labour market remains strong and the slowdown it is experiencing appears to be a gradual one. In particular, the latest available data (December) show that some 223,000 new jobs were created, compared to an average of around 400,000 in the rest of 2022, while the ratio of job vacancies per unemployed person stands at around 1.7 – a figure which, although high, marks a moderation from the recent historic high of 2.0. It will also be essential that the reduced stress in the labour market translates into a moderation in wage growth, which currently remains at uncomfortable levels for the Fed's inflation targets, as the institution's own officials acknowledged in December (for instance, hourly wages have continued to rise at a rate of around 5% in recent months). Overall, we anticipate a significant slowdown in the economy in 2023 to growth rates of around 1%. This reduced economic momentum will help to curb the high inflation rate: although it has eased since the summer peaks, as of late 2022 inflation was still showing persistence in the core components (headline inflation of 7.1% in November and core inflation of 6.0%).

The euro area, faced with the challenge of continuing to grow without Russian gas. Unlike the US, the bulk of the indicators suggest that the euro area will be unable to avoid entering a recession over the winter months, although they

US and euro area: inflation

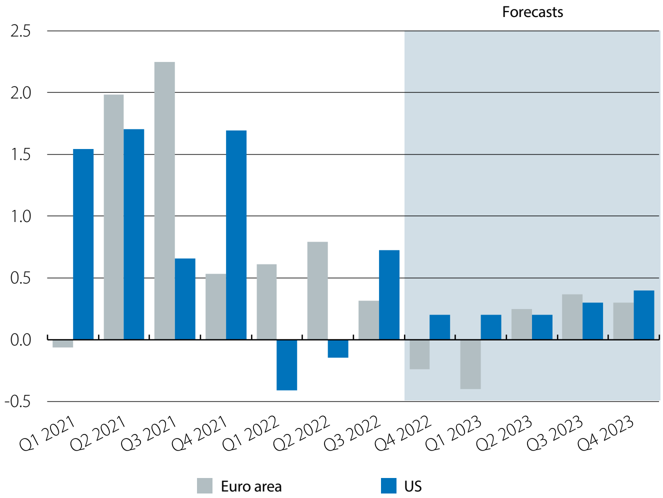
Year-on-year change (%)



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

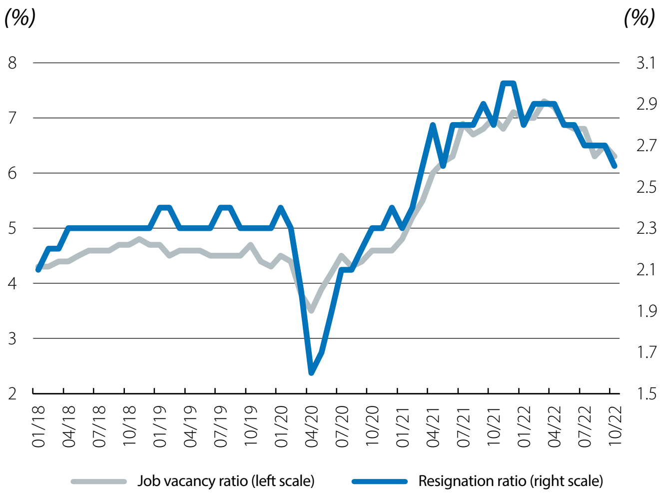
International: GDP

Quarter-on-quarter change (%)



Source: *BPI Research, based on data from Refinitiv.*

*US: job vacancies and resignations **



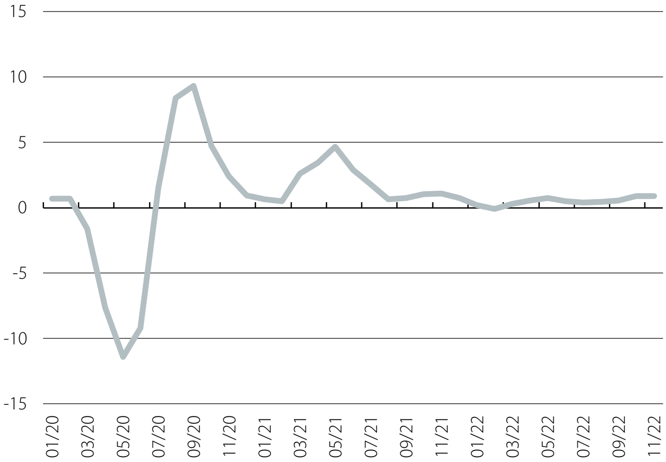
Notes: ** Resignation ratio = number of resignations / employment level x 100.*
Vacancy ratio = number of vacancies / (employment + number of vacancies) x 100.
Source: *BPI Research, based on data from the Bureau of Labor Statistics.*

also signal it ought to be a mild one. As an example, in December the composite PMI indices for the euro area and its main economies remained in contractionary territory for the sixth consecutive month, but they also registered a widespread improvement (49.3 points for the euro area as a whole, compared to a low of 47.3 in October). However, there are various elements that point to a more challenging outlook beyond the immediate economic contraction. First of all, it must be borne in mind that, after the winter, gas inventories will have been significantly depleted and the task of replenishing them with little to no supply from Russia will pose a significant challenge. Therefore, it is foreseeable that the current efforts to cut gas usage, both among households and businesses, will be intensified in order to avoid a «critical» winter in 2023-2024 (consumption fell by around 20% up to November compared to the average for 2017-2021, according to Eurostat). On the other hand, inflation, although declining, will remain high and above the ECB's target rate, so we can expect the monetary institution to continue tightening monetary policy in 2023 (with rates exceeding 3%, according to market expectations at the year end). Moreover, the fiscal momentum of recent years has reduced the margin for action in the public accounts, and in 2023 they look set to achieve a certain «normalisation». This will pave the way for the Stability and Growth Pact to be reactivated in 2024, pending its reform during the course of this year to adapt it to «the new times» (see the Focus «The EU, raider of the lost fiscal rules» in the MR12/2022). All in all, with the continued resilience of the labour market (unemployment rate at 6.5% in November), a savings rate still above its long-term average, and a better starting position thanks to a stronger-than-expected performance in 2022 (GDP will grow by more than 3.0%), we have reason to be moderately optimistic. Thus, for 2023 we anticipate average GDP growth of around 0.2%. However, the high uncertainty of the current context and the region's significant exposure to an escalation in the war in Ukraine introduce clear downside risks for growth and upside risks for inflation.

China will have a difficult «opening». The Chinese government ended the year by abandoning its zero-COVID policy and allowing the economy to open up. However, this decision by no means clears the outlook for the Asian giant. The country is experiencing an explosion in COVID cases and an increase in pressure on its health system, all in a context in which vaccination rates are too low. This raises doubts about how sustained the lifting of restrictions could be and, in any case, suggests that proper mobility will take a long time to normalise. On the other hand, the approval in the US of the CHIPS and Science Act in July 2022, through which the country aims to regain its leadership position in technology and chip production, will have a direct impact on the Chinese economy. Other measures include provisions to prevent China from directly accessing US science and technology, which could shave around 0.3 pps from China's GDP growth in 2023 according to some analysts' estimates. In addition, in 2023, the difficulties in China's construction sector will still be present, while the country's exports will face headwinds due to the slowdown in global economic activity.

US: personal consumption

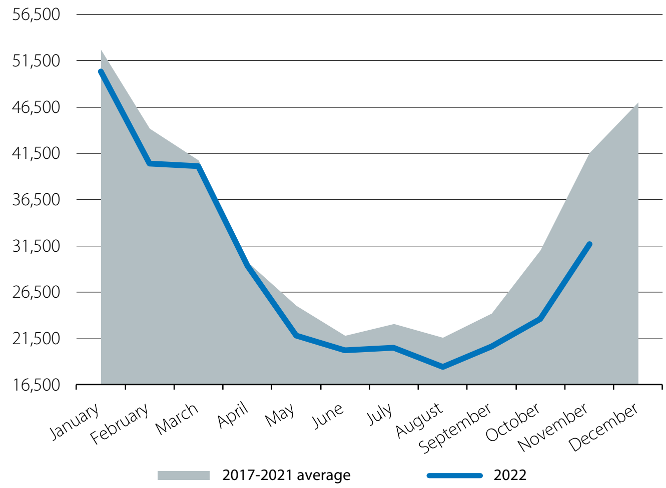
Change in the 3-month average versus the previous 3 months (%)



Source: *BPI Research, based on data from Refinitiv.*

EU: natural gas consumption

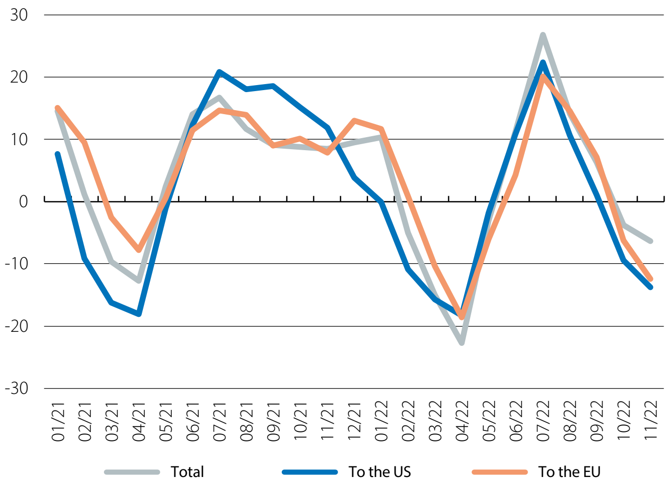
(Million m^3)



Source: *BPI Research, based on data from Eurostat.*

China: exports of goods

Change in the 3-month average versus the previous 3 months (%)



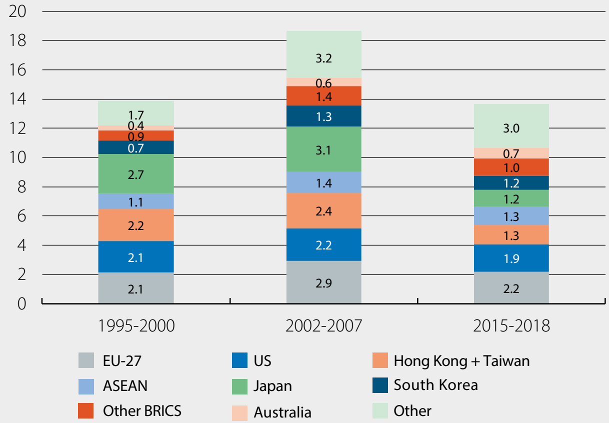
Source: *BPI Research, based on data from Refinitiv.*

EU and China: mapping out a strategic interdependence II

China is the main source of imports of the European bloc and accounts for just over 20% of the EU's total imports of goods. It is therefore not surprising that there is a high degree of dependency on China in some European sectors. Using detailed data based on international input-output tables, which allow us to identify the precise origin and destination of each good and service that is traded throughout the value chain, we can investigate the real composition of each country or region's final demand and exports. In aggregate terms, we saw in a previous Focus[1] that the composition of European final demand includes 2% Chinese goods and services, while the dependence rises to 6% in manufacturing, most notably in sectors such as textiles and electronics. Now, we invert the question: how much does China depend on the EU?

Chinese final demand originating abroad

(% of final demand)



Note: *The data refer to the average for the years 1995-2000 (before China joined the WTO in 2001), 2002-2007 (after China joined the WTO, pre-global financial crisis) and 2015-2018 (the most recent years). We use information from the latest update of the OECD's TiVA database.*
Source: *BPI Research, based on OECD TiVA data (November 2021).*

Value added in China's final demand originating abroad

(% of China's final demand)

	UE-27			US			ASEAN			Japan			Other BRICS			South Korea			Australia		
	2015-2018	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007
TOTAL	**2.2**	**2.1**	**2.9**	**1.9**	**2.1**	**2.2**	**1.3**	**1.1**	**1.4**	**1.2**	**2.7**	**3.1**	**1.2**	**0.7**	**1.3**	**1.0**	**0.9**	**1.4**	**0.7**	**0.4**	**0.6**
Agriculture	**1.3**	**0.6**	**1.0**	**1.7**	**0.9**	**1.6**	**1.2**	**0.5**	**1.0**	**0.5**	**0.6**	**0.9**	**2.0**	**0.3**	**1.1**	**0.5**	**0.3**	**0.4**	**0.6**	**0.4**	**0.5**
Mining	**1.7**	**1.6**	**1.9**	**1.5**	**1.3**	**1.2**	**1.7**	**1.0**	**1.2**	**0.8**	**1.8**	**1.7**	**2.3**	**1.0**	**1.4**	**0.7**	**0.5**	**0.7**	**1.9**	**0.3**	**0.6**
Manufacturing	**3.7**	**3.3**	**4.8**	**2.6**	**2.9**	**3.2**	**1.8**	**1.4**	**2.1**	**2.1**	**4.2**	**5.3**	**1.5**	**1.0**	**1.6**	**1.8**	**1.5**	**2.5**	**0.9**	**0.4**	**0.6**
Food	1.9	1.2	1.5	1.7	1.5	1.7	1.6	1.3	1.6	0.6	1.2	1.2	1.7	0.8	1.3	0.5	0.5	0.6	0.7	0.4	0.5
Textiles and clothing	2.7	2.0	2.8	1.5	2.1	1.8	2.4	1.4	1.6	1.1	4.8	3.5	1.7	0.7	1.2	1.0	3.5	2.3	0.4	0.5	0.4
Wood and paper	2.5	3.2	3.9	2.3	3.5	3.0	1.9	4.6	2.8	1.3	3.2	3.5	2.0	1.3	2.4	0.8	1.8	1.3	0.9	0.6	0.9
Coke and refined petroleum prod.	1.6	2.2	2.2	2.7	4.2	2.3	3.4	4.8	3.2	0.8	2.0	1.5	5.0	2.4	3.2	0.9	1.1	1.3	2.0	0.8	1.3
Chemicals and pharma.	4.6	1.8	3.0	2.7	2.1	2.4	1.2	1.2	1.6	1.2	2.5	2.8	1.3	0.8	1.4	0.9	1.1	1.3	0.7	0.3	0.5
Rubbers and plastics	4.6	2.6	4.3	2.4	2.6	3.0	2.1	1.7	2.8	2.7	4.1	5.4	1.8	1.0	1.8	2.1	1.9	2.2	0.8	0.4	0.6
Other non-metallic minerals	2.3	2.2	3.6	1.3	1.8	2.2	1.3	1.2	1.7	1.3	3.0	4.0	1.5	0.9	1.5	0.8	1.1	1.4	0.9	0.3	0.4
Metals	3.4	3.7	5.9	1.7	2.4	2.3	1.1	1.1	1.5	1.5	4.1	4.5	1.9	1.9	3.2	1.1	1.4	2.2	1.7	0.7	1.3
Computers and electronics	3.8	5.3	5.4	4.0	5.9	6.9	4.4	2.5	5.8	4.9	11.5	12.9	1.0	0.7	1.0	9.0	3.1	9.0	0.7	0.3	0.5
Electrical products	3.6	3.3	5.0	2.1	2.3	2.4	1.7	1.2	1.9	2.9	5.5	6.9	1.6	1.2	2.2	2.1	1.4	2.2	1.5	0.5	1.0
Machinery	5.1	7.3	8.9	2.4	3.5	3.2	1.4	1.2	1.6	3.6	7.2	7.2	1.3	1.3	2.1	2.2	1.6	2.2	1.1	0.4	0.8
Motor vehicles and trailers	4.8	2.9	4.8	2.2	1.7	1.8	1.0	0.6	0.9	2.5	3.3	4.9	1.0	0.7	1.2	1.3	0.7	1.7	0.8	0.2	0.5
Other transport equipment	9.0	12.2	11.4	11.2	16.8	11.7	1.3	1.1	1.4	2.4	5.3	6.5	1.9	2.5	3.5	1.6	1.6	1.9	0.8	0.3	0.6
Other manufacturing	3.3	4.6	5.0	2.4	4.6	3.8	2.4	2.4	2.2	1.6	3.6	3.2	2.2	1.9	2.6	1.0	2.5	1.7	0.9	0.5	0.7
Services	**2.1**	**2.2**	**2.8**	**2.1**	**2.9**	**2.6**	**1.4**	**1.2**	**1.4**	**1.1**	**2.5**	**2.7**	**1.0**	**0.7**	**1.0**	**0.7**	**0.8**	**1.2**	**0.5**	**0.5**	**0.5**
Trade services	2.6	2.6	3.7	2.3	2.8	3.3	1.2	1.2	1.8	1.3	3.9	4.9	0.8	0.7	1.0	0.8	0.9	1.3	0.6	0.5	0.6
Logistics	4.6	3.2	5.1	3.6	3.3	2.9	2.9	1.7	1.9	2.2	2.9	3.7	2.0	1.2	1.5	1.2	1.0	1.5	1.3	0.7	0.9
Hotels and restaurants	3.1	2.1	1.8	4.9	6.4	2.6	3.1	2.5	1.5	2.6	1.2	1.3	1.8	1.1	1.0	0.9	0.8	0.6	1.2	1.3	1.0
Information and communication	2.6	2.9	3.4	2.4	3.7	3.0	1.8	1.7	2.0	1.0	4.1	3.6	2.2	0.8	2.1	1.4	1.2	2.1	0.4	0.4	0.5
Finance	0.7	1.0	1.5	1.8	2.7	3.3	0.9	0.6	1.0	0.2	1.1	1.3	0.3	0.3	0.6	0.2	0.4	0.9	0.2	0.1	0.2
Real estate	0.5	0.7	0.9	0.4	0.8	0.7	0.3	0.4	0.5	0.2	0.8	0.8	0.2	0.2	0.4	0.1	0.3	0.4	0.1	0.1	0.1
Other services	2.5	3.4	4.9	1.8	3.0	4.0	1.4	1.3	1.9	1.0	3.5	4.1	0.9	0.8	1.4	1.1	1.1	2.4	0.6	0.4	0.6

Notes: *The data refer to the average for the years 1995-2000 (before China joined the WTO in 2001), 2002-2007 (after China joined the WTO, pre-global financial crisis) and 2015-2018 (the most recent years). We use information from the latest update of the OECD's TiVA database.*
Source: *BPI Research, based on OECD TiVA data (November 2021).*

1. See the Focus «EU and China: mapping out a strategic interdependence» in the MR05/2022.

The European origin of Chinese final demand: 2% made in the EU

Of all the final demand in China, 14% originates in the rest of the world, and 2.2% originates in the EU (data for the period 2015-2018).[2] Thus, goods and services from the EU account for 16% of the value added (VA) in Chinese demand that originates abroad, reflecting Europe's position of leadership in the Chinese market (see chart). The EU is followed by the US, China's second-largest trading partner, which was the origin of 1.9% of the total VA in the same period. Japan, meanwhile, was China's main trading partner up until the 2000s with around 3% of the country's final demand, but this figure has dropped to 1.2% in recent years, even surpassed by the ASEAN countries as a whole.

Analysing the breakdown by sector, we can get a more detailed «x-ray» of the interdependencies between different countries (see first table). Although China's dependence on the EU has declined in the last decade – partly as a result of a process of economic development and growing specialisation of the Chinese economy, which has led to a partial substitution of higher-VA imports – the link with Europe is still substantial in some sectors, within both manufacturing and services. On the manufacturing side, this is especially the case in transportation equipment (motor vehicles, trailers and other transportation equipment), machinery and the chemical sector (in particular, chemicals and pharmaceuticals, as well as rubber and plastics). On the services side, logistics and tourism services stand out. It is worth noting that in the

Value added in China's exports originating abroad
(% of VA in China's exports)

	EU-27			South Korea			US			Japan			ASEAN			Other BRICS			Australia		
	2015-2018	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007	**2015-2018**	1995-2000	2002-2007
TOTAL	**2.1**	**2.1**	**2.8**	**2.0**	**1.5**	**2.2**	**1.8**	**2.1**	**2.3**	**1.6**	**3.6**	**4.0**	**1.6**	**1.2**	**1.9**	**1.3**	**0.7**	**1.5**	**0.9**	**0.3**	**0.6**
Agriculture	**0.4**	**0.3**	**0.4**	**0.2**	**0.4**	**0.2**	**0.9**	**0.4**	**0.9**	**0.1**	**0.3**	**0.3**	**1.5**	**0.7**	**1.4**	**1.9**	**0.3**	**1.2**	**0.4**	**0.2**	**0.3**
Mining	**0.4**	**0.3**	**0.4**	**0.0**	**0.1**	**0.1**	**1.3**	**0.6**	**0.9**	**0.0**	**0.1**	**0.1**	**3.8**	**3.0**	**3.0**	**6.3**	**2.5**	**5.4**	**7.3**	**1.3**	**3.3**
Manufacturing	**1.9**	**2.3**	**2.6**	**2.8**	**2.0**	**3.0**	**1.5**	**2.1**	**2.1**	**1.9**	**4.2**	**4.5**	**1.4**	**1.1**	**1.7**	**0.6**	**0.6**	**0.8**	**0.1**	**0.2**	**0.2**
Food	1.1	0.6	0.8	0.4	0.4	0.3	0.5	0.5	0.5	0.3	0.8	0.9	1.4	0.7	1.1	0.5	0.3	0.5	0.3	0.2	0.2
Textiles and clothing	0.6	0.5	0.5	0.4	2.8	1.2	0.1	0.2	0.2	0.3	2.4	1.2	1.1	0.5	0.5	0.5	0.1	0.2	0.0	0.1	0.0
Wood and paper	1.9	2.7	3.0	0.8	2.3	1.4	1.6	2.8	2.2	1.4	3.7	3.7	1.6	3.2	2.1	1.7	0.9	1.6	0.3	0.4	0.4
Coke and refined petroleum prod.	0.8	0.6	0.8	2.2	2.8	4.3	1.2	0.7	1.3	0.8	1.5	1.5	1.9	2.1	2.3	3.2	2.3	4.0	0.3	0.1	0.3
Chemicals and pharma.	2.5	2.3	3.2	2.5	3.1	3.7	1.8	2.9	2.9	1.8	4.0	4.3	2.0	1.8	2.6	0.8	1.0	1.5	0.1	0.1	0.2
Rubbers and plastics	2.2	2.0	2.9	2.6	2.2	3.7	0.9	1.4	1.3	2.6	3.0	4.8	0.9	0.7	1.3	0.4	0.2	0.5	0.1	0.2	0.2
Other non-metallic minerals	0.9	1.5	1.9	1.0	1.2	1.5	0.5	0.9	1.0	0.9	2.7	3.0	0.5	0.3	0.6	0.3	0.3	0.4	0.1	0.1	0.1
Metals	1.8	3.4	3.3	1.1	1.8	2.6	1.2	2.4	1.5	2.1	5.8	5.4	0.5	0.6	0.7	1.0	1.3	1.7	0.5	0.6	0.8
Computers and electronics	1.7	2.9	2.2	8.5	2.0	6.3	2.8	3.9	4.2	2.6	6.6	6.5	2.7	1.6	3.9	0.1	0.1	0.1	0.0	0.0	0.0
Electrical products	1.9	2.8	3.3	1.3	0.8	1.9	0.5	0.9	0.9	2.3	5.5	5.5	0.7	0.3	0.6	0.1	0.2	0.2	0.0	0.0	0.0
Machinery	3.8	6.1	6.8	1.2	1.0	1.3	1.2	2.7	2.1	3.3	7.3	7.8	0.4	0.5	0.6	0.3	0.4	0.5	0.1	0.1	0.1
Motor vehicles and trailers	4.0	1.7	3.2	1.2	0.3	1.2	0.9	0.9	0.9	3.0	3.2	5.3	0.3	0.3	0.3	0.2	0.2	0.3	0.0	0.0	0.1
Other transport equipment	3.8	7.8	6.1	0.9	1.1	1.3	7.9	15.0	9.7	1.3	3.0	4.2	0.7	0.8	0.8	0.8	1.4	1.3	0.1	0.2	0.2
Other manufacturing	1.9	1.6	2.4	0.5	0.4	0.4	0.5	0.9	1.0	1.0	3.7	5.1	0.5	0.3	0.5	0.6	0.3	0.6	0.2	0.1	0.1
Services	**2.8**	**2.7**	**4.2**	**1.5**	**1.4**	**2.1**	**2.4**	**2.7**	**3.4**	**1.8**	**4.5**	**5.3**	**1.6**	**1.2**	**2.1**	**1.3**	**0.7**	**1.6**	**0.7**	**0.3**	**0.5**
Trade services	2.3	2.7	3.6	1.5	1.6	2.2	2.1	3.3	3.7	2.3	7.9	8.3	2.4	1.8	3.4	1.3	0.8	1.6	0.4	0.4	0.5
Logistics	3.5	2.1	3.6	1.4	0.7	1.4	1.8	1.4	1.6	2.0	3.2	3.9	1.5	0.8	1.3	1.7	0.8	1.5	0.7	0.2	0.4
Hotels and restaurants	1.2	0.6	1.1	1.8	0.8	0.9	0.8	0.5	0.7	1.0	2.0	2.5	0.6	0.3	0.6	0.3	0.1	0.2	0.4	0.1	0.2
Information and communication	3.3	2.3	4.1	1.6	1.3	2.2	3.1	2.5	3.4	1.6	3.2	4.2	1.0	0.8	1.3	1.6	0.6	2.4	0.6	0.3	0.5
Finance	1.1	1.7	2.6	0.9	1.8	2.1	1.5	2.1	2.9	0.3	2.3	2.3	1.1	1.3	1.8	0.7	0.6	1.5	0.7	0.3	0.6
Real estate	3.9	3.0	6.6	1.0	1.2	2.5	3.4	2.4	4.9	1.9	3.3	4.9	1.0	0.8	1.4	1.4	0.8	2.0	0.8	0.3	0.6
Other services	4.9	5.8	8.9	2.5	1.7	3.8	4.4	5.9	7.1	2.2	2.6	4.3	1.2	1.0	1.6	1.4	0.9	2.0	1.1	0.4	0.9

Notes: *This table shows the sectoral origin of the value added of China's final exports. E.g. between 2015 and 2018, 3.8% of the value added linked to the machinery sector in China's exports originated in the EU-27, 1.2% originated in South Korea and in the US, 3.3% in Japan and 0.4% in ASEAN countries. The data refer to the average for the years 1995-2000 (before China joined the WTO in 2001), 2002-2007 (after China joined the WTO, pre-global financial crisis) and 2015-2018 (the most recent years). We use information from the latest update of the OECD's TiVA database.*
Source: *BPI Research, based on OECD TiVA data (November 2021).*

2. We use the most recent update (November 2021) of the OECD's TiVA (Trade in Value Added) database. This data allows us to identify the actual origin of the goods and services that are received in, consumed in and exported from a given country. Compared to a more standard analysis based on gross trade flows (depending on the direct source of imports), we can interpret the TiVA data, presented here, as net data. That is, a portion of the content of a given country's gross imports will originate within the country itself. As an example, if a country which exports machinery relocates part of its production process to a neighbouring country before later assembling the final product ready for it to be re-exported (or consumed), the TiVA data would remove this «bias». For further details, also see the Focus «European dependence on Russia: a primary issue» in the MR04/2022.

«other services» subcomponent (which includes professional, scientific and technical services), China's dependence on foreign imports has decreased significantly, which is a further sign of the rapid structural transformation that has been underway in the country over the past two decades. In this regard, there has also been a relative «decoupling» (i.e. lower dependence) with respect to advanced Asian economies such as Japan and South Korea, which is particularly visible in some of the more cutting-edge sectors, while the country's dependence on ASEAN and other BRICS countries has increased in sectors such as agriculture, mining and less advanced manufacturing (e.g. textiles). Taken together, these trends confirm the Asian giant's growing sectoral specialisation and economic integration into global value chains.

Similarly, it is also interesting to analyse the composition of China's exports according to their origin. In this case, we classify exports according to the geographical and sectoral origin of the intermediate goods that are incorporated into the final exported goods or services.[3] This exercise reveals that, between 2015 and 2018, 8.5% of the VA in China's final exports linked to the computer and electronics sector originated in South Korea, 2.8% originated in the US, 2.7% in ASEAN countries, 2.6% in Japan and only 1.7% in the EU. On the other hand, in this map the deep links between the chemical-pharmaceutical, machinery and transportation vehicle industries in Europe and China's business fabric are clear, as is the significant presence of European services (which account for around 3% of the total VA of services in China's final exports).

The low degree of penetration of the European electronics sector in China's exports, particularly when compared to the significant presence of other trading partners, is a clear sign of Europe's lagging leadership in this sector, which is not only highly competitive but also has some of the most integrated supply chains at the international level. In a new era of «technological competition» between blocs, this trend of Europe falling behind in the sector may be an early indicator of the difficulties in balancing a commitment to implementing a stronger industrial policy in the sphere of technology, on the one hand, and an increasing attachment to (or greater dependence on) geopolitical allies, on the other.[4]

What does the future hold for EU-China trade relations?

China's central role in global value chains is not new. This role has arisen precisely as a result of China's opening up to the outside world in recent decades. Economic links between countries and regions – or interdependencies – have thus developed over the years, with significant added benefits for both parties. Today, it can be said that China is as economically dependent on the EU as the EU is on China.

There are some important nuances, however. The electronics sector is a particularly interesting case, due to the nuances it reveals and because of its key role in the technological development model of the future, in an era in which automation, artificial intelligence and big data will be central to the economy, society and the rethinking of the new world geopolitical order. Thus, the EU has recently «joined forces» with its first-choice ally, the US, to form a new forum for discussion on this subject: the Trade and Technology Council (TTC).[5]

A potential decoupling between China and the EU would be particularly difficult for both sides. If China's «electronic footprint» in the EU is very significant, the «technology footprint» of Europe (and the US) in China is no less so, and it materialises in several key sectors such as machinery and advanced services. While it is clear that China is no longer just the world's factory, in many areas it is the links with its main trading partners that allow China's industry to be internationally competitive. A more abrupt decoupling between blocs would thus deal a heavy blow to the architecture of global value chains, with unpredictable ramifications for the global economy. It has recently become clear that geopolitics will play a central role in the coming years, putting an end to a period that has been repeatedly referred to as the «holiday from history».[6] To this extent, in order to know how much the EU will depend economically on China, and vice versa, by the end of this decade, we would need to answer another question: what will the world look like in 2030?

Luís Pinheiro de Matos

3. Technically, this is a perspective according to the «sectoral origin of the value added», not the exporting sector. For instance, in this classification, an exported textile garment is «split up» according to the origin of the machinery used on the production line, the electronics in those machines, and the energy and services required to market and sell the garment. Similarly, although a car exported by China has a significant percentage of its value added linked to the Chinese motor vehicle and trailer sector, this breakdown allows us to identify the portion of the car's value added which originates in the German machinery sector or the ASEAN textile sector.
4. In the Focus «EU and China: mapping out a strategic interdependence» in the MR05/2022, we saw that 18% of the final European demand for computers and electronics originated in China, which means that China's «electronic footprint» in the EU is even more significant than Russia's «energy footprint» in the bloc.

5. The Trade and Technology Council was created in 2021 as a forum for proposing a common agenda on matters related to trade and technology. It is organised by specialised working groups, with the aim of nurturing cooperation between them in establishing technology standards and in matters related to supply chain security and data governance. See C. Canals and L. Pinheiro de Matos (2022), «The Trade and Technology Council: the new window for European Union-United States collaboration» in *China's geoeconomic strategy and its implications for Europe. A view from Barcelona*, CIDOB Centre for International Affairs (forthcoming publication).
6. See, for example, H. A. Conley (2019). «Transatlantic Relations: the Long Holiday from History is Over», CEPOB Policy Brief 6-19, College of Europe.

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

UNITED STATES

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Activity									
Real GDP	–3.4	5.9	5.7	3.7	1.8	1.9	–	–	–
Retail sales (excluding cars and petrol)	2.1	17.5	16.3	11.2	7.8	8.5	7.8	6.7	...
Consumer confidence *(value)*	101.0	112.7	112.9	108.1	103.4	102.2	102.2	101.4	108.3
Industrial production	–7.2	4.9	4.5	4.8	4.5	4.0	3.3	2.5	...
Manufacturing activity index (ISM) *(value)*	52.5	60.6	60.1	57.8	54.8	52.2	50.2	49.0	48.4
Housing starts *(thousands)*	1,396	1,605	1,679	1,720	1,647	1,450	1,434	1,427	...
Case-Shiller home price index *(value)*	228	267	284	299	314	310	304	...	...
Unemployment rate *(% lab. force)*	8.1	5.4	4.2	3.8	3.6	3.6	3.7	3.6	3.5
Employment-population ratio *(% pop. > 16 years)*	56.8	58.4	59.3	59.9	59.9	60.0	60.0	59.9	60.1
Trade balance [1] *(% GDP)*	–3.2	–3.6	–3.6	–3.9	–4.0	–3.9	–3.9	–3.9	...
Prices									
Headline inflation	1.2	4.7	6.7	8.0	8.6	8.3	7.7	7.1	...
Core inflation	1.7	3.6	5.0	6.3	6.0	6.3	6.3	6.0	...

JAPAN

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Activity									
Real GDP	–4.5	2.1	0.9	1.2	1.6	1.5	–	–	–
Consumer confidence *(value)*	31.0	36.3	38.3	34.8	33.1	31.2	29.9	28.6	30.3
Industrial production	–10.6	5.6	1.1	–0.6	–3.6	4.0	3.8	–1.2	...
Business activity index (Tankan) *(value)*	–19.8	13.8	18.0	14.0	9.0	8.0	–	–	–
Unemployment rate *(% lab. force)*	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	...
Trade balance [1] *(% GDP)*	0.1	–0.3	–0.3	–1.0	–2.0	–3.0	–4.3	–4.6	...
Prices									
Headline inflation	0.0	–0.2	0.5	0.9	2.4	2.9	3.8	3.8	...
Core inflation	0.2	–0.5	–0.7	–0.9	0.8	1.5	2.5	2.8	...

CHINA

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Activity									
Real GDP	2.2	8.4	4.0	4.8	0.4	3.9	–	–	–
Retail sales	–2.9	12.4	3.5	1.6	–4.9	3.5	–0.5	–5.9	...
Industrial production	3.4	9.3	3.9	6.3	0.6	4.8	5.0	2.2	...
PMI manufacturing *(value)*	49.9	50.5	49.9	49.9	49.1	49.5	49.2	48.0	47.0
Foreign sector									
Trade balance [1,2]	524	681	681	728	824	907	906	904	...
Exports	3.6	30.0	23.1	15.7	12.9	10.0	–0.6	–9.0	...
Imports	–0.6	30.0	23.7	10.6	1.3	0.7	–0.7	–10.6	...
Prices									
Headline inflation	2.5	0.9	1.8	1.1	2.2	2.7	2.1	1.6	...
Official interest rate [3]	3.9	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7
Renminbi per dollar	6.9	6.5	6.4	6.3	6.6	6.9	7.2	7.2	7.0

Notes: *1. Cumulative figure over last 12 months. 2. Billion dollars. 3. End of period.*
Source: *BPI Research, based on data from the Department of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Standard & Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Refinitiv.*

EURO AREA

Activity and employment indicators

Values, unless otherwise specified

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Retail sales *(year-on-year change)*	–0.8	5.5	4.4	6.1	1.1	...	–2.6	–2.8	...
Industrial production *(year-on-year change)*	–7.6	9.0	0.3	–0.2	0.4	...	3.4	...	...
Consumer confidence	–14.1	–7.4	–7.6	–13.7	–22.3	–26.9	–27.5	–23.9	–22.2
Economic sentiment	88.3	110.8	116.0	110.9	104.0	96.5	93.0	94.0	95.8
Manufacturing PMI	48.6	60.2	58.2	57.8	54.1	49.3	46.4	47.1	47.8
Services PMI	42.5	53.6	54.5	54.1	55.6	49.9	48.6	48.5	49.8
Labour market									
Employment (people) *(year-on-year change)*	–1.5	1.4	2.4	3.0	2.6	...	–	–	–
Unemployment rate *(% labour force)*	8.0	7.7	7.1	6.9	6.7	...	6.5	6.5	...
Germany *(% labour force)*	3.7	3.6	3.3	3.1	3.0	...	3.0	3.0	...
France *(% labour force)*	8.0	7.9	7.5	7.3	7.6	...	7.1	7.0	...
Italy *(% labour force)*	9.3	9.5	9.0	8.5	8.1	...	7.9	7.8	...
Real GDP *(year-on-year change)*	–6.3	5.5	4.8	5.5	4.2	2.3	–	–	–
Germany *(year-on-year change)*	–4.1	2.8	1.2	3.5	1.7	1.3	–	–	–
France *(year-on-year change)*	–7.9	7.2	5.1	4.8	4.2	1.0	–	–	–
Italy *(year-on-year change)*	–9.1	7.0	6.5	6.4	5.0	2.6	–	–	–

Prices

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
General	0.3	2.6	4.6	6.1	8.0	9.3	10.6	10.1	9.2
Core	0.7	1.5	2.4	2.7	3.7	4.4	5.0	5.0	5.2

Foreign sector

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Current balance	1.8	2.6	2.6	1.8	0.7	–0.3	–0.4	...	...
Germany	7.0	7.4	7.4	6.6	5.4	4.2	3.9	...	...
France	–1.8	0.4	0.4	0.1	–0.4	–1.3	–1.6	–1.8	...
Italy	3.9	3.1	3.1	2.1	0.9	–0.5	–0.6	...	...
Nominal effective exchange rate [1] *(value)*	**93.8**	**94.2**	**92.7**	**92.5**	**90.1**	**88.9**	**90.5**	**92.2**	**...**

Credit and deposits of non-financial sectors

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Private sector financing									
Credit to non-financial firms [2]	6.3	3.5	3.3	4.4	6.1	8.4	8.9	8.4	...
Credit to households [2,3]	3.2	3.8	4.1	4.4	4.6	4.5	4.2	4.1	...
Interest rate on loans to non-financial firms [4] *(%)*	1.2	1.2	1.1	1.2	1.4	1.8	2.5	2.9	...
Interest rate on loans to households for house purchases [5] *(%)*	1.4	1.3	1.3	1.4	1.5	2.1	2.7	2.9	...
Deposits									
On demand deposits	12.9	12.6	10.5	9.1	7.7	6.3	3.4	1.9	...
Other short-term deposits	0.6	–0.8	–1.5	–0.3	0.9	5.3	9.9	12.0	...
Marketable instruments	8.1	11.6	9.9	0.7	2.0	4.3	2.9	8.5	...
Interest rate on deposits up to 1 year from households *(%)*	0.2	0.2	0.2	0.2	0.2	0.4	0.8	1.1	...

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

2023 perhaps less negative than uncertainty suggests

Indicators for 4Q 2022 give mixed signals, suggesting that a contraction can be avoided. Economic activity decelerated in October, reflecting a contraction in industrial production and more moderate, but still robust, growth in services and industrial output. However, the economic climate indicator improved in November and stabilised in December, which may indicate better prospects for output at the end of the year and early 2023. Consumer sentiment improved in December and the indicators for consumption actually suggest continued positive growth, especially with regard to durable goods, namely cars, which in October and November exceeded Q3 sales by around 3% and Q4 21 sales by 20%. These results will likely be reflected in a further reduction in the surplus savings accumulated during the pandemic. In Q3, households used about €2.2 billion of the surplus savings accumulated during confinement, falling to approximately €5.2 billion (2% of GDP). In the same period, the savings rate dropped to 5.1% of disposable income, 0.9 percentage points less than in 2Q. In this environment, after strong growth in 2022, a considerable slowdown in economic activity is expected in the year to come. Despite their importance during periods of higher prices, the fall in surplus household savings was accompanied by an increase in financing costs and a weakening of activity in Portugal's main trading partners. In this context, the Bank of Portugal anticipates that the economy will grow by 1.5% in 2023 (higher than that predicted by BPI Research, which we maintain for the time being at 0.5%, recognising that it is a conservative estimate), after having grown by 6.8% in 2022. The possibility of a contraction remains alive, however, if the risks related to a total cut in gas supplies to Europe by Russia materialise.

Average inflation in 2022 ended at 7.8%. In the last month of the year, global inflation showed signs of deceleration again – falling 0.3% to 9.6% – a reflection of the reduction in the prices of energy goods.This trend should continue into the new year, reflecting less buoyant demand due to the increase in financing costs and the loss of purchasing power associated with price increases. However, this deceleration will be gradual, as higher energy prices still impact the prices of other goods and services - evident in the absence of signs of deceleration in underlying inflation - and because energy and food prices will remain subject to upward pressure as the war in Ukraine drags on. We anticipate that inflation will remain above 5% in 2023, returning to levels close to the ECB's target only in 2024.

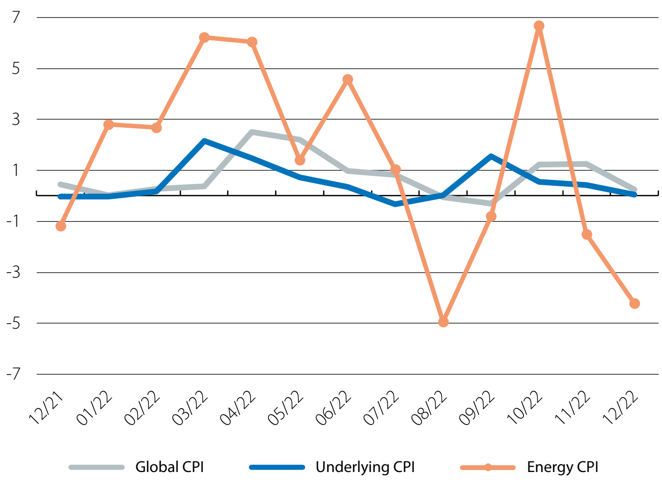
Residential real estate values are showing the first signs of slowing. This is mainly due to a decline in the number of property transactions in Q3 2022 compared to the previous period (-3.2%) and is corroborated by the trajectory of new housing loan operations (also negative, at -13.6% in year-on-year terms in October and for the fourth consecutive month).

Portugal

		2021	2022	2023	2024	Accum. 22-24
GDP	BdP Dec-22	5,5	6,8	1,5	2,0	10,6
(Yearly, %)	*BdP Dec-22 (adverse)*		*6,8*	*–0,4*	*0,3*	*6,7*
	BPI Dec-22		*6,7*	*0,5*	*2,0*	*9,4*
Unemployment rate	BdP Dec-22	6,6	5,9	5,9	5,9	–0,7
(Annual average, %)	*BdP Dec-22 (adverse)*		*5,9*	*7,1*	*7,9*	*1,3*
	BPI Dec-22		*5,9*	*6,4*	*6,1*	*–0,5*
Inflation	BdP Dec-22	1,3	8,1	5,8	3,3	18,1
(Annual average, %)	*BdP Dec-22 (adverse)*		*8,1*	*8,0*	*5,1*	*22,7*
	BPI Dec-22		*7,9*	*5,7*	*2,2*	*16,6*

CPI: monthly variation

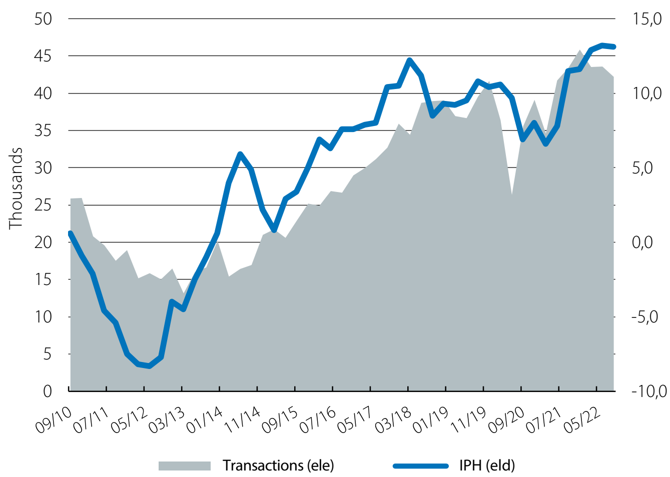
(%)



Source: *BPI Research, based on data from INE.*

Sale of houses and IPH

Number / var. year on year (%)



Source: *BPI Research, based on data from INE.*

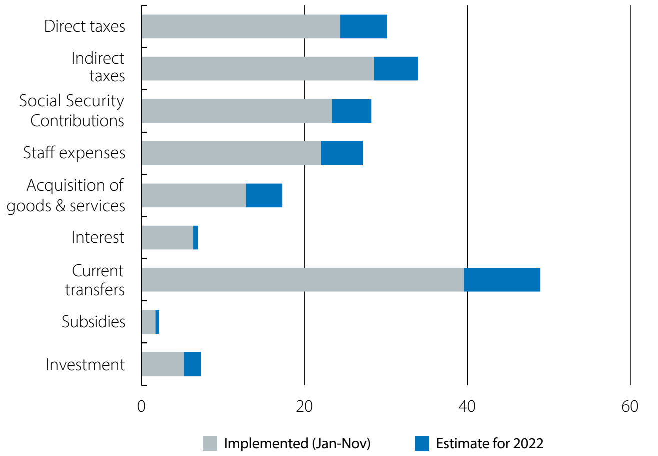
Although the evolution of the index is positive (+2.9% quarter-on-quarter), we consider that all the signs are symptomatic of a worsening financial environment due to a sustained increase in interest rates. We anticipate a slight price adjustment in the final months of 2022, which should continue into 2023. Nevertheless, the average valuation of houses in 2022 should exceed 12% and be situated above the current forecast by BPI Research (11.7%).

The economy's borrowing needs increased to 1.2% of GDP in Q3. By sector, we note the improvement in the State's financing capacity to 1.1% of GDP (accumulated over 4 quarters) and the fact that households, for the first time since 2008, recorded financing needs equivalent to 0.2% of GDP, reflecting the fact that consumption increased by around €3 billion while disposable income increased by only around €1.6 billion. Regarding the budgetary balance, for the Government's forecast (-1.9% of GDP) to be accurate, the deficit would have to be -15.8% of GDP in Q4, an amount higher than that recorded in Q2 2020, during the pandemic, which points to another positive surprise in public accounts in 2022. Meanwhile, the current account deficit narrowed to €3.963 billion in October as a result of a slight reduction in the goods and services deficit and an increase in the income account surplus, via an increase in dividends received. As a percentage of GDP, the current account deficit improved by 0.2% to 1.7%, suggesting that for the year as a whole the deficit could be around 1.5% of GDP, better than the current BPI Research forecast.

The loan portfolio in the non-financial private sector slowed, though the default ratio continued to improve. More specifically, the loan portfolio grew 1.6% year-on-year in November, which compares with growth of 3.0% at the start of the year. On the one hand, the mortgage loan portfolio grew by 3.0% year-on-year (3.1% in October), with new operations demonstrating the effects of rising interest rates and global uncertainty on new loans (although, at the time of writing, only data up to October are known, which already reveal a fall in the monthly amount to levels around €1 billion). On the other hand, the credit portfolio of non-financial companies fell 0.7% year-on-year in November, which contrasts with the behaviour of new operations (+10.7% year-on-year to October), which can be explained by repayments by companies or the sale of credit portfolios by banks. In turn, the NPLs ratio of the non-financial private sector decreased to 4.3% in Q3 (from 4.5% in Q2), -0.8%. year-on-year, with a notable reduction observed in the case of companies (7.2%, -1.1% year-on-year).

Portugal: budgetary implementation (public accounts)

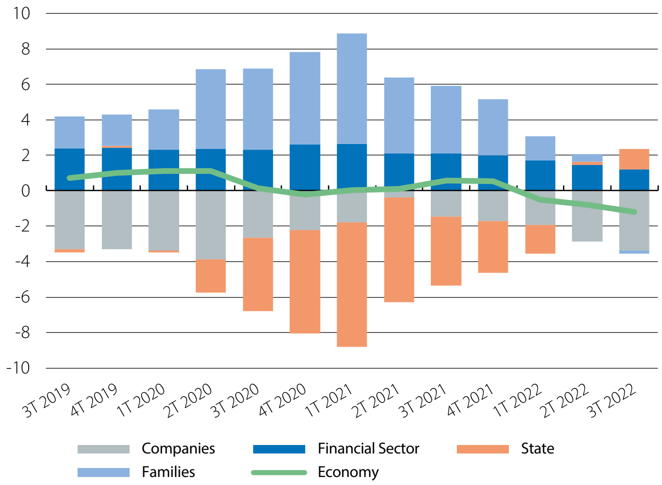
Accumulated in the year to November (billions of Euros)



Source: *BPI Research, based on data from DGO and OGE 2023.*

Capacity (+) / Necessity (-) for borrowing

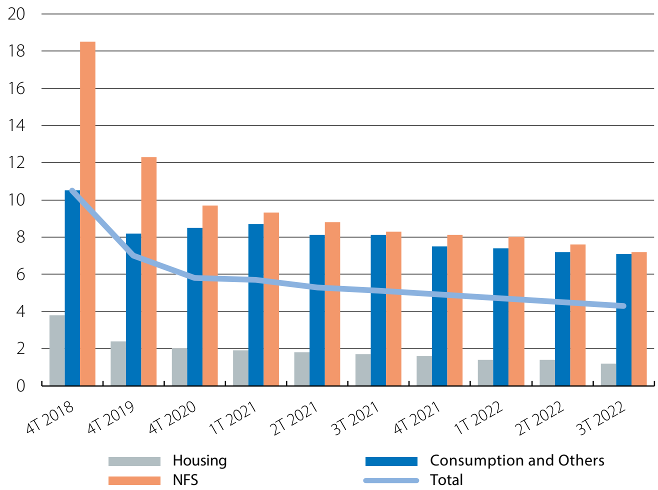
(% of GDP)



Source: *BPI Research, based on data from the INE.*

Ratio of NPLs in the non-financial private sector

(%)



Source: *BPI Research, based on data from Banco de Portugal.*

Resilience: a keyword also for the labour market

Activity dynamics are the main driver of developments in employment. Our central scenario for the Portuguese economy points to real GDP growth of 0.5% in 2023. We anticipate that the strong slowdown in activity should lead to a slight increase in the unemployment rate to 6.4% (+0.5% compared to the current forecast for 2022). In this article, we seek to highlight which sectors are most exposed to current constraints and discuss the risks to the evolution of employment.

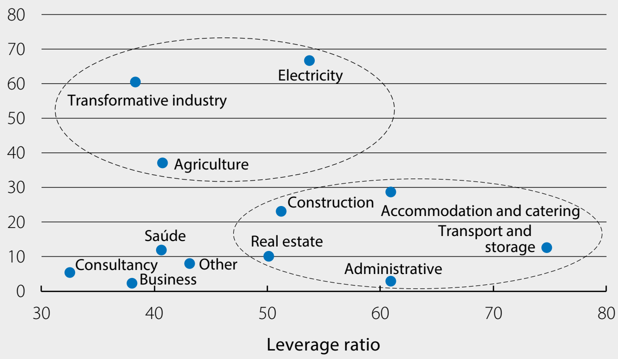
The return of high levels of inflation was the main economic issue of 2022 and the need to control it guided the actions of the main central banks. The ECB's response came later compared than that of the Fed, with a first move to raise rates taking place only in July (+50 basis points). The tightening of monetary policy was reflected in the increase of Euribor rates to their highest levels of 2009, with the 12-month Euribor, at the time of writing, standing at 2.8%. The ECB's movement to increase reference rates is expected to continue in the first months of 2023. This is a pressure factor on many companies' cash flow, which may lead to the need to reduce fixed costs and, ultimately, to layoffs and an increase in the unemployment rate. In Portugal, loans with variable or mixed interest rates represent 61% of the total number of loans and an even higher percentage of their overall value (83%). This means rate movements are reflected with a short time lag in the cost of corporate financing. Normally, the frequency of updating loan rates tends to coincide with the maturity of the index. With more than half of the loans indexed to Euribor having an associated Euribor with a periodicity of 6 months or less, transmission tends to be fast.

Another current constraint relates to the energy crisis. Russia's decision to reduce gas supplies (Nord Stream 1 interruption) places pressure on these markets. This, in parallel with efforts to transition to green energy, should keep prices at higher levels for longer. The ongoing larger weight of energy costs in companies' operating accounts may also constitute a pressure factor on cash flow, generating a need to reduce fixed costs through business stoppages, temporary lay-offs and, as a last resort, redundancies.

Some business sectors are more exposed to monetary policy tightening than others because they are more indebted, more exposed to variable rates, or because financial charges weigh more heavily on their operating account. In turn, other sectors are more exposed to the costs of energy (and commodities in general), either because of the nature of their business model or because of the infrastructure and equipment used in production.

Energy and raw material intensity in production and leverage ratio, by sector of activity

Energy and raw material costs, % of production costs



Note: *The leverage ratio corresponds to the ratio of financing obtained over the sum of equity and financing obtained. Energy and raw material costs are the average electricity, fuel and raw material purchase costs between 2017 and 2019. Production costs correspond to the average expenditure on personnel, FSE and CMVMC between 2017 and 2019.*
Source: *BPI Research, a partir de dados do BdP (relatório de estabilidade financeira.*

In order to stress our baseline scenario, we identified the highest risk sectors considering these two conditioning factors and concluded that they would be the most affected: Construction & Real Estate, Accommodation & Restaurants, Transport & Warehousing, Manufacturing, Agriculture, Electricity and Administrative Activities (see first chart). We then analysed previous crises and found that the sovereign debt crisis, specifically in 2012, was when GDP contracted the most,[1] accompanied by significant job losses (-4.1% and -4.7%, respectively). Next, and somewhat simplistically, we assumed that employment in these sectors would fall by the same margin.[2] This would put the unemployment rate at 8.1%, i.e. representing a 2.2% increase from the 2022 estimate, and would put the rate at the highest level since 2017.

Is such a large increase in the unemployment rate plausible? Making predictions has never been an easy task, but in this context, it is even more complex. We cannot say with certainty that the unemployment rate will not increase to these levels next year, but some factors seem to make it unlikely.

1. We exclude from our analysis the recent crisis triggered by the pandemic, as economic variables behaved in a very particular way in the face of the various support measures. For example, GDP contracted by 8.3% in 2020, but employment fell by "only" 1.9% and the unemployment rate increased by "only" 0.4% to 7.0%, this due to the employment support measures implemented (such as simplified lay-offs).
2. Simplistically, we assume that employment in the remaining sectors would remain unchanged at 2022 levels. It is not certain that this would happen, but we have found in previous crises that the destruction of jobs was not transversal to all sectors. We also assumed that the active population would not change.

Indeed, our central scenario points to a sharp deceleration of the economy, but, at least for the time being, no contraction of economic activity. In previous crises, employment dropped significantly and was accompanied by a downturn in the economy as well.

Additionally, the Portuguese labour market is today more resilient than in the past.[3] Employment is at high levels, far surpassing that recorded in the pre-pandemic period (+3.0% compared to the end of 2019, i.e. + 143,000 jobs), an outcome largely explained by the sectors that require more qualified labour, such as the case of consulting, scientific and technical activities, and ICT. Similarly, the share of individuals with secondary and higher education in the employed population is now considerably higher than in 2011 (66%, up from 41%). Finally, it is also worth highlighting the creation of jobs with more stable contractual conditions, with much of the employment created in the post-pandemic period based on permanent contracts. In this context, the percentage of precarious jobs among the employed population has decreased from 23% in 2008 to 16% in 2022, a reduction that cuts across all sectors.[4] Another factor that may support the labour market has to do with the scarcity of labour, one of the main obstacles to activity mentioned by companies, and which may limit the increase in unemployment in any strong economic slowdown. Indeed, the number of job vacancies is at record highs in the period which began in 2010, reaching especially high levels in some sectors that we have detected as being more vulnerable to the current context of rising interest rates and energy costs, such as manufacturing, and accommodation and catering.[5]

These structural changes increase both the financial costs of redundancy and also those costs associated with the loss of talent, which may be difficult to replace subsequently. On the other hand, some companies in the most affected sectors will be able to pass on cost increases to consumers. In short, the expected (albeit modest) growth of the Portuguese economy in 2023 supports the expectation that the deterioration of the labour market should be contained.

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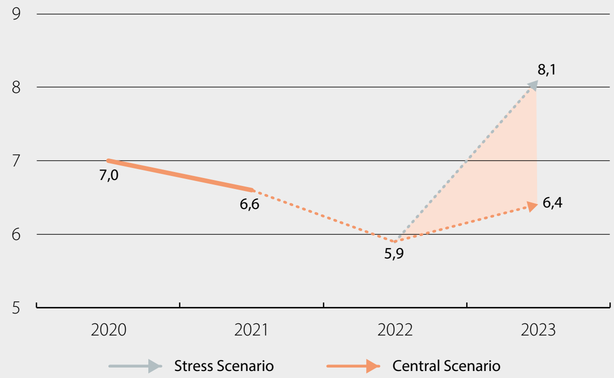
3. For more information, see Focus "The new dynamics of the labour market in the post-pandemic period" in IM 09/2022.
4. The case of the construction sector is particularly notable, with the weight of temporary contracts falling from 31.6% in 2008 to 15% in 2022.
5. These two sectors together represented 28% of vacancies to be filled in 2Q 2022.

Unemployment rate: central scenario and stress scenario (risk sectors)

(%)



Source: *BPI Research, based on data from INE.*

Forecasts of the unemployment rate by various institutions

(%)

	2021	2022	2023	2024
BPI	**6.6**	**5.9**	**6.4**	**6.1**
OECD (November)	–	6.1	6.4	6.2
EIU (November)	–	5.8	6.0	6.1
European Commission (autumn forecast)	–	5.9	5.9	5.7
IMF (October)	–	6.1	6.5	6.4
Government (October) *	–	5.6	5.6	–
Bank of Portugal (October) *	–	5.8	–	–
CFP (September)	–	5.6	5.3	5.1

Note: ** Bank of Portugal and the Government use the concept of national accounts for employment.*
Source: *BPI Research.*

High long-term unemployment and job vacancies at record highs: what is this paradox in the labour market?

After the COVID-19 pandemic, the labour market in Portugal seems to have entered a golden period. Looking at the first graph, where the Beveridge Curve is presented, we see that the unemployment rate is at very low levels and is accompanied by a vacancy rate at all-time highs (around 1.4%).

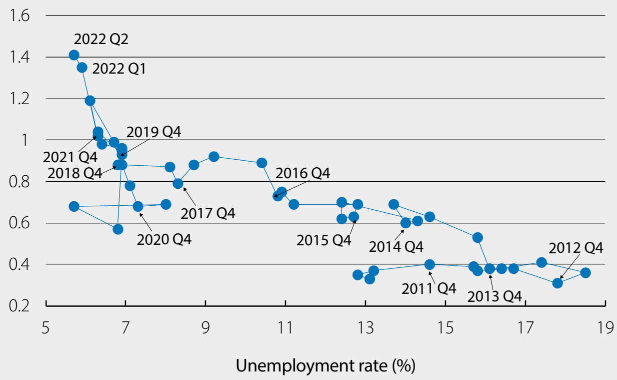
It seems paradoxical that this should be the case, when the country continues to have such high long-term unemployment (despite a huge reduction since 2014, when it accounted for almost 60% of unemployment). Indeed, the share of the unemployed in this situation for a year or more (long-term unemployment) reached 46.4% of the unemployed population in the first three quarters of 2022. If we look at very long-term unemployment (over 2 years), the percentage is 29.4%. In both metrics, Portugal recorded the fourth-highest percentage among Eurozone countries, where the average is 40.4% and 25.4%, respectively. In addition, a worker who loses his or her job in Portugal takes 22 months on average[1] to find a new job, twice as long as in the Eurozone.[2] What explains this apparent paradox between historical highs in unfilled vacancies and such a high percentage of long-term unemployment? In an article published in 2015,[3] the Bank of Portugal pointed out that education and age could explain the high long-term unemployment in Portugal.

The mismatch between the skills that companies seek and the skills that candidates have may explain the context of high unemployment and a high number of unfilled vacancies. It is therefore possible that the lack of qualifications and/or the mismatch of individuals' qualifications is a cause of high long-term unemployment, but it may also be a consequence of it, since long-term unemployment leads to the loss of qualifications of the unemployed and erosion of human capital.[3] Looking at the level of education of the long-term unemployed in Portugal, we see that 44.2% had a basic level of education or no education in 2021 (latest data available), compared to 40.3% in the average of the Eurozone. However, in the post-pandemic period, individuals are found to be more aware of the importance of training and education for their successful reintegration into the labour market, with 17.1% of the long-term unemployed participating in education and training activities in 2021, up from 11% in 2019.

1. Considering the average duration recorded in the first three quarters of 2022; data provided by INE.
2. OECD, 2021.
3. Banco de Portugal (2015). "O mercado de trabalho português e a grande recessão." Boletim económico.

Beveridge curve for Portugal

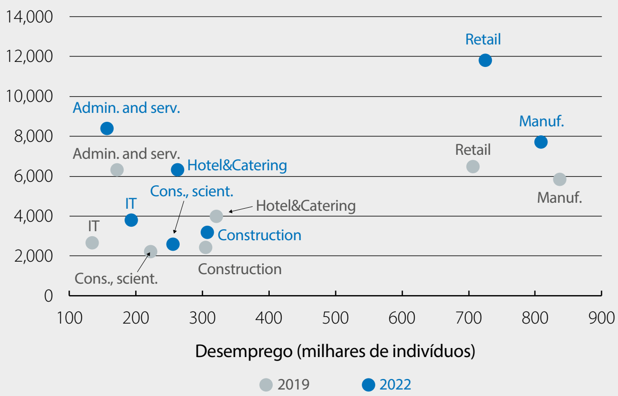
*Job vacancy rate (%) **



Note: ** Relates the number of job vacancies to the sum of the number of employees and the number of job vacancies.*
Source: *BPI Research, based on data from the INE and Eurostat.*

*Job vacancies and unemployment, by sector (2019 vs. 2022) **

Job vacancies (number)



Note: ** Average recorded in the first half of 2022.*
Source: *BPI Research, based on data from the INE and Eurostat.*

This mismatch between qualifications in demand and those on offer may justify what was seen between 2019 and 2022 in sectors such as trade, where the increase in unemployment was accompanied by a significant increase in the number of vacancies (visible in the second graph). The future will be even more challenging with the issue of digital transition. Skills such as digital literacy, critical thinking and data literacy are among the 10 skills that will experience higher demand in the next 10 years.[4] This in a context where 27% of the population in Portugal has a low level (or no) digital skills, a percentage that exceeds 33% in the case of the unemployed.

Another explanation for long-term unemployment has to do with age, and this could be particularly challenging in

4. Forbes (2022). "The Top 10 Most In-Demand Skills For The Next 10 Years."

the coming years in Portugal (and in Europe) with an ageing population. The long-term unemployment rate increases with age. If, in 2021, 27% of the unemployed aged between 15 and 29 were unemployed for more than 12 months, that proportion was 53% among the unemployed aged between 45 and 49 and reached 59% in the case unemployed aged 50 or over.

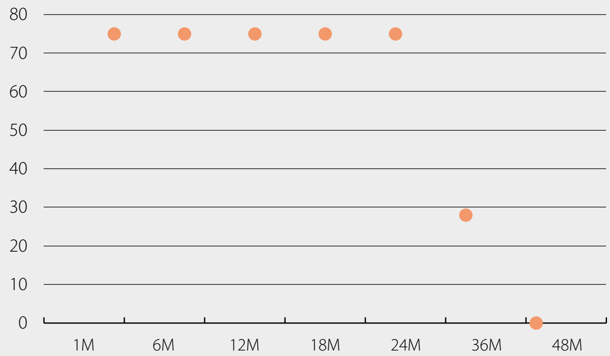
This may be associated with the level of education and seniority in the same company. Looking at the working population as a whole, as we move up the age ladder, we find that older individuals have lower levels of education. Indeed, 35% of active individuals aged between 55 and 64 and 47% of individuals between 65 and 89 have a basic level of education or none, which contrasts with the age group of 25-34 years (3%). The lower educational level among older people makes it more difficult for them to re-enter the labour market in case of unemployment, which contributes to longer periods of unemployment and discourages job seeking.[3] It should also be borne in mind that older people usually have stronger attachments to companies than younger people, who are more likely to change jobs in search of better working conditions (a phenomenon known as job-hopping). This situation also affects older unemployed people emotionally, demotivating them to return to the labour market, aggravated by the fact that they feel helpless when faced with the need to look for a new job after years in the same company.[5] Other possible explanations have to do with the system for granting unemployment benefits. It is important to bear in mind that unemployment benefits are extremely important, insofar as they allow the unemployed to consider the choice of a new job opportunity and avoid fluctuations in income and consumption.[3] Depending on their generosity, however, these benefits can discourage the search for a job and lead to longer periods of unemployment. In this respect, it is important to look at the third graph, where it is possible to see that an individual in the first month of unemployment receives about 75% of the income he or she received when working, a percentage that remains unchanged in the following two years, which may point to a certain generosity of the Portuguese system.

There are certainly other reasons for long-term unemployment, such as a person's previous economic activity. However, at this point in time, it seems more likely that what explains the high number of unfilled job vacancies and (ongoing) high levels of long-term unemployment is the mismatch between the skills that companies are looking for and what candidates have to offer,[6] taking into account the reporting made by companies in confidence surveys. For example, in the manufacturing industry, of the 43% that reported obstacles to their activity in October, almost 29% pointed out difficulties in hiring qualified personnel (the second main cause), a percentage that increases to almost 67% of the companies in construction and public works that reported difficulties in their activity, and to almost 86% in the case of companies in accommodation and catering (in both cases, pointed to as the main obstacle). A greater focus on improving people's skills is therefore extremely important, one of the objectives of the RRP itself, which allocates around 1.37 billion euros to improving qualifications and skills.

Vânia Duarte

Net unemployment replacement rate *

(%)



Note: *Net unemployment replacement rates measure the proportion of net income that remains after x months of unemployment. Values for a single individual, without children, without other social support, in 2021.*
Source: *BPI Research, based on data from the OECD.*

5. Adecco Foundation (2019). "TuEdadEsUnTesoro: mayores de 55 años en el mundo laboral."
6. The Bank of Portugal (see source in footnote 3) did not consider that the mismatch between the conditions offered by companies and those that candidates would be willing to accept justified long-term unemployment.

External debt: on the right path, but with a need for stable reduction factors

The deterioration of Portugal's external accounts[1] is a cause for concern due to the impact it can have on the evolution of external indebtedness, for which Portugal's ratios are among the highest in the eurozone.[2] This concern is especially pressing at a time when increased financing costs associated with rising interest rates in the euro area are expected.

For this reason, we decided to look at how Portugal's external indebtedness (measured by the international investment position, IIP[3]) has evolved and how it is distributed among the various types of instruments, in order to understand to what extent the economy may be exposed to a situation of financial stress associated with any event that aggravates the perception of market risk.

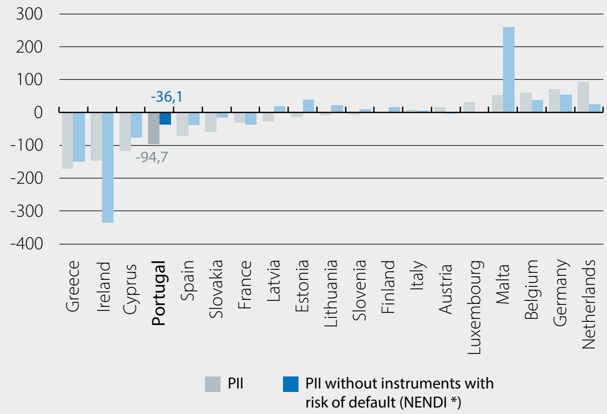
Although we are not reassured by the fact that Portugal is among the countries with the highest level of external debt, we are satisfied with its evolution and composition, as a distribution by financing instrument reveals a large weight of the components without default risk, giving a comfortable degree of stability to the capital received. Foreign direct investment (FDI) – an asset with greater stability and no risk of default – represents an important share of external indebtedness, but the challenge of improving the capacity to attract foreign investment to productive and higher value-added sectors remains open. This would favour the expansion of export capacity in a stable way, an improvement in the current account balance and a stable reduction in external indebtedness.

Despite the recent deterioration of the current account, we can see that the IIP has evolved positively, evident in the behaviour of the ratio to GDP and in the reduction of the nominal value of Portugal's external liabilities. Thus, in Q3 2022, the IIP balance amounted to –€201 billion, far from the approximately –220 million recorded in 2018. This favourable trend resulted in the IIP's share of GDP improving to 86.3% in Q3 2022, 20 percentage points less than in 2018.

The improvement in Portugal's external position is also visible when looking at the components of the IIP that

International Investment Position 2021

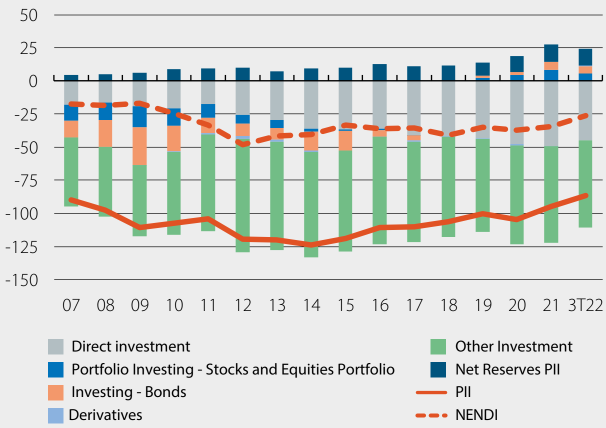
(% of GDP)



Note: ** NENDI=PII-IDE-Inv. Portfolio (Stocks and Equities)-Intra-Company Cross-Border FDI Debt.*
Source: *BPI Research, based on data from Eurostat.*

PII: composition by instrument

(% of GDP)



Source: *BPI Research, based on data from Banco de Portugal.*

are most vulnerable to changes in the perception of market risks and subject to possible default. Indeed, the components of the IIP at risk of default (NENDI[4]) represented around –27% of GDP in Q3, 15% less than in 2018,while its value amounted to 62 billion euros, 22 billion less than in 2018. In addition to the improvement in exposure risk via a reduction in the amount, an additional guarantee of stability is provided by the fact that the largest share of this is in the form of loans obtained from non-residents to public sector,

1. See «External Accounts - Better structure despite the economic climate» in IM11.
2. According to Eurostat, Portugal's International Investment Position in 2021 represented -94.7% of GDP. Only Greece (-171.9%), Ireland (-145.5%) and Cyprus (-117.8%) are worse than Portugal.
3. Banco de Portugal: Net external debt is closely associated with the international investment position. The latter includes equity instruments, financial derivatives and gold (bar) assets, which are excluded from the net external debt calculation. In 2021, these 3 components represented 15% of GDP.

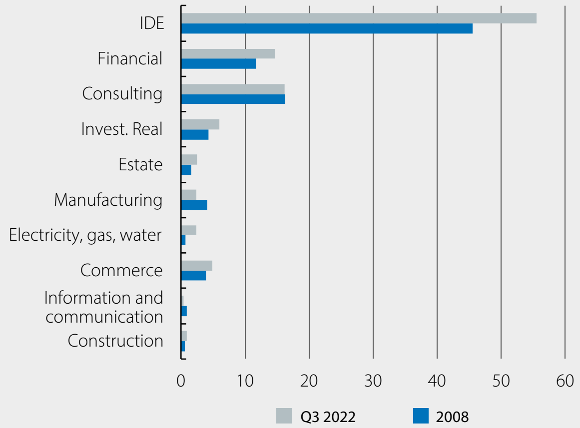
4. The NIIP excluding non-defaultable instruments removes foreign direct investment in equity, equity investments and intra-company cross-border FDI debt (NENDI) from the total NIIP. The values we present are calculated by us and represent a proxy for the indicator, slightly different from the annual values calculated by Eurostat.

which includes around 57 billion relating to the EFAP[5] and around 6 billion to the SURE.[6]

The non-defaulting components represent about 60% of GDP and are mostly made up of foreign direct investment. At the end of Q3, this amounted to €165 billion, mostly concentrated in investments in financial activities and real estate. The former represent 22% of total FDI (26% in 2008) and real estate investment 16% of the total, a very considerable increase from around 10% in 2008. The evolution of investment in the electricity, gas and water sectors was very positive, representing 7% of the total (1.5% in 2008). Less positive has been the evolution of FDI in the industrial sector, falling from 9% of the total in 2008 to 8% in 3Q22. And, as we mentioned at the start of this analysis, greater investment in the industrialisation of the economy will be important for increasing the country's productive and export base, which is fundamental for a steady reduction in the external debt.

Teresa Gil Pinheiro

Foreign direct investment by sector
(% of GDP)



Source: *BPI Research, based on data from Banco de Portugal.*

5. The Economic and Financial Assistance Programme (EFAP) agreed in May 2011 between Portugal, the European Union and the IMF aimed at restoring the confidence of international financial markets, promoting competitiveness and sustainable economic growth.
6. SURE: temporary support instrument through loans to mitigate the risks of unemployment during the pandemic period.

Activity and employment indicators

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

	2020	2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	10/22	11/22	12/22
Coincident economic activity index	–5.3	3.5	7.3	7.0	6.0	...	5.4	5.2	...
Industry									
Industrial production index	–6.9	4.5	–2.1	2.0	1.8	...	–1.9	–0.3	...
Confidence indicator in industry *(value)*	–15.3	–5.3	–0.1	–2.3	–4.7	–6.6	–6.3	–6.6	–6.9
Construction									
Building permits - new housing (number of homes)	0.7	13.5	45.6	–22.6	4.0	...	36.4	...	...
House sales	–11.2	20.5	25.8	4.5	–2.8	...	–	–	–
House prices *(euro / m² - valuation)*	8.3	8.6	11.5	14.2	15.8	...	13.5	13.9	...
Services									
Foreign tourists *(cumulative over 12 months)*	–76.2	51.5	259.9	298.1	244.4	...	199.8	169.7	...
Confidence indicator in services *(value)*	–19.0	0.1	13.0	21.1	17.9	8.1	11.1	7.6	5.8
Consumption									
Retail sales	–3.0	4.9	12.7	3.1	3.3	...	1.0	–2.0	...
Coincident indicator for private consumption	–6.2	4.8	7.1	5.6	3.6	...	2.5	2.1	...
Consumer confidence index *(value)*	–22.4	–17.2	–19.3	–30.5	–31.8	–37.0	–35.2	–37.7	–38.1
Labour market									
Employment	–1.9	2.8	4.7	1.9	1.1	...	0.8	...	...
Unemployment rate (*% labour force*)	7.0	6.6	5.9	5.7	5.8	...	6.1	...	...
GDP	**–8.3**	**5.5**	**12.0**	**7.4**	**4.9**	**...**	**–**	**–**	**–**

Prices

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

	2020	2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	10/22	11/22	12/22
General	0.0	1.3	4.3	8.0	9.1	10.0	10.1	9.9	9.6
Core	0.0	0.8	3.1	5.5	6.5	7.2	7.1	7.2	7.3

Foreign sector

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

	2020	2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	10/22	11/22	12/22
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	–10.3	18.3	21.2	18.9	22.8	...	24.4	...	...
Imports *(year-on-year change, cumulative over 12 months)*	–14.8	22.0	33.3	31.5	35.2	...	35.8	...	...
Current balance	**–2.1**	**–2.5**	**–4.3**	**–4.7**	**–4.3**	**...**	**–4.0**	**...**	**...**
Goods and services	–3.9	–5.7	–6.9	–6.4	–5.1	...	–5.0	...	...
Primary and secondary income	1.8	3.2	2.7	1.7	0.8	...	1.1	...	...
Net lending (+) / borrowing (–) capacity	**–0.1**	**1.2**	**–0.8**	**–1.3**	**–2.1**	**...**	**–1.7**	**...**	**...**

Credit and deposits in non-financial sectors

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

	2020	2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	10/22	11/22	12/22
Deposits [1]									
Household and company deposits	10.0	9.3	8.9	8.2	7.8	...	8.0	6.5	...
Sight and savings	18.8	16.3	15.3	12.9	11.2	...	10.8	7.3	...
Term and notice	1.2	1.2	1.1	2.3	3.3	...	4.4	5.4	...
General government deposits	–21.0	–4.1	9.8	8.5	–0.1	...	4.7	10.7	...
TOTAL	**8.9**	**9.0**	**8.9**	**8.2**	**7.5**	**...**	**7.9**	**6.6**	**...**
Outstanding balance of credit [1]									
Private sector	4.6	2.9	2.8	2.7	2.0	...	1.8	1.6	...
Non-financial firms	10.5	2.2	1.2	1.0	–0.1	...	–0.4	–0.7	...
Households - housing	2.1	3.3	3.0	3.8	3.3	...	3.1	3.0	...
Households - other purposes	–1.1	3.1	6.4	3.3	3.2	...	3.0	2.8	...
General government	–4.2	3.8	5.3	–1.3	–1.5	...	0.6	–0.2	...
TOTAL	**4.2**	**2.9**	**2.8**	**2.5**	**1.9**	**...**	**1.8**	**1.5**	**...**
NPL ratio *(%)* [2]	**4.9**	**3.7**	**3.6**	**3.4**	**3.2**	**...**	**–**	**–**	**–**

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

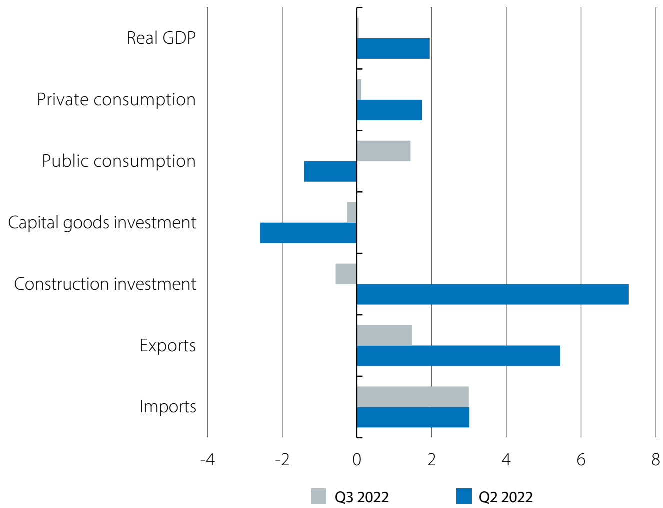
The Spanish economy remains resilient

The National Statistics Institute improves the growth profile of the last few quarters. Specifically, it has revised GDP growth for the first half of 2022 upwards and, instead, has slightly revised down the estimated growth for Q3 last year. Thus, according to the new estimate, GDP in Q1 grew by 0.1% quarter-on-quarter (previously –0.2%) and in Q2 it grew by 2.0% (previously 1.5%). GDP growth in Q3 2022 remained virtually unchanged, going from 0.2% to 0.1% quarter-on-quarter. Following these changes, we will soon revise our GDP growth forecast for 2022 as a whole. Currently, it stands at 4.5%, and will probably end up above 5%.

Reduced strength of domestic demand in Q3. The slight downward revision of GDP in Q3 is primarily due to the reduced strength of private consumption, which has gone from growing by 1.1% quarter-on-quarter to 0.1% in the new estimate. This lower growth in Q3 has been offset by upward revisions in the previous two quarters, so consumption remains 5.4% below the pre-pandemic level (Q4 2019), the same gap as was initially estimated. Investment growth, meanwhile, has also been revised downwards by 0.7 pps to –0.1% quarter-on-quarter, while public consumption has been revised upwards by 0.8 pps to 1.4% quarter-on-quarter. The upward revision of public consumption has been unable to offset the lower growth of the other components, so domestic demand has gone from contributing 1.0 pp to quarter-on-quarter GDP growth to contributing 0.5 pps. Foreign demand, on the other hand, had a less negative quarter-on-quarter contribution than initially estimated, at –0.4 pps versus the previous –0.8 pps.

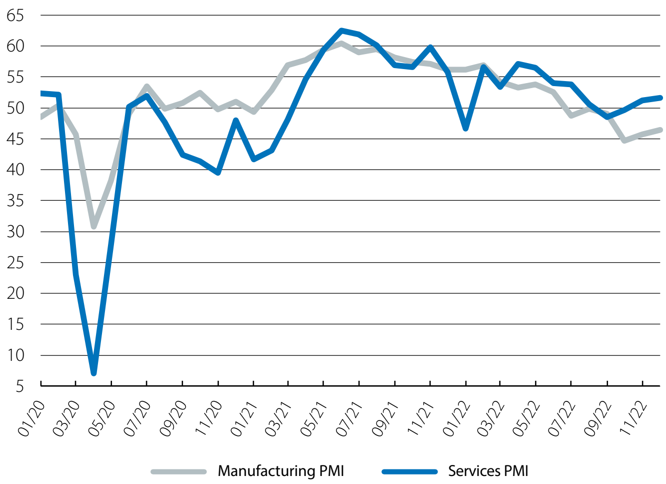
The available indicators suggest a less pronounced weakening than expected in Q4. The indicators for the final quarter of last year offer mixed signals. On the one hand, there is an apparent weakness in the industrial sector, which has been the one most affected by the supply shocks. Specifically, the PMI for the manufacturing sector stood at 45.6 points on average in the quarter, the lowest level since Q2 2020, in addition to an average decline in industrial production in October-November of 1% compared to the previous quarter. On the other hand, the services PMI improved over the course of the quarter and ended up in expansionary territory (51.6 points in December). Also, foreign tourism continues to show significant buoyancy. In November, the number of international tourists grew by 29.2% year-on-year, while their expenditure grew by 43.2%, placing it 6.4% above the level recorded in the same month of 2019. The retail trade index, meanwhile, registered strong growth in November, at 3.8% month-on-month (–0.6% year-on-year). This pushes the average for October-November 2.7% above the average for Q3, hinting at consumption growth in Q4.

Spain: components of demand
Quarter-on-quarter change (%)



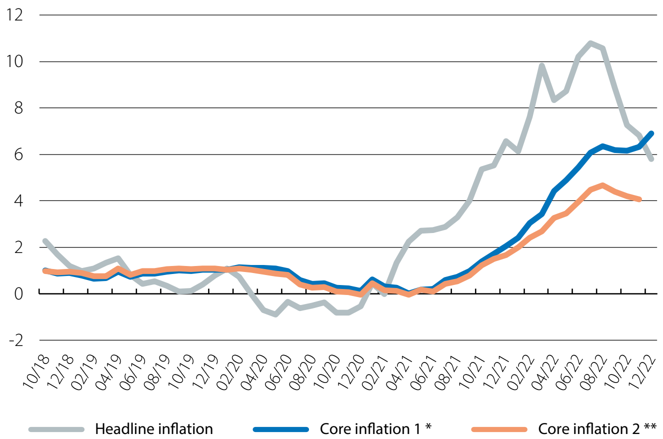
Source: *BPI Research, based on data from the National Statistics Institute.*

Spain: PMI
Level



Source: *BPI Research, based on data from IHS Markit.*

Spain: CPI
Year-on-year change (%)



Notes: ** Excluding unprocessed food and energy. ** Excluding all food and energy.*
Source: *BPI Research, based on data from the National Statistics Institute.*

Job creation weakened in December, but the results for Q4 and for the year as a whole are positive. Social Security affiliation increased in December by 12,640 people, below the average for the month of December in the period 2014-2019 (64,300). In addition, in seasonally adjusted terms this measure registered the first decline since April 2021 (–8,347 registered workers). In any case, for Q4 2022 as a whole, the seasonally adjusted number of registered workers not on furlough grew by 0.6% quarter-on-quarter, barely 1 percentage point less than in the previous quarter, thanks to the strong job growth registered in November. At the 2022 year end, the number of registered workers stood at 20,296,271, meaning that 471,360 jobs were created in the year.

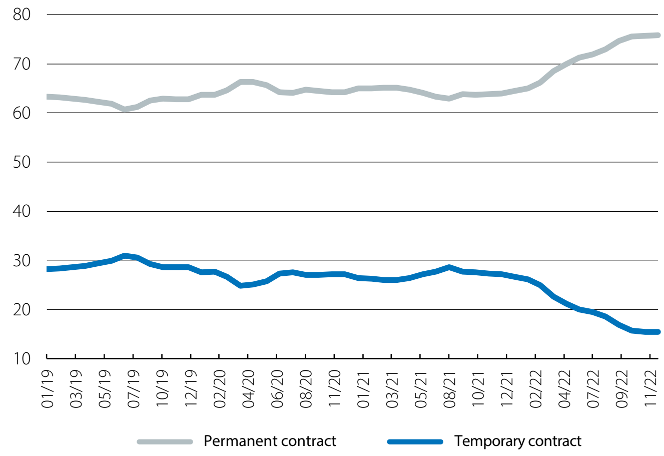
The headline inflation rate continues to moderate thanks to the cooling of energy prices. According to the flash indicator for December, there was a notable moderation in headline inflation, falling from 6.8% in November to 5.8%. This moderation in the headline rate was mainly driven by the energy component. However, the core rate (excluding energy and unprocessed food prices) prolonged its rally and reached 6.9% (6.3% in November), driven above all by higher processed food prices.

Real estate activity holds up well, but the growth of home prices slows. In October, 51,625 home sales took place, 11.4% more than in the same month of the previous year. Although the growth of sales transactions has moderated significantly compared to the year-on-year rates in excess of 20% recorded at the beginning of the year, growth remains resilient considering the context of tightening monetary policy and erosion of household purchasing power due to the high inflation. Looking ahead to the next few months, we expect sales to slow as the increase in rates filters through to lower demand. Home prices according to the National Statistics Institute, meanwhile, increased by 7.6% year-on-year in Q3. Although a significant rate of growth, this is still below that recorded in Q1 and Q2 2022, when it stood at 8.5% and 8.0%, respectively.

A new action plan is approved to combat the inflationary pressures as the budget execution to October indicates a deficit in 2022 below 5.0%. The consolidated general government deficit, excluding local corporations, for the cumulative period from January to October stood at 1.2% of GDP. This figure is lower than the 4.4% of October 2021 and even the 1.5% of October 2019 (the deficit in that year ended up being 3.1% of GDP). The improvement is due to the buoyancy of tax revenues (+16.3% year-on-year on a cumulative basis up to October, which represents 34.5 billion more than in 2021), favoured by the effect of the increase in prices on taxable bases and the resilience of the labour market. Public spending increased by much less, at 2.4% year-on-year to October. On the other hand, the government approved a new action plan to mitigate the impact of inflation in 2023, with a budget of 10 billion euros (see the Focus: «A new action plan to mitigate inflation: the key points» in this same *Monthly Report*).

Spain: registered workers affiliated under the General Scheme by contract type

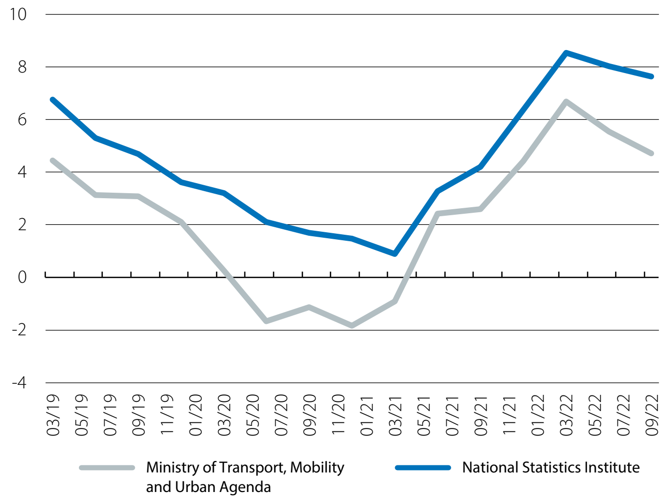
(% of the total registered workers under the General Scheme)



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

Spain: home prices

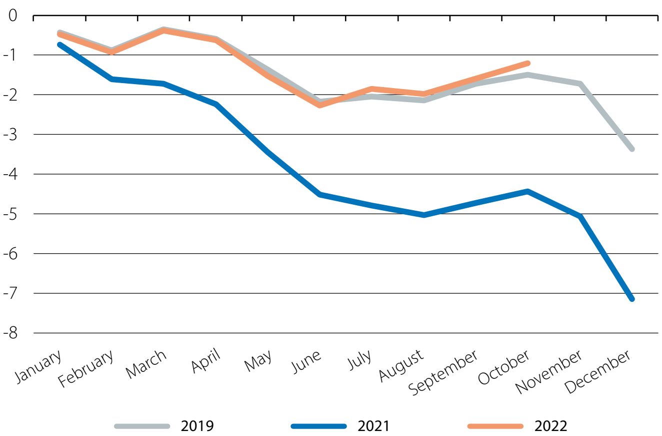
Year-on-year change (%)



Source: *BPI Research, based on data from the National Statistics Institute and the Ministry of Transport, Mobility and Urban Agenda.*

Spain: general government funding capacity/needs

(% of GDP)



Note: *Consolidated data excluding local corporations.*
Source: *BPI Research, based on data from the General Comptroller of the State Administration (IGAE).*

Recent trends in the labour share

In the last three years we have witnessed the outbreak of a pandemic and of war between Russia and Ukraine. Against this turbulent backdrop, it is worth reviewing the recent pattern in the labour share, as this is a key variable which is linked to inequality, competitiveness, technological change and other structural dynamics.[1]

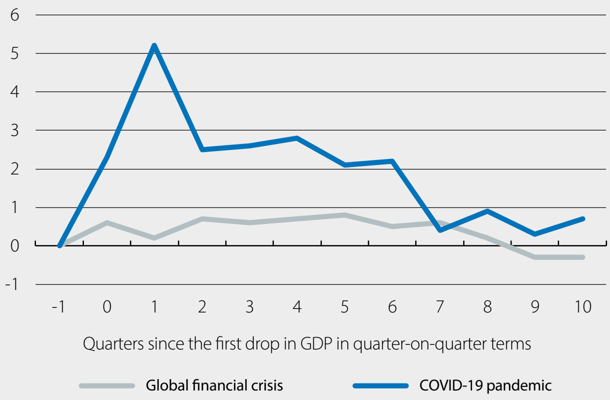
The labour share ratio, usually measured using employee wage data from the quarterly national accounts, typically follows a counter-cyclical pattern. That is, it increases during periods of recession and decreases in expansionary phases. This behaviour is largely due to the fact that, during a crisis, businesses prefer to retain their workers insofar as possible in order to avoid the costs associated with finding employees who fit the required profile when the economy eventually emerges from the crisis. This correlation has tended to be less pronounced in Spain compared to other developed countries, due to the traditionally strong duality of the labour market, which has been reflected in a greater propensity among firms to lay off workers when a recession hits.

In the first chart, we can compare how the labour share has varied with the onset of the Global Financial Crisis (GFC) in 2008 and since the outbreak of the pandemic in 2020. As mentioned earlier, the counter-cyclical pattern of the labour share is clear in both crises. However, it is also apparent that the pattern was far more pronounced during the pandemic than during the GFC. During the pandemic, the labour share increased by 5 pps compared to its pre-crisis level (Q4 2019) and for much of 2020 and 2021 it remained around 3 pps higher. Indeed, according to the latest data for Q3 2022, this ratio still lies around 1 pp higher. In contrast, during the GFC the ratio barely increased by 1 pp at its peak.

This more pronounced counter-cyclical pattern during the pandemic is undoubtedly related to the measures implemented during 2020 to protect household incomes. In particular, the introduction of the ERTE furlough schemes allowed more than three million workers to stop working (either entirely or partially) without losing their jobs. As such, their wages were not as affected as they would have been had they been fired and, moreover, they were able to return to employment much faster.

These economic policies, which have had an impact on the cyclical behaviour of the labour share, have also been reflected in the way in which the drop in economic activity was distributed among the labour force. The

Spain: labour share
Change (pps)



Note: *For the global financial crisis, 0 corresponds to Q3 2008, while for the pandemic it corresponds to Q1 2020.*
Source: *BPI Research, based on data from the National Statistics Institute.*

second chart shows the breakdown of the growth in employee compensation into three factors: remuneration per hour worked (wages), hours worked per employee (intensive margin) and the number of employees (extensive margin).

As can be seen in 2020, and in particular in Q2 of that year, the fall observed in the compensation of employees was largely due to a drop in the number of hours worked per employee (intensive margin), while the contribution of the fall in the number of employees (extensive margin) was much smaller. The fall in employee compensation in 2020 is consistent with the increase in the labour share which we saw in the first chart. That is, the labour share increased because labour incomes fell to a lesser extent than GDP as a whole.[2]

Also, in Q2 2021, the quarter which saw a significant reopening of the economy, it was once again the intensive margin which drove the recovery in employee compensation. This was thanks to the fact that the ERTE furlough schemes allowed the workers affected by such schemes to quickly return to work.

Finally, the chart also shows that, since Q3 2021, wage growth has stabilised and has become clearly more driven by job growth (extensive margin).

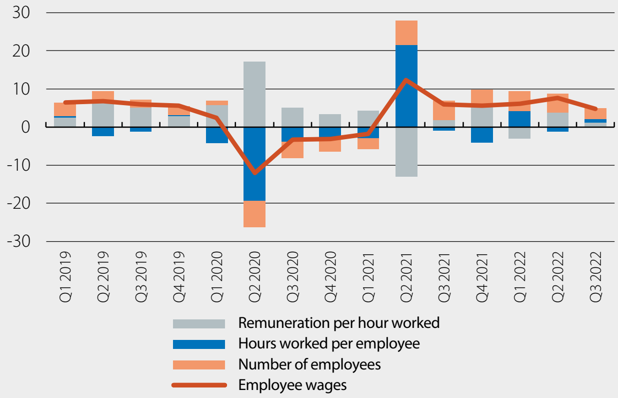
The role of the intensive margin in explaining wage fluctuations stands in stark contrast with the experience during the GFC. As the last chart shows, during the GFC it was the extensive margin, rather than the intensive one, that explained most of the fluctuation in the employee compensation.

1. For many years, the academic economic literature has analysed the steady fall in the labour share. See the Dossier «Labour income share in perspective» in the MR02/2014.

2. For instance, in Q2 2020 the compensation of employees fell by 12.2% while GDP dropped by 21%.

In short, in this article we have seen how the labour share increased during the pandemic to a greater extent than was usually the case in the past. This more counter-cyclical behaviour has its origins in the structural changes in the Spanish labour market. In particular, the ERTE furlough schemes allowed the labour market to adjust by reducing the number of hours worked per employee rather than resorting to mass lay-offs. As such, the impact of the crisis has been distributed among workers more evenly, rather than being concentrated in the group of workers who lost their jobs.[3]

Spain: compensation of employees, breakdown
Contribution to year-on-year growth (pps)



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

Spain: compensation of employees, breakdown
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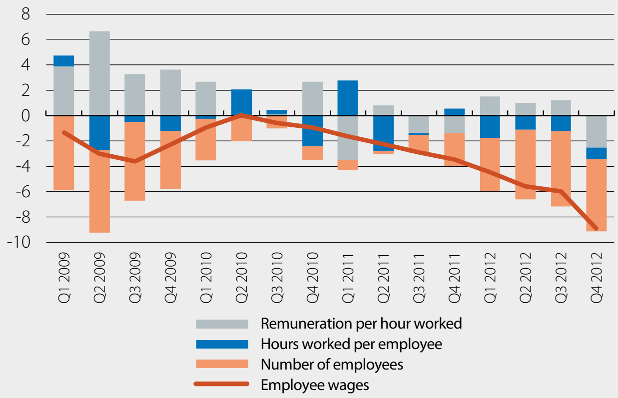

Source: *BPI Research, based on data from the National Statistics Institute.*

3. The article «Wage inequality in Spain returns to the pre-pandemic levels» in the MR07/2022 shows how inequality in Spain recovered pre-crisis levels during the pandemic much more quickly than following the global financial crisis. Again, the differential behaviour of the labour market during the pandemic is one of the key factors behind this outcome.

Activity and employment indicators

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Industry									
Industrial production index	–9.4	8.8	1.7	1.6	4.6	4.7	2.5	...	...
Indicator of confidence in industry *(value)*	–13.6	0.6	5.0	6.8	0.4	–5.2	–3.9	–7.6	–4.8
Manufacturing PMI *(value)*	47.5	57.0	56.9	55.8	53.2	49.2	44.7	45.7	46.4
Construction									
Building permits *(cumulative over 12 months)*	–12.8	4.7	24.6	31.6	18.8	8.7	3.5	...	...
House sales *(cumulative over 12 months)*	–12.5	9.6	32.5	41.8	33.6	23.0	19.1	...	...
House prices	2.1	3.7	6.4	8.5	8.0	7.6	–	–	–
Services									
Foreign tourists *(cumulative over 12 months)*	–77.3	64.7	64.7	313.4	311.7	208.4	167.2	143.7	...
Services PMI *(value)*	40.3	55.0	57.4	52.2	55.9	51.0	49.7	51.2	51.6
Consumption									
Retail sales	–7.1	5.1	0.6	0.4	1.2	0.0	1.0	–0.6	...
Car registrations	–29.3	158.0	–17.1	–7.5	–10.3	3.1	11.7	10.3	–14.1
Consumer confidence index *(value)*	–22.7	–12.8	–13.1	–17.6	–26.4	–33.0	–31.6	–28.7	...
Labour market									
Employment [1]	–2.9	3.0	4.3	4.6	4.0	2.6	–	–	–
Unemployment rate (% labour force)	15.5	14.8	13.3	13.6	12.5	12.7	–	–	–
Registered as employed with Social Security [2]	–2.0	2.5	3.9	4.5	4.8	3.5	3.0	2.7	2.4
GDP	**–11.3**	**5.5**	**6.6**	**7.0**	**7.6**	**4.4**	–	–	–

Prices

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
General	–0.3	3.1	5.8	7.9	9.1	10.1	7.3	6.8	5.8
Core	0.7	0.8	1.7	3.0	4.9	6.2	6.2	6.3	6.9

Foreign sector

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	–10.0	21.2	21.2	26.2	22.2	23.3	23.3	...	...
Imports *(year-on-year change, cumulative over 12 months)*	–14.7	24.8	24.8	36.1	35.2	38.1	37.9	...	...
Current balance	**6.8**	**11.5**	**11.5**	**8.5**	**8.5**	**7.0**	**6.2**	...	...
Goods and services	16.3	17.9	17.9	14.2	15.3	15.7	15.6	...	...
Primary and secondary income	–9.5	–6.4	–6.4	–5.7	–6.8	–8.7	–9.4	...	...
Net lending (+) / borrowing (–) capacity	**11.9**	**22.4**	**22.4**	**19.8**	**21.5**	**19.8**	**19.1**	**...**	**...**

Credit and deposits in non-financial sectors [3]

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

	2020	2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	10/22	11/22	12/22
Deposits									
Household and company deposits	7.5	6.1	5.8	5.2	5.4	5.3	4.1	...	...
Sight and savings	12.3	10.3	9.2	9.3	9.2	8.2	6.1	...	...
Term and notice	–16.5	–24.4	–27.6	–26.8	–25.4	–19.2	–11.4	...	...
General government deposits	1.0	15.5	19.4	19.3	15.6	6.6	–1.9	...	...
TOTAL	**7.1**	**6.7**	**6.6**	**6.0**	**6.0**	**5.4**	**3.7**	**...**	**...**
Outstanding balance of credit									
Private sector	1.2	0.3	–0.1	0.2	0.8	1.3	1.0	0.8	...
Non-financial firms	4.9	1.1	–1.0	–0.5	0.7	2.4	2.0	1.6	...
Households - housing	–1.8	0.2	1.0	1.3	1.4	1.1	0.7	0.2	...
Households - other purposes	0.8	–1.2	–1.2	–1.1	–0.5	–0.9	–0.6	0.3	...
General government	3.0	15.3	11.6	3.4	1.9	–3.5	–2.9	–0.9	...
TOTAL	**1.3**	**1.1**	**0.6**	**0.4**	**0.9**	**1.0**	**0.7**	**0.7**	**...**
NPL ratio (%) [4]	**4.5**	**4.3**	**4.3**	**4.3**	**4.1**	**3.8**	**3.8**	**...**	**...**

Notes: *1. Estimate based on the Active Population Survey. 2. Average monthly figures. 3. Aggregate figures for the Spanish banking sector and residents in Spain. 4. Period-end figure.*
Source: *BPI Research, based on data from the Ministry of Economy, the Ministry of Public Works, the Ministry of Employment and Social Security, the National Statistics Institute, the State Employment Service, Markit, the European Commission, the Department of Customs and Special Taxes and the Bank of Spain.*

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