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MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK  
JUNE 2023



## ECONOMIC & FINANCIAL ENVIRONMENT

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### FINANCIAL MARKETS

*Is monetary policy managing to cool economic activity? A first assessment*

### INTERNATIONAL ECONOMY

*New economic scenario: a change of outlook for international economies and markets?*

### PORTUGUESE ECONOMY

*Mortgage loans: what is the real extent of the effort the Portuguese*

*Stability Programme: budget balance heading for surplus*

### SPANISH ECONOMY

*New economic scenario: the outlook improves for Spain*

*The 2023-2026 Stability Programme: reduction of Spain's budget deficit through economic growth*

## DOSSIER: THE GOLDEN YEARS OF THE BABY BOOMERS: CHALLENGES AND OPPORTUNITIES

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*Baby-boomers: who are they and where do they fit into Portuguese society?*

*What is the impact of baby boomers on pensions in Portugal?*

*The macroeconomic impact of the retirement of the baby boomers: some topics for discussion*

*How have other pension systems ensured their sustainability?*

*How to make our cognitive biases work in favour of increasing private savings in the form of pensions*

## MONTHLY REPORT - ECONOMIC AND FINANCIAL MARKET OUTLOOK

June 2023

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

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## Forecasts in an unstable economy

The last few years have been humbling for economic forecasters. Distortions provoked in the behaviour of growth and inflation due to a diverse range of shocks and the need to calibrate economic scenarios with hypotheses about the evolution of the pandemic or the effects of the armed conflict on the behaviour of commodity prices have increased forecasting uncertainty. In a short period, economists had to update their knowledge of energy markets, take a crash course on the economic effects of epidemic diseases, and put geopolitical risk back on the radar as they tried to understand the nature and consequences of global supply-demand mismatches. Along the way, the intensity and duration of the inflationary episode that began in early 2021 and the resilience of the economic cycle to all kinds of shocks were underestimated, as was, therefore, the flexibility of families and companies to overcome the successive obstacles that have appeared on the horizon. This adaptability of modern economies and the favourable winds of extraordinarily expansionary monetary and fiscal policies explain a much better than expected economic performance in recent times.

These signs are still present towards the end of the second quarter of 2023, as the international economy maintains an acceptable cruising speed, despite divergences between countries and sectors of activity. While overall inflation readings continue to improve and doubts remain about price performance over the medium term, indications of declines in trend measures of inflation are inconclusive (especially in food and services), which give little sign of improvement at the end of the interest rate hike process. The positive news is that behind this behaviour of the main economic variables lies the correction of a good part of the imbalances between global supply and demand, reflecting that economic policy transmission channels continue to work and that the bottlenecks that were distorting production have been removed. But the feeling is that the adjustment is still incomplete and that the first effects of the search for strategic autonomy (“de-risking”) will become apparent sooner or later.

In this context, with the first source of financial instability apparently over, there has been an upward revision of growth forecasts for the year, reflecting the fall in commodity prices since the summer, the positive surprises in winter activity data, the good performance of the labour market, and the improvement in economic sentiment. In our case, we increased our forecasts for activity in the euro area for 2023 (0.9% versus 0.5%), Portugal (2.5% versus 1.0%), and the US (1.2% versus 0.9%), although in all cases we moderately reduced our forecasts for 2024, taking into account the lagging effect of the cumulative increases in interest rates.

Now that the energy scenario is clearer, the risks to our central projections become the effects of monetary tightening on financial stability, the behaviour of the most persistent components of inflation (core inflation), and the loss of household purchasing power as savings accumulated during the pandemic disappear. With a fiscal policy that should move towards neutrality, the key will become how central banks manage their dual mandate (financial stability versus economic stability) while minimising the risk of financial crashes. Although the main negative surprise of the last few months is the difficulties that the manufacturing sector is continuing to suffer in emerging from a generalised lethargy, which is something that is affecting world trade and is being reflected in the evolution of activity in countries such as Germany, where growth has been negative in three of the last four quarters. Impacted over time with an adaptation of industrial policy to new geostrategic challenges, a trend led by the US with the passing of the IRA (Inflation Reduction Act), which constitutes a “before and after” for the framework of Transatlantic economic relations. In short, the balance of the international economy, although with good developments in recent months, is forecast to continue to move in an unstable way in the period ahead.

José Ramón Díez

## Chronology

### MAY 2023

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

### MARCH 2023

- 16 The ECB raises rates by 50 bps and places the depo rate at 3.00% and the refi rate at 3.50%.
- 18 Russia and Ukraine extend the deal allowing the export of grain and related foodstuffs and fertilisers via the Black Sea.
- 22 The Fed raises rates by 25 bps, placing them in the 4.75%-5.00% range.

### JANUARY 2023

- 1 Croatia joins the euro area and the Schengen Area.
- 8 China reopens its borders to foreign travellers after three years.

### APRIL 2023

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

### FEBRUARY 2023

- 1 The Fed raises rates by 25 bps up to the 4.50%-4.75% range.
- 2 The ECB raises rates by 50 bps, placing the depo rate at 2.50% and the refi rate at 3.00%.
- 6 A magnitude 7.8 earthquake strikes Türkiye and Syria, with the highest death toll since 2010 and the fifth highest this century.

### 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.

## Agenda

### JUNE 2023

- 2 Spain: registration with Social Security and registered unemployment (May).
- 9 Spain: DBRS rating.  
Portugal: international trade (April).
- 12 Portugal: service sector turnover (April).
- 13-14 Federal Open Market Committee meeting.
- 15 Governing Council of the European Central Bank meeting.
- 16 Spain: quarterly labour cost survey (Q1).
- 23 Spain: quarterly national accounts (Q1).  
Spain: loans, deposits and NPL ratio (Q1 and April).  
Spain: balance of payments and NIIP (Q1).  
Portugal: GDP breakdown (Q1).
- 29 Spain: CPI flash estimate (June).  
Portugal: NPL ratio (Q1).  
Euro area: economic sentiment index (June).
- 29-30 European Council meeting.
- 30 Spain: household savings rate (Q1).  
Spain: state budget execution (May).  
Portugal: CPI flash estimate (June).

### JULIO 2023

- 3 Portugal: industrial production (May).
- 4 Spain: registration with Social Security and registered unemployment (June).
- 11 Spain: financial accounts (Q1).
- 14 Spain: Moody's rating.
- 18 China: GDP (Q2).
- 20 Portugal: balance of payments (May).
- 21 Portugal: DBRS rating.
- 24 Spain: loans, deposits and NPL ratio (May).
- 25 Portugal: bank loan survey (Q2).
- 25-26 Federal Open Market Committee meeting.
- 27 Spain: labour force survey (Q2).  
Governing Council of the European Central Bank meeting.  
US: GDP (Q2).
- 28 Spain: GDP flash estimate (Q2).  
Spain: CPI flash estimate (July).  
Portugal: turnover in retail (June).  
Euro area: economic sentiment index (July).
- 31 Spain: state budget execution (June).  
Portugal: GDP flash estimate (Q2).  
Euro area: GDP (Q2).

## Good news on several fronts in Portugal

The Portuguese economy has performed better than expected. Not only did it avoid periods of contraction but also recorded healthy growth, mainly supported by the external sector, with growth in employment and a reduction in structural imbalances. Our growth forecast for GDP in 2023 is now 2.5%, up from 1% at the start of the year. The fall in the price of energy on international markets is one of the factors behind this performance, as well as the strength of tourism and the support of surplus savings during the pandemic. But it is still a remarkable outcome, especially in such a challenging context, after an increase of more than 3 percentage points in interest rates and with high inflation, weighing on the cost of living of families. Just as remarkable is that the economy is already more than 4% above pre-covid levels, one of the best performances in the EMU.

It should be noted that the strong upward revision of activity this year has been a common movement among the various official entities and think tanks that monitor activity in Portugal, including, to mention just a few, the OECD (2.5%), the European Commission (2.4%), the IMF (2.6%), and the EIU (2.4%). But all these entities also forecast a reduction in expectations for next year, when we project growth of 1.5%. Despite the expected greater support from community funds, which will reinforce public and private investment, only from the second half of the year will the full increase in interest rates be felt, which will take time to be reflected in economic activity.

One of the main drivers of the post-pandemic bounce-back was the export sector, undoubtedly driven by the strength of tourism. We mention just a few metrics, considering the first 4 months of the year and compared to the same period in 2019: the number of guests and stays (resident and non-resident) increased by 14% and 15% respectively, and the number of flights by 10%. The results are evident not only in the activity but also in the improvements in external accounts (non-resident tourism). In the first quarter, the balance of goods and services returned to a nearly balanced situation, close to that seen in 2019, despite a still slightly more onerous energy balance. Household consumption was also boosted by the consumption of residents as tourists in national territory. However, we have no specific data to measure this impact. By way of reference, we know that in 2019 tourism consumption (of residents and non-residents) represented around 15% of GDP (its effect being split via private consumption and exports).

But exports are not only about tourism. Indeed, external sales of goods have also performed well, increasing 13% in the first quarter year-on-year, with those directed outside the Euro Zone rising 25%. Among these, exports to the USA (+26%) and Angola (+32%) stand out for their relative weight. This performance seems to confirm the apparent trend of gaining market share that was already observed in 2022, when exports directed to these destinations grew more than the receiving country's total imports. From another perspective, it can be seen that the positive performance has taken place across various classes of goods, with the exception of fuels and lubricants. The categories Machinery and Equipment (+27.5%), Food and Beverages (+15.4%), and Transport Material (+26%) are of particular note.

The positive performance of exports of goods and services has made it possible to accommodate both the recovery of domestic demand, which implied a greater need for imports, while also making it possible to accommodate higher energy prices in international markets. This was particularly evident in 2022, when the energy balance was at historic highs when measured by its share of GDP (-4.8%), yet with a current account deficit of only 1.3%. Compared to 2008-09, when the energy deficit was around the same relative values, the external balance stood at around -10%. This improvement, besides the factors already mentioned, also reflects the reinforcement of the production capacity of renewable energies, which, besides being an imperative in the context of combating climate risks, also confer resilience in the face of external shocks such as the one we have recently witnessed. Thus, in 2022, almost 60% of electricity was produced using renewables, compared to only about 30% in 2017.

In summary, the trend towards a gradual reduction of imbalances should continue, supported by a more dynamic and competitive export sector and with more and more companies targeting and exposed to external markets (about 59,000 companies in 2020 compared to 35,000 in 2007). Nevertheless, it is possible that this momentum may be somewhat dampened in the coming months, given the expected slowdown in global demand.

**Paula Carvalho Lisbon**  
7 June 2023

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

### Financial markets

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
<b>INTEREST RATES</b>							
<b>Dollar</b>							
Fed funds (upper limit)	3.43	0.81	0.25	0.25	4.50	5.00	3.50
3-month Libor	3.62	1.01	0.23	0.21	4.74	5.00	3.50
12-month Libor	3.86	1.48	0.34	0.52	5.47	4.50	3.10
2-year government bonds	3.70	1.04	0.13	0.62	4.41	3.50	2.60
10-year government bonds	4.70	2.57	0.93	1.45	3.62	3.20	3.00
<b>Euro</b>							
ECB depo	2.05	0.20	-0.50	-0.50	1.77	3.75	3.00
ECB refi	3.05	0.75	0.00	0.00	2.27	4.25	3.50
€STR	–	-0.54	-0.56	-0.58	1.57	3.66	2.98
1-month Euribor	3.18	0.50	-0.56	-0.60	1.72	3.62	2.83
3-month Euribor	3.24	0.65	-0.54	-0.58	2.06	3.57	2.69
6-month Euribor	3.29	0.78	-0.52	-0.55	2.56	3.72	2.74
12-month Euribor	3.40	0.96	-0.50	-0.50	3.02	3.86	2.80
<b>Germany</b>							
2-year government bonds	3.41	0.35	-0.73	-0.69	2.37	3.30	2.50
10-year government bonds	4.31	1.54	-0.57	-0.31	2.13	2.80	2.60
<b>Spain</b>							
3-year government bonds	3.62	1.69	-0.57	-0.45	2.66	3.15	2.82
5-year government bonds	3.91	2.19	-0.41	-0.25	2.73	3.23	2.99
10-year government bonds	4.42	3.17	0.05	0.42	3.18	3.90	3.60
Risk premium	11	164	62	73	105	110	100
<b>Portugal</b>							
3-year government bonds	3.68	3.33	-0.61	-0.64	2.45	3.35	3.07
5-year government bonds	3.96	3.94	-0.45	-0.35	2.53	3.40	3.20
10-year government bonds	4.49	4.68	0.02	0.34	3.10	3.85	3.60
Risk premium	19	314	60	65	97	105	100
<b>EXCHANGE RATES</b>							
EUR/USD (dollars per euro)	1.13	1.26	1.22	1.13	1.06	1.12	1.15
EUR/GBP (pounds per euro)	0.66	0.84	0.90	0.85	0.87	0.86	0.85
<b>OIL PRICE</b>							
Brent (\$/barrel)	42.3	80.1	50.2	74.8	81.3	93.0	80.0
Brent (euros/barrel)	36.4	62.5	41.3	66.2	76.8	85.0	69.8

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
<b>GDP GROWTH</b>							
<b>Global</b>	4.5	3.3	-2.8	6.3	3.4	2.8	3.0
<b>Developed countries</b>	2.7	1.4	-4.2	5.4	2.7	1.2	1.2
United States	2.7	1.7	-2.8	5.9	2.1	1.2	0.8
Euro area	2.2	0.8	-6.3	5.3	3.5	0.9	1.3
Germany	1.6	1.2	-4.1	2.6	1.9	0.2	1.1
France	2.2	1.0	-7.9	6.8	2.6	0.7	1.0
Italy	1.5	-0.3	-9.0	7.0	3.8	1.1	1.0
Portugal	1.5	0.5	-8.3	5.5	6.7	2.5	1.5
Spain	3.7	0.6	-11.3	5.5	5.5	2.0	1.8
Japan	1.4	0.4	-4.3	2.3	1.1	1.3	1.1
United Kingdom	2.6	1.3	-11.0	7.6	4.1	0.4	0.6
<b>Emerging and developing countries</b>	6.5	4.9	-1.8	6.9	4.0	4.0	4.3
China	10.6	8.0	2.2	8.4	3.0	5.7	4.9
India	7.2	6.8	-6.7	9.0	7.3	6.0	6.7
Brazil	3.6	1.6	-3.3	5.0	2.9	0.9	1.8
Mexico	2.4	1.9	-8.0	4.7	3.1	1.4	1.9
Russia	7.2	1.3	-2.7	5.6	-2.1	-0.5	1.3
Türkiye	5.5	4.5	1.9	11.4	5.6	2.4	3.2
Poland	4.2	3.7	-2.0	6.9	4.9	0.7	2.7
<b>INFLATION</b>							
<b>Global</b>	4.1	3.7	3.2	4.7	8.7	6.6	4.8
<b>Developed countries</b>	2.1	1.6	0.7	3.1	7.3	4.6	2.4
United States	2.8	1.8	1.3	4.7	8.0	4.2	2.2
Euro area	2.2	1.4	0.3	2.6	8.4	5.6	2.6
Germany	1.7	1.4	0.4	3.2	8.6	6.0	2.9
France	1.9	1.3	0.5	2.1	5.9	5.0	2.4
Italy	2.4	1.4	-0.1	1.9	8.7	6.3	2.5
Portugal	3.1	1.1	0.0	1.3	7.8	5.0	2.8
Spain	3.2	1.3	-0.3	3.1	8.4	3.9	2.8
Japan	-0.3	0.4	0.0	-0.2	2.5	2.5	1.5
United Kingdom	1.6	2.3	0.9	2.6	9.0	6.3	2.7
<b>Emerging countries</b>	6.7	5.6	5.2	5.9	9.8	8.1	6.4
China	1.7	2.6	2.5	0.9	2.0	1.5	2.1
India	4.5	7.3	6.6	5.1	6.7	5.3	5.0
Brazil	7.3	5.7	3.2	8.3	9.3	5.3	4.5
Mexico	5.2	4.2	3.4	5.7	7.9	6.5	4.6
Russia	14.2	7.9	3.4	6.7	13.8	6.7	5.2
Türkiye	22.6	9.6	12.3	19.6	72.3	46.4	34.9
Poland	3.5	1.9	3.7	5.2	14.3	12.8	6.9

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
<b>Macroeconomic aggregates</b>							
Household consumption	1.7	0.5	-7.0	4.7	5.7	0.4	0.9
Government consumption	2.3	-0.3	0.4	4.6	2.4	1.0	1.0
Gross fixed capital formation	-0.4	-0.7	-2.2	8.7	2.7	5.0	8.2
Capital goods	3.2	2.6	-5.4	13.9	5.3	–	–
Construction	-1.5	-2.6	1.0	5.5	0.8	–	–
Domestic demand (vs. GDP Δ)	1.3	0.1	-5.3	5.7	4.8	1.3	2.3
Exports of goods and services	5.3	4.0	-18.8	13.4	16.7	4.3	6.1
Imports of goods and services	3.6	2.7	-11.8	13.2	11.0	4.6	6.4
<b>Gross domestic product</b>	<b>1.5</b>	<b>0.5</b>	<b>-8.3</b>	<b>5.5</b>	<b>6.7</b>	<b>2.5</b>	<b>1.5</b>
<b>Other variables</b>							
Employment	0.4	-0.5	-1.9	2.7	2.0	0.3	0.3
Unemployment rate (% of labour force)	6.1	11.4	7.0	6.6	6.0	7.1	6.9
Consumer price index	3.1	1.1	0.0	1.3	7.8	5.0	2.8
Current account balance (% GDP)	-9.2	-2.9	-1.2	-0.8	-1.4	-0.4	-0.2
External funding capacity/needs (% GDP)	-7.7	-1.6	0.1	1.0	-0.4	1.3	1.5
Fiscal balance (% GDP)	-4.6	-5.1	-5.8	-2.9	-0.4	-0.3	-0.1

Forecasts

### Spanish economy

	Average 2000-2007	Average 2008-2019	2020	2021	2022	2023	2024
<b>Macroeconomic aggregates</b>							
Household consumption	3.6	0.0	-12.4	6.0	4.5	0.6	2.0
Government consumption	5.0	1.1	3.5	2.9	-0.7	0.7	0.4
Gross fixed capital formation	5.6	-1.4	-9.7	0.9	4.6	0.8	2.9
Capital goods	4.9	0.1	-13.3	6.3	4.0	0.6	5.0
Construction	5.7	-2.9	-10.2	-3.7	4.7	0.7	1.7
Domestic demand (vs. GDP Δ)	4.6	-0.2	-6.4	4.5	3.2	0.6	1.8
Exports of goods and services	4.7	2.9	-19.9	14.4	14.4	5.1	1.6
Imports of goods and services	7.0	0.2	-14.9	13.9	7.9	2.2	1.9
<b>Gross domestic product</b>	<b>3.7</b>	<b>0.6</b>	<b>-11.3</b>	<b>5.5</b>	<b>5.5</b>	<b>2.0</b>	<b>1.8</b>
<b>Other variables</b>							
Employment	3.2	-0.4	-6.8	6.6	3.8	1.8	1.5
Unemployment rate (% of labour force)	10.5	19.5	15.5	14.8	12.9	12.6	12.2
Consumer price index	3.2	1.3	-0.3	3.1	8.4	3.9	2.8
Unit labour costs	3.0	0.6	7.7	0.3	0.4	2.6	2.6
Current account balance (% GDP)	-5.9	-0.3	0.6	1.0	0.6	0.8	1.0
External funding capacity/needs (% GDP)	-5.2	0.1	1.1	1.9	1.5	1.5	2.0
Fiscal balance (% GDP) <sup>1</sup>	0.3	-6.5	-10.3	-6.9	-4.8	-4.2	-3.4

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

Forecasts



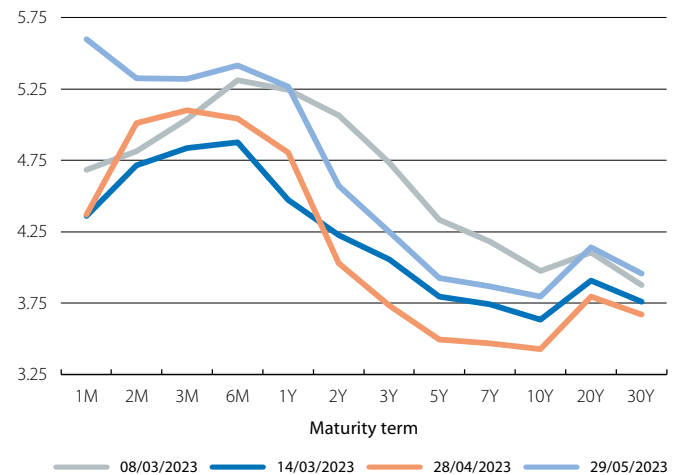
## The US debt ceiling and the landing of the economy determine investor sentiment

**Financial markets on the trilemma of political tensions, a resilient cycle and a persistent inflation.** Following the instability involving the US regional banking system and Credit Suisse in March, and as investors gradually digested these changes in the environment in April (a process that was not without its incidents), in May investors' attention shifted to other sources of uncertainty. Firstly, the negotiations around raising the US debt ceiling, which were unresolved up until the beginning of June, determined the investor mood in May, especially as the deadline approached. News about the progress of the negotiations either spurred on or stifled risk appetite in the markets and raised the yield on US Treasury bills in the shorter term, driving it up to a 20-year high of around 6%. Secondly, as concerns about financial instability receded, the health of the business cycle and the evolution of inflation regained prominence in the major developed economies.

**Expectations for interest rate hikes in the coming months pick up slightly, easing towards the end of the month.** After May kicked off with the Fed and the ECB raising benchmark interest rates by 25 as expected, as the month progressed and the doubts about financial stability faded, market expectations regarding interest rate levels in the coming months rose. For the Fed, after investors initially anticipated that May would bring the final rate hike of the current cycle, the strength of the labour market and the resilience of private consumption have now raised the possibility of additional 25-bp hikes in June or July. Nevertheless, a pause in the rate-hiking cycle at the June meeting remains the most likely scenario. In the euro area, with inflation figures still high (despite the stronger signs of moderation in May), coupled with statements by most members of the ECB's Governing Council – including its president Christine Lagarde – stressing that the institution still has some way to go in this cycle, investors continue to expect that the reference rate will reach 3.75%.

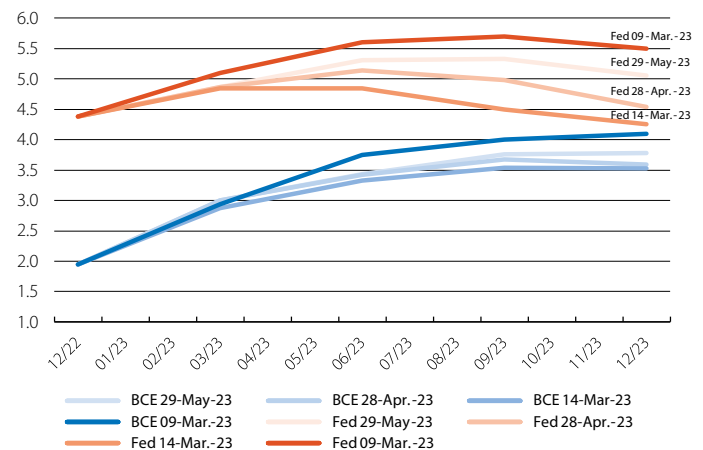
**Public debt yields end the month down despite a month of gains fuelled by the mentioned uncertainties.** The tensions over the debt ceiling, as well as Fitch's revision of its US rating watch (despite maintaining its AAA rating, the agency revised the outlook from «stable» to «negative») and the release of the economic data for April, caused a gradual and widespread rebound in sovereign debt yields in the short-term sections of the yield curves during the first few weeks of May, exacerbating their inversion. However, after progress was made in the political negotiations in the closing days of the month, these rallies were reversed both in the US and, even more sharply, in the euro area. Here, the slowdown in inflation in May, coupled with the continued signs of weakness in the industrial sector according to the business surveys, led 2-year benchmark rates to end the month almost flat. In the United Kingdom, in contrast, the worrying core inflation data drove 2-year debt yields to climb above 4.5%.

**US sovereign yield curve by date**  
Yield (%)



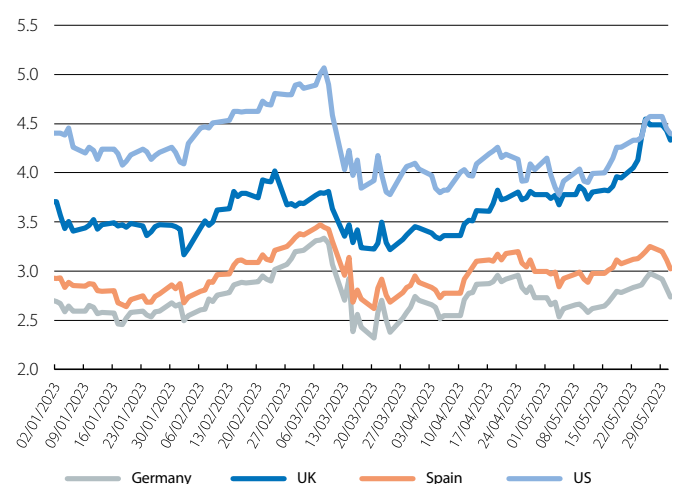
Source: BPI Research, based on data from Bloomberg.

**Expectations for Fed and ECB benchmark interest rates**  
(%)



Source: BPI Research, based on data from Bloomberg.

**Interest rates on 2-year sovereign debt**  
(%)



Source: BPI Research, based on data from Bloomberg.

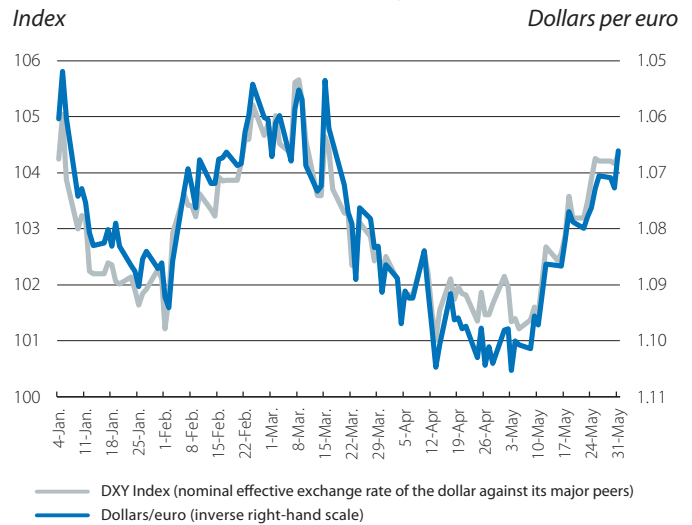
**The US dollar appreciates on the back of higher interest rates expectations.** In May, the depreciation experienced by the dollar since the beginning of March was reversed. This depreciation had initially been triggered by the financial instability in the US regional banks, which had lowered expectations for benchmark interest rates much more sharply for the Fed than for the ECB, thereby favouring the euro. However, the role of the dollar as a safe-haven currency amid the uncertainty surrounding the debt ceiling, as well as the gradual rise in expectations for rate hikes in the US, favoured the appreciation of the US currency relative to its major peers. Thus, after exceeding the level of 1.10 per euro, the dollar appreciated by 3%, to below 1.07 per euro. The dollar also appreciated against the yen (2.2%), although it depreciated against the pound sterling (1%) as the inflation data in the United Kingdom could pressure the Bank of England to implement further rate hikes.

**Weakness in European and Chinese stock markets due to the impact of a weaker-than-expected reopening of China.**

May was the month with the weakest stock market performance so far this year in Europe, both in the Euro Stoxx 50 (–3.2%) and on the main national trading floors, with Portugal's PSI-20 performing particularly poorly (–7.8%). This pattern is explained both by the poorer performance of banking stocks and by the declines in the luxury sector (which affect the Italian and French indices in particular), weighed down by a reopening of the Chinese economy which has fallen short of expectations. This has also weighed on Hong Kong's Hang Seng index, which was down more than 8% in the month and fell to its lowest level this year. In the US, the tech sector performed particularly well (Nasdaq +7.5% in the month) compared to the rest (S&P flat with +0.2%). Also of note was the performance of US regional banking stocks: although the KBW index fell 6% in the month, the rapid deterioration observed in March and April appears to have ended, with several banks showing a stabilisation in their deposits in their earnings presentations.

**Commodity prices ease.** Energy prices registered their biggest declines of the year in May, with a cumulative decrease of almost 25% in the past five months. In the oil market, the Brent barrel ended the month below 73 dollars, dragged down by China's slower economic recovery and despite the intention of some OPEC countries to maintain their current production cuts. On the other hand, in Europe tensions relating to the gas market continued to ease. In addition to the continuous flow of liquefied natural gas supplies from the US and Qatar, energy generation from renewables registered a record high and there was a slowdown in the demand for gas across the continent, having reduced by almost 20% in the first four months of the year compared to the previous year. These factors, combined with the mild temperatures, favoured the acceleration of the filling of gas reserves (which are already back at almost 70% of capacity) as well as a drop in gas prices down to the levels of two years ago (around €25/MWh in the case of the TTF).

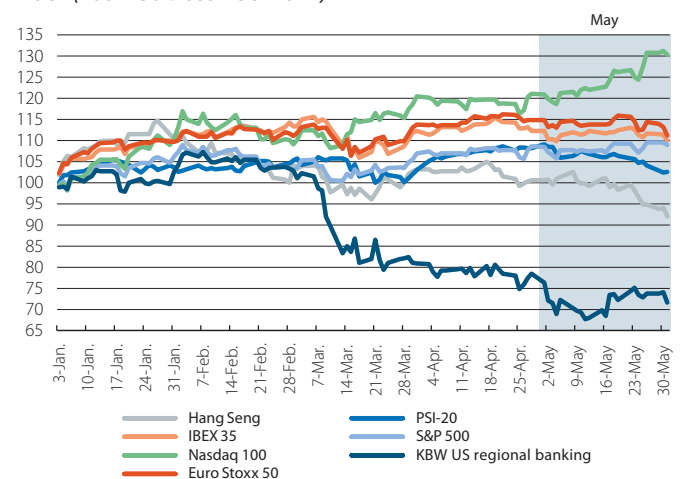
**Evolution of the dollar exchange rate**



Source: BPI Research, based on data from Refinitiv.

**Stock market performance for the year to date**

Index (100 = 30 December 2022)



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

**Oil and gas prices**

(€/MWh)

\$/barrel



Note: The natural gas price corresponds to the Dutch TTF benchmark.

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

## Is monetary policy managing to cool economic activity? A first assessment

In its battle against inflation, monetary policy has tightened considerably, as is clearly visible in official interest rates and those faced by businesses, households and governments. But these interest rates are not an end in themselves; rather, the ultimate goal is to cool economic activity and thus curb inflation. With this in mind, we have analysed the state of monetary policy transmission through one of its main channels: credit conditions.

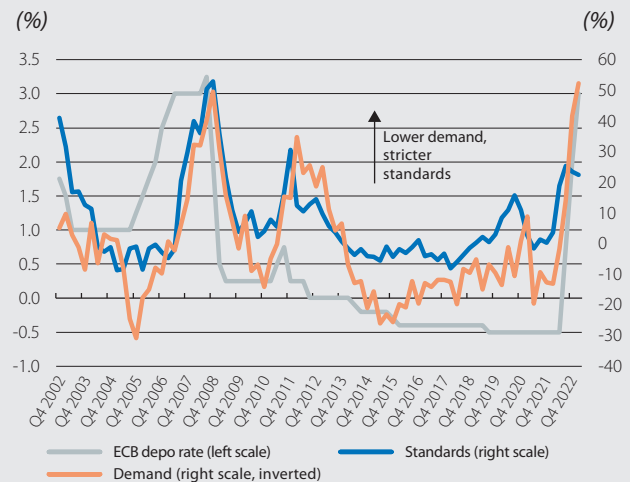
The Fed and ECB rate hikes (+500 bps and +375 bps, respectively) have resulted in a tightening of credit standards and weaker demand for credit. This is reflected in the latest banking sector surveys conducted by the Fed and the ECB (in particular, the BLS in Europe and the SLOOS in the US).<sup>1</sup> Not only do they capture this accumulated tension up to Q1 2023, but in the case of the euro area survey it also suggests that the peak may have already been reached and that we could see a slowdown in the pace of the tightening process in Q2 2023 (this would be consistent with expectations that the Fed and ECB's official rates have already reached their peak or are close to doing so).<sup>2</sup>

In this context of higher rates, stricter lending standards and lower demand, we would expect to observe less buoyancy in credit volumes. Therefore, it is useful to analyse the pattern of so-called «credit impulse», which we define as the change in the balance of outstanding credit minus its change in the same period of the previous year (as a percentage of nominal GDP).<sup>3</sup> This measure has a close correlation with GDP growth and allows us to assess credit dynamics in terms of their importance for economic activity.<sup>4</sup> In recent months, credit impulse has deteriorated. Most notably, it has done so to a degree that is commensurate with the tightening observed in credit standards and demand, which also suggests that the transmission of the monetary tightening strategy pursued by the Fed and the ECB has been successful.

In Europe, if the reduced tension in credit standards and lower demand predicted by the surveys end up being

1. Bank Lending Survey (BLS) and Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS).
2. Specifically, in Europe, the BLS captures the state of credit standards and the demand for credit in the current quarter and expectations for the next one. Abnormally, in Q1 2023 the actual situation ended up being more severe than had been anticipated in Q4 2022. However, this occurred in a context of turbulence surrounding Silicon Valley Bank. Generally speaking, BLS expectations are a very good predictor of future patterns.
3. See W.L. Barcelona *et al.* (2022). «What Happens in China Does Not Stay in China». Fed International Finance Discussion Papers.
4. Intuitively, the outstanding balance of credit is especially associated with past economic activity, while new lending issued in a given quarter is associated with the economic activity of that quarter. Thus, the growth of this new credit is associated with GDP growth.

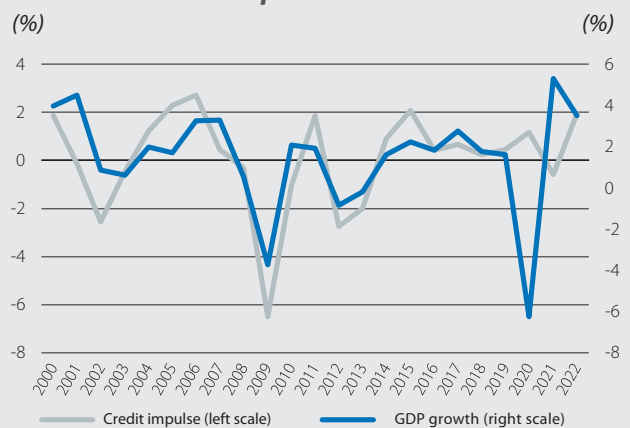
### Euro area: credit standards and demand



**Note:** The percentages refer to the net difference between the number of banks that have tightened standards/seen an increase in demand and those that have relaxed standards/seen a drop in demand.

**Source:** BPI Research, based on data from the ECB's Bank Lending Survey.

### Euro area: credit impulse and GDP

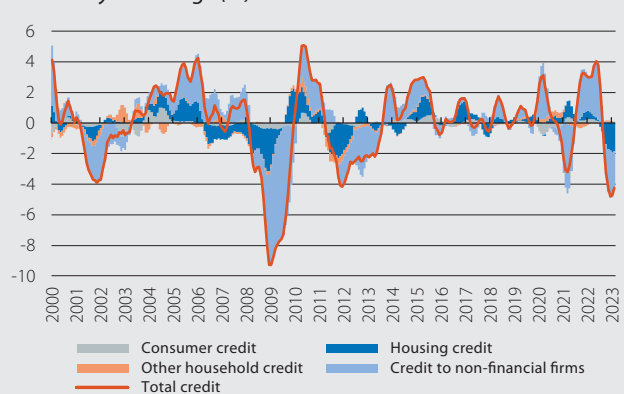


**Note:** Credit impulse is calculated as the change in the balance of outstanding credit minus its change in the previous year (as a percentage of nominal GDP).

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

### Euro area: credit impulse

Year-on-year change (%)



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

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

confirmed, then credit impulse will remain negative over the coming months, albeit slightly less so than in Q1 (specifically, the BLS expectations for Q2 predict an improvement in credit impulse of between 0.5 and 1.0 pps). In the case of the US, meanwhile, the SLOOS suggests that in the next quarter these credit conditions could tighten further still, which could reduce credit impulse by at least 0.2 pps.

If the transmission of monetary policy to credit impulse is proving effective, both in the US and in the euro area, then the question that remains is to what extent and with what time lag will this channel cool economic activity. The time lags are uncertain and variable, as prominent ECB and Fed members continue to stress,<sup>5</sup> but the close correlation between credit impulse and GDP growth offers us clues about the possible impact. To assess the magnitude of the potential cooling, we used a statistical model that predicts GDP growth based on its latest level and the contemporary credit impulse. The model is simple, but it is useful for explaining the correlation between the two measures and it suggests that credit plays an important role in determining GDP growth.<sup>6</sup> According to this exercise, the drop in credit impulse already observed, and assuming zero impulse in the coming quarters, would be associated with a reduction in GDP growth of 0.7 pps in both the euro area and the US.<sup>7</sup> If the impulse over the coming quarters evolves in line with the latest surveys for Q2, then according to this exercise GDP growth for 2023 as a whole would be 1.5 pps less in the euro area and 2.1 pps less in the US.<sup>8</sup>

Finally, beyond this simple exercise, a tightening of credit conditions could be affected by vulnerabilities in certain sectors. In this regard, one of the concerns is focused on the US and the high exposure of its regional banks to the commercial real estate sector, given the setbacks this sector has suffered so far this year and the fact that, in an environment of high rates, the outlook remains challenging. As an illustration, of all the credit issued by small banks in the US, 47% goes to this sector, whereas in the case of the big banks this figure drops to 16%. On the other hand, of the total credit granted to the commercial real estate sector, 67% is held by small banks, which are precisely the ones which suffered the most during the financial turbulence of March.

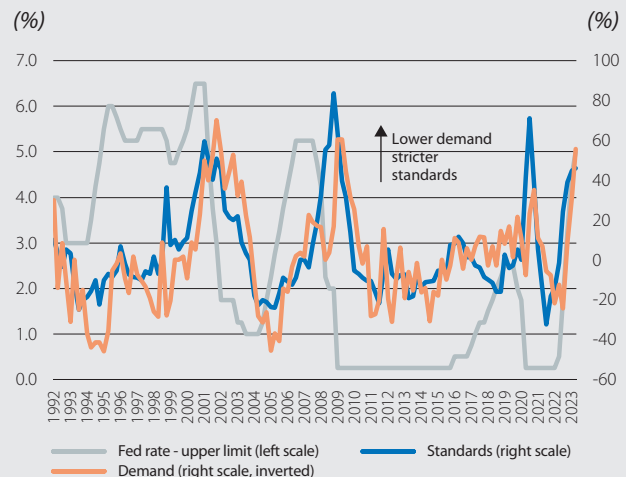
5. See the speech by the Federal Reserve Governor Philip N. Jefferson of 18 May 2023, *The U.S. Economic Outlook and Considerations for Monetary Policy*.

6. The R-squares for the US and the euro area are 0.85 and 0.64, respectively, all variables are significant at 1%, and the estimated ratios for credit impulse are similar in magnitude to those corresponding to the time lag of GDP growth.

7. In both cases, compared to a scenario where credit impulse was exactly 0 in 2023 (i.e. a scenario where the growth in the volume of the outstanding balance of credit was equal to that of 2022).

8. In the US, we would see a tightening of credit conditions consistent with what was expected in the latest SLOOS, while in the euro area we assume that the maximum tightening has already occurred.

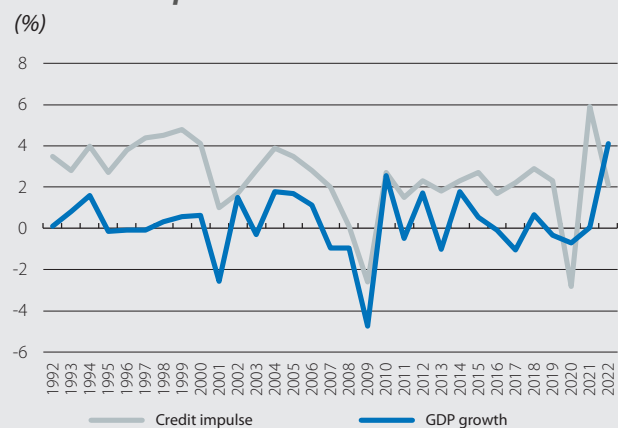
### US: credit standards and demand



**Note:** The percentages refer to the net difference between the number of banks that have tightened standards/seen an increase in demand and those that have relaxed standards/seen a drop in demand.

**Source:** BPI Research, based on data from the Fed's Senior Loan Officer Opinion Survey.

### US: credit impulse and GDP

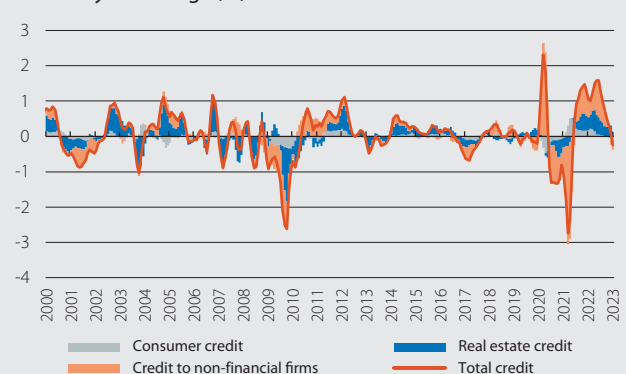


**Note:** Credit impulse is calculated as the change in the balance of outstanding credit minus its change in the previous year (as a percentage of nominal GDP).

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

### US: credit impulse

Year-on-year change (%)



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

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

*Interest rates (%)*

	31-May	30-April	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
<b>Euro area</b>					
ECB Refi	3.75	3.50	25	125.0	375.0
3-month Euribor	3.46	3.27	20	133.1	379.8
1-year Euribor	3.94	3.88	6	64.8	352.2
1-year government bonds (Germany)	3.17	3.09	8	57.0	311.0
2-year government bonds (Germany)	2.72	2.69	3	-4.5	216.3
10-year government bonds (Germany)	2.28	2.31	-3	-28.9	109.5
10-year government bonds (Spain)	3.33	3.36	-3	-33.1	102.8
10-year government bonds (Portugal)	3.02	3.13	-11	-56.3	68.6
<b>US</b>					
Fed funds (upper limit)	5.25	5.00	25	75.0	425.0
3-month Libor	5.50	5.30	19	72.9	387.0
12-month Libor	5.73	5.37	36	24.8	295.5
1-year government bonds	5.17	4.74	43	48.6	307.8
2-year government bonds	4.40	4.01	40	-2.3	176.1
10-year government bonds	3.64	3.42	22	-23.2	73.7

*Spreads corporate bonds (bps)*

	31-May	30-April	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	82	83	-2	-8.8	-7.0
Itraxx Financials Senior	93	98	-5	-6.3	-5.7
Itraxx Subordinated Financials	173	187	-14	1.4	-15.9

*Exchange rates*

	31-May	30-April	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.069	1.102	-3.0	-0.1	0.4
EUR/JPY (yen per euro)	148.950	150.070	-0.7	6.1	7.5
EUR/GBP (pounds per euro)	0.859	0.877	-2.0	-3.0	0.7
USD/JPY (yen per dollar)	139.340	136.300	2.2	6.3	7.1

*Commodities*

	31-May	30-April	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	541.5	547.5	-1.1	-2.4	-13.8
Brent (\$/barrel)	72.7	79.5	-8.6	-15.4	-37.5
Gold (\$/ounce)	1,962.7	1,990.0	-1.4	7.6	6.3

*Equity*

	31-May	30-April	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	4,179.8	4,169.5	0.2	8.9	1.9
Eurostoxx 50 (euro area)	4,218.0	4,359.3	-3.2	11.2	12.2
Ibex 35 (Spain)	9,050.2	9,241.0	-2.1	10.0	3.5
PSI 20 (Portugal)	5,729.4	6,212.3	-7.8	0.1	-8.1
Nikkei 225 (Japan)	30,887.9	28,856.4	7.0	18.4	12.5
MSCI Emerging	958.5	977.1	-1.9	0.2	-10.2



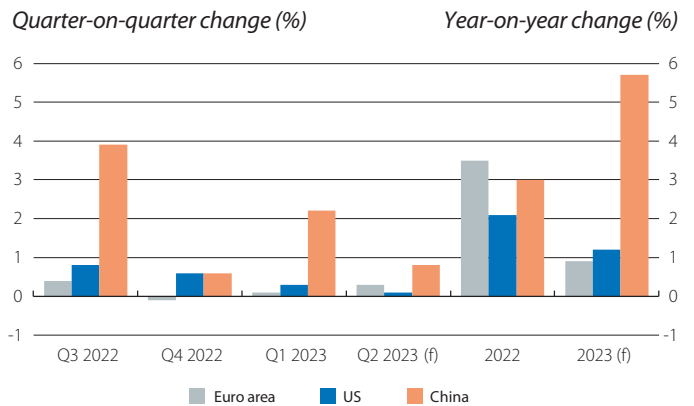
## Clearer skies in the international economy, albeit with risks of storms

After a few months in which the winds have been less unfavourable than expected, the growth forecasts for this year are looking somewhat brighter. With the horizon loaded with risks, the clouds of the war in Ukraine led us to expect a scenario of stagflation at the beginning of the year, with a slowdown in the world economy from 3.1% in 2022 to 2.7% in 2023. Such a scenario was consistent with a Chinese economy weighed down by the restrictions, an energy crisis in Europe without precedent in recent times, gas prices far above their historical levels, a process of rapid monetary tightening in most of the major economies (necessary to contain the inflation crisis) and an environment of high geopolitical tensions. Although many of these underlying factors have not changed, China's reopening, the improvement in the energy outlook and a less weak Q1 than expected lead us to revise our macroeconomic scenario for 2023, with global growth now expected to be 2.8% as a result of upward revisions in the major economies. Specifically, we revised our forecast for GDP growth in the euro area to 0.9% (vs. 0.5% previously), in the US to 1.2% (vs. 0.9% previously) and in China to 5.7% (vs. 5.2% previously).

**Inflation offers mixed signs of cooling.** As set out in the Focus «New economic scenario: a change of outlook for international economies and markets?» in this same report, the balance between the downward drag of energy prices and the inertia of core component prices has led us to revise our inflation forecasts for the major international economies slightly upwards. After all, despite the moderation observed in recent months, the latest data still show significant underlying tensions. In particular, core inflation is still above 5% in both the US and the euro area, and the indicator of negotiated wage rates for the euro area (an indicator published by the ECB) continues to show an acceleration relative to prior quarters, with a year-on-year increase of 4.3% in Q1 2023 (vs. 3.1% in Q4 2022 and a historical average of around 2%). The strength of the labour market will thus continue to provide a floor for the rate at which inflation can decline. In the US, the unemployment rate has stood at around 3.5% in recent months, a level not sustained since 1969. Finally, even though tensions in food prices have begun to moderate, prices remain well above their pre-war levels, and there continues to be a state of drought in many major producing regions.

**Mists and crosswinds in European economic activity.** In the euro area, the situation is rather varied. On the one hand, the downward revision of Germany's growth for Q1 2023 from 0.0% to -0.3% (vs. -0.5% in Q4 2022) shows that the largest economy in the European bloc is in a technical recession, after registering two consecutive quarters of quarter-on-quarter declines in GDP. Spain, France and Italy remain the stars of the show, with positive growth in Q1 and an acceleration in the

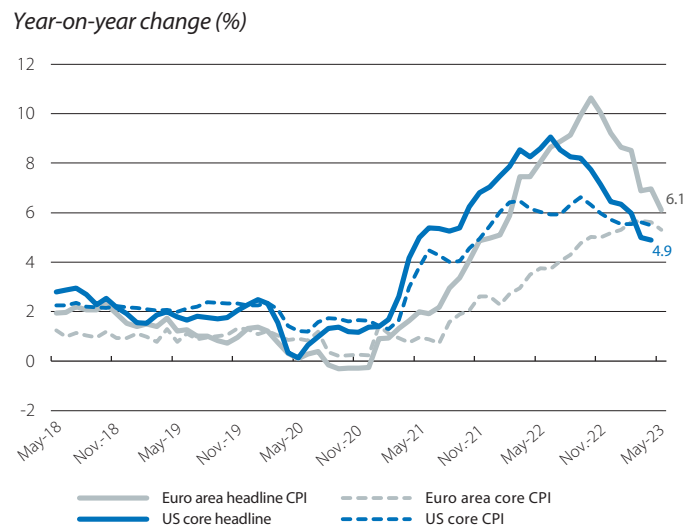
### Global: GDP growth in the euro area, the US and China



**Notes:** On the left-hand side of the chart we show the quarter-on-quarter growth for the last three quarters and the forecast for the next quarter (Q2 2023). On the right, we show the year-on-year growth rates recorded in 2022 and the forecasts for 2023.

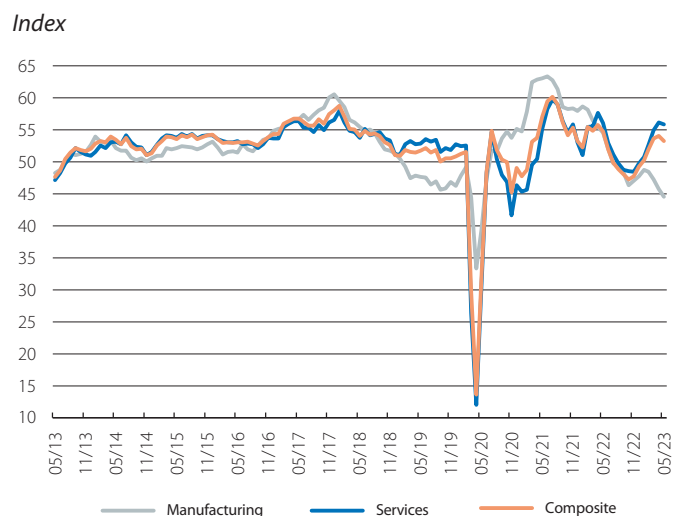
**Source:** BPI Research, based on data from Eurostat, the Bureau of Economic Analysis and the National Statistics Office of China.

### US and euro area: CPI



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

### Euro area: PMI



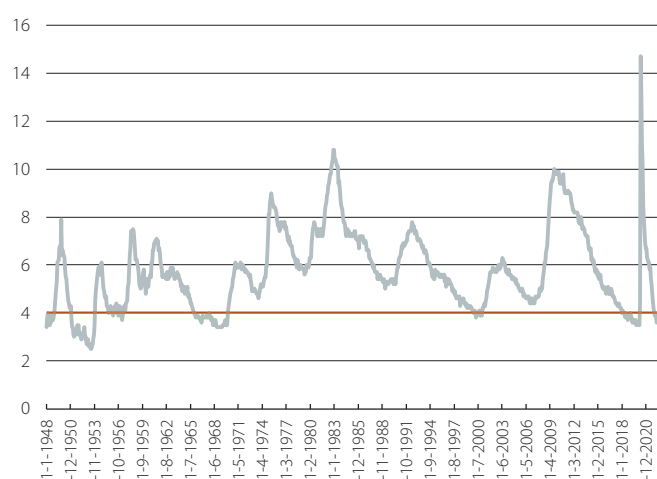
**Source:** BPI Research, based on data from S&P Global, via Refinitiv.

growth rate versus the previous quarter. There are also significant differences between sectors. Services remain the driver of the recent recovery, still spurred on by a post-pandemic boom which is beginning to show timid signs of moderation, while industry is showing persistent signs of weakness. This duality is well reflected in the business confidence data: the services PMIs are above 55 points for the third consecutive month, while those of industry have registered 11 months below 50 points and 4 consecutive months of declines. The German Ifo index also disappointed this month, falling by more than expected (to 91.7 points) and with 22 months in contractionary territory (below 100 points). In this context, economic activity is expected to remain sluggish in the coming months.

**With the impasse in the US Congress seemingly resolved, watch out for side effects.** In the US, although the market turbulence has dissipated for now, the risk of storms remains ever-present due to the side effects of the impasse regarding the debt ceiling, as well as due to the tightening of financial conditions. Since January, the US Treasury has been forced to take exceptional measures to ensure the normal functioning of the federal government (a historically rare event, although in the last 13 years these episodes have been repeated over 10 times). With these measures on the verge of expiring, an agreement was reached in the negotiations between Democrats and Republicans to raise the debt ceiling, alleviating fears of a partial government shutdown (to ensure the repayment of the debt) or a default which, although highly unlikely, would have led to a cascade of events in the financial markets and would have had potentially severe global consequences. However, following the increase in the debt ceiling under an agreement that should last two years, the heightened risk perceived by investors is still palpable in the financial markets (see the Financial Markets section) and the spending cuts negotiated between Republicans and Democrats are expected to deduct as much as 0.2 pps from US growth this year.

**In China, the boost provided by the reopening process has run out of steam.** The economic activity data for April has fallen short of expectations. Although both industrial production (5.6%) and retail sales (18.4%) have advanced at a considerable rate in year-on-year terms, this growth is distorted by the base effects related to the closure of the Chinese economy a year ago. Looking at the breakdown by component, the strength of the services sector and the advance of public investment have stood out in recent months, in contrast with the weakness of the manufacturing sector and residential investment. In the manufacturing sector, of particular note is the year-on-year decline in the industrial production of electronic products, including semiconductors. Taking into account the export restrictions announced over the last few months by the world's major producers of these components, such as the US and Japan, this factor is expected to continue to undermine the outlook for industry in the short term, while also acting as a strong headwind for the long-term growth outlook.

### US: unemployment rate (%)



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

### US: debt ceiling

#### Episodes of near-default in the last 10 years

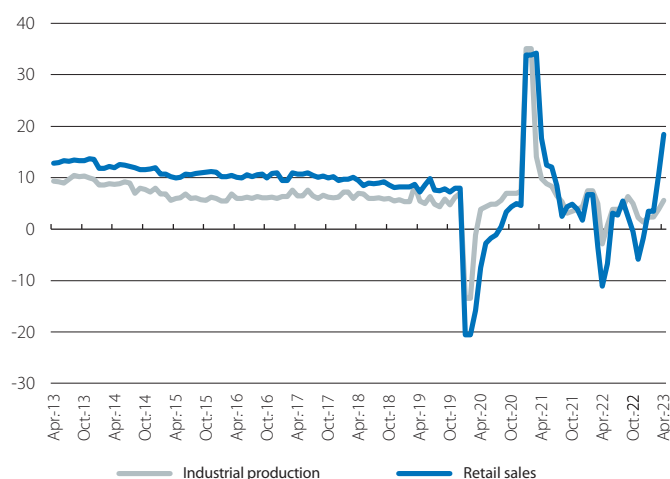
	Debt ceiling in force	White House	House of Representatives	Senate	Approximate time to shutdown
May. 23	31.4b USD	Dem	Rep	Dem	1 week
Dec. 21	28.4b USD	Dem	Rep	Dem	1 day
Jul. 19	22b USD	Rep	Rep	Rep	1 month
Feb. 18	20.5b USD	Rep	Rep	Rep	1 month
Sep. 17	19.8b USD	Rep	Rep	Rep	2 weeks
Nov. 15	18.1b USD	Dem	Rep	Rep	1 day
Feb. 14	17.2b USD	Rep	Rep	Rep	1 month
Oct. 13	16.7b USD	Rep	Rep	Rep	1 day
Feb. 13	16.4b USD	Rep	Rep	Rep	2 weeks

**Note:** The table shows the debt ceiling that was in force on each occasion (before its suspension), the party that was in office and the party that controlled both houses of Congress (blue: Democrats, red: Republicans), as well as the estimated time remaining until the date that the funds available to meet the US federal government's financial obligations would run out (which would lead to a default, or a shutdown of parts of the government).

Source: BPI Research, based on data from Politico.com.

### China: economic activity

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



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



## New economic scenario: a change of outlook for international economies and markets?

The international economy in the year to date has been marked by three major dynamics. Firstly, energy price tensions have eased, with prices stabilising at much lower levels than had been feared a few months ago, although they are still above pre-pandemic levels.<sup>1</sup> Secondly, the economic indicators have shown resilience on the activity side, while sending mixed signals on the inflation side, with sharp declines in headline inflation but significant persistence in the more inertial components. For these reasons, and as the third key dynamic of the year, the major central banks have been driven to further tighten their monetary policy. In addition to rate hikes, financial conditions in 2023 have also been strained following the collapse of Silicon Valley Bank (SVB) in the US and its reverberations in the global financial markets.<sup>2</sup> Taken together, all these developments have led us to re-evaluate the outlook for the international economy and financial markets.<sup>3</sup>

### Easing of energy prices

2023 began with energy prices that were much less stressed than had been initially feared, and this scenario has been confirmed over the course of the spring. In the gas market, Europe managed to get through the winter without major incidents, thanks to high levels of reserves and effective policies to contain demand and price volatility, all accompanied by a more temperate winter than usual. Thus, in May in the futures markets, the TTF gas price was trading at around €50/MWh on average for 2023 and 2024 as a whole. These levels, which are well below those anticipated at the start of the year (of over 100 euros),<sup>4</sup> will provide some relief for economic activity over the coming quarters.

The oil market, meanwhile, has experienced a more volatile few months, with the Brent barrel fluctuating between 70 dollars (when the market was dominated by fears of global cooling) and almost 90 dollars (when signs of a rapid revival of the Chinese economy coincided with further cuts in OPEC production). This volatility, coupled with the prospect of a second half of the year in which China's rebound could have a greater effect on commodity prices, leads us to forecast a Brent barrel price of around 85 dollars (80 euros) for 2023.

1. Gas prices are also now below their pre-Ukraine war levels (having been on the rise since Q3 2021).

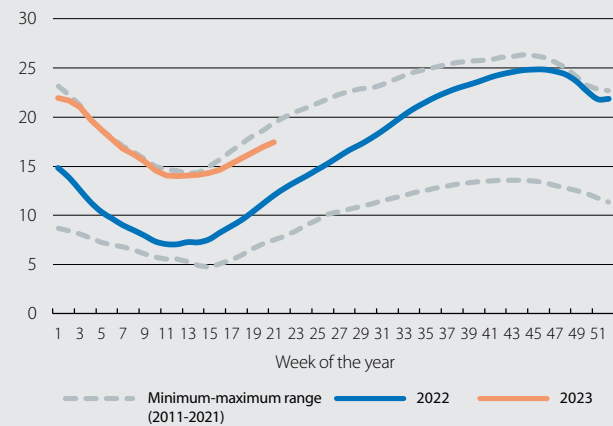
2. See the Focus «Financial stability considerations amid monetary tightening» in the MR05/2023.

3. Our new macroeconomic scenario can be viewed in the forecast tables of this very *Monthly Report*.

4. Prices based on the 60-day moving average, which is the benchmark metric used for our gas price projections. In part, the lower prices also reflect the prospect of a cooling in global economic activity.

### Euro area: gas storage \*

(% of consumption)



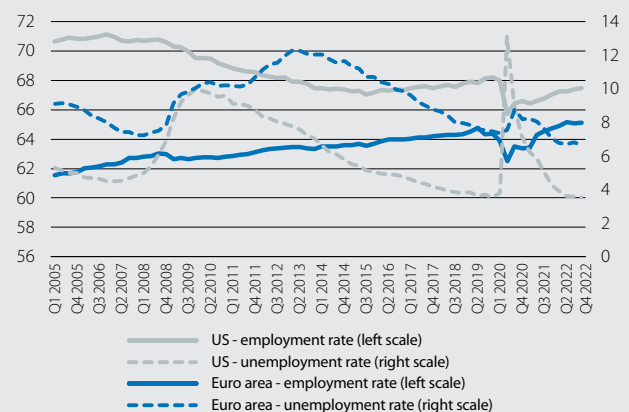
Note: \* Average for Germany, France, Italy and Spain.

Source: BPI Research, based on data from AGSI.

### US and euro area: labour market

(% of population between 15 and 74 years old)

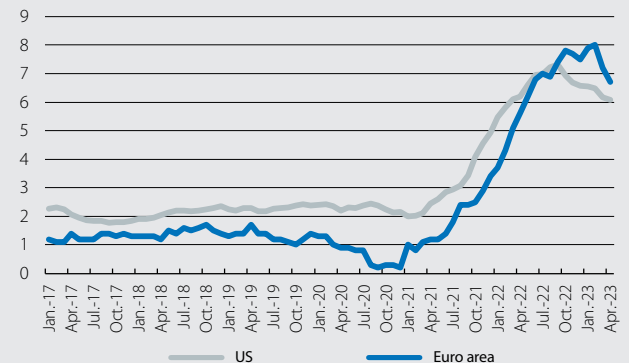
(% of labour force between 15 and 74 years old)



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

### CPI: 15% trimmed mean \*

Year-on-year change (%)



Note: \* The trimmed-mean inflation rate is calculated based on the mean basket of goods, but where the components with the most pronounced price movements are excluded (trimmed).

In this case, the 15% of components with the sharpest movements (16% for the US series) are excluded.

Source: BPI Research, based on data from the ECB and the Federal Reserve Bank of Cleveland.

### Resilience of global activity

Not only did the economic activity indicators improve steadily over the winter and spring (e.g. the global PMI rose from a low of 48 points in November, indicating economic contraction, to above 54 points in April, well within expansionary territory), but the GDP figures for Q1 in the major economies also proved better than expected: while the forecasts were for growth of 0.1%, 2.0% and –0.2% quarter-on-quarter in the US, China and the euro area, respectively, the actual figures were 0.3%, 2.2% and 0.1%.<sup>5</sup> This suggests that economic activity has been less weak than expected and, almost mechanically, it leads us to raise our GDP forecasts for 2023.

However, this does not mean that the global economy is out of the woods. In reality, our new forecasts paint a picture of rather modest quarterly growth, especially in the US and for the euro area as a whole. The fact is that higher interest rates are exerting a burden on the economy that will become increasingly visible. In fact, the cooling is already visible in the sector breakdown: the strength of the PMI mentioned above is driven mainly by the services sector, while various indicators point to a contraction of industrial activity in the world's major economies in recent months.

However, the loss of momentum of economic activity will be cushioned by the strength of the labour markets, which continue to show unemployment rates at close to all-time lows in both the US and the euro area, as well as significant growth in labour activity rates.

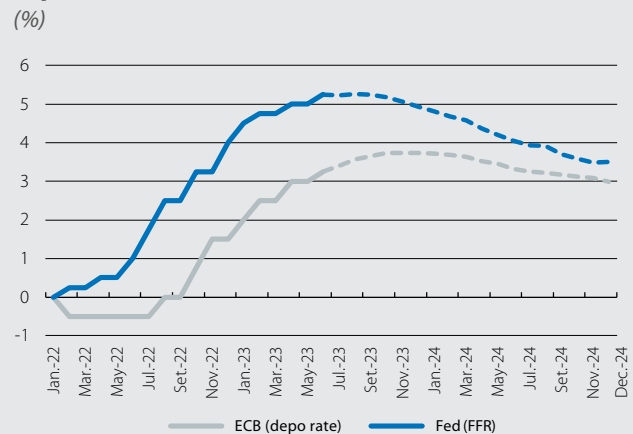
### Greater inertia in underlying inflation

Headline inflation has fallen steadily since the peaks reached in 2022, and it has done so mainly thanks to energy prices, both due to their base effect and because of lower energy costs.<sup>6</sup> This energy effect will indirectly filter through to the rest of the price basket over the coming months, intensifying the decline in inflation. In fact, the emergence of disinflationary signals is becoming increasingly apparent in the middle stages of the price formation chain, where supply bottlenecks have normalised, producer prices are decelerating in all sectors (including food) and the surveys reflect a moderation in businesses' pricing intentions. Moreover, the US rent index, which is a key component accounting for 40% of the core inflation basket, has registered two consecutive months of

5. Although better than expected, the euro area figure has been overshadowed by a downward revision in Germany (–0.3%, after an initial estimate of 0.0%). However, the euro area figure is also weighed down by a contraction of 2.7% in Ireland (a country which has recently been generating unusually volatile data). With these two notable exceptions, in the majority of euro area countries GDP was higher than expected in Q1.

6. In the euro area, the energy component has gone from adding around 5 pps to headline inflation in the autumn (when inflation peaked at 10.6%) to just 0.2 pps in April (when headline inflation stood at 7.0%).

### Official interest rates and market expectations



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

moderation and will help to bring down inflation going forward.

However, so far this year, underlying price pressures have shown more resistance than initially anticipated.<sup>7</sup> While this leads us to moderately raise our inflation forecasts for 2023 as a whole (more than offsetting the downward effect of the new energy forecasts), we continue to expect a gradual slowdown in prices over the coming quarters, supported by the indirect effects mentioned above, the cooling of demand and the containment of the feedback loops between wages, margins and prices.

### Interest rates, higher for longer

Given these dynamics in the energy crisis, economic activity and inflation, the central banks of the major advanced economies have been driven to continue to raise rates (with the fed funds rate at between 5.00%-5.25% in the US and the depo rate at 3.25% in Europe). On the other hand, with interest rates at clearly restrictive levels, and conscious that the macroeconomic impact of rate hikes operates with a time lag and with clear indications that the monetary policy transmission mechanisms are working,<sup>8</sup> the central banks have recently adopted a more cautious approach. While the Fed has not ruled out further rate hikes, and further moderate rises are still being considered by the ECB, the general strategy is now to keep rates in restrictive territory for a long time (as opposed to raising them even further) and to monitor the economic activity and inflation data before deciding on the next steps.

7. For example, core inflation began 2023 at 5.6% in the US and at 5.3% in Europe in January, while in April it remained at 5.5% in the US and at 5.6% in the euro area.

8. A viewpoint reinforced by the SVB episode. Also see the Focus «Is monetary policy managing to cool economic activity? A first assessment» in this very *Monthly Report*.

Thus, focusing on Europe, we take up the ECB's message of the need for rates to be kept «higher for longer» and our new forecasts contemplate that interest rates will reach a slightly higher peak in the coming months (depo rate at 3.75%) and that they will remain there for a little longer (the first rate cut would not occur before mid-2024).

### The environment remains challenging

Behind these changes in the economic environment, a constellation of risks persists which still leave the global economy in a fragile environment. In addition to the geopolitical factors, most notably the war in Ukraine, the collapse of SVB has highlighted the fact that, in a context of sharp interest rate rises (particularly following a long period of low rates), there is a risk of a sharp tightening of financial conditions, which in turn can trigger a sudden cooling of the economy. In the same vein, the state of some real estate markets is also cause for concern, having experienced significant price increases in recent years and with signs of overvaluation and high household indebtedness, as we recently analysed.<sup>9</sup> In addition, if the underlying price pressures persist, the central banks may be forced to tighten monetary policy even further, accentuating the aforementioned risks.

### Forecasts for international economies and markets

Annual change (%), unless otherwise stated	2022	2023	2024
Global GDP	3.4	2.8 (2.7)	3.0 (3.4)
US GDP	2.1	1.2 (0.9)	0.8 (1.4)
US inflation	8.0	4.2 (4.1)	2.2 (2.7)
Fed funds rate (year end)	4.50	5.00	3.75
Euro area GDP	3.5	0.9 (0.5)	1.3 (1.6)
Euro area inflation	8.4	5.5 (5.3)	2.6 (2.7)
ECB depo rate (year end)	2.00	3.75 (3.50)	3.00 (2.50)
12-month Euribor (average)	1.1	3.8 (3.4)	3.3 (2.6)
EUR/USD exchange rate (year end)	1.06	1.12 (1.10)	1.15
Chinese GDP	3.0	5.7 (5.2)	4.9 (5.1)
Brent oil (€ per barrel, average)	94	80	76
Natural gas (TTF) (€ per MWh, average)	132	51 (113)	55 (93)

**Note:** In brackets, previous forecast (only where different).

**Source:** BPI Research.

9. See the Focus «Advanced economy housing markets in a scenario of tighter monetary policy (part I)» in the MR04/2023.

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

## UNITED STATES

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Activity</b>									
Real GDP	5.9	2.1	1.8	1.9	0.9	1.6	–	–	–
Retail sales (excluding cars and petrol)	15.8	9.3	8.8	9.4	7.5	5.9	5.0	4.3	...
Consumer confidence (value)	112.7	104.5	103.4	102.2	104.2	105.5	104.0	103.7	102.3
Industrial production	4.4	3.4	3.8	3.5	1.8	1.3	0.1	0.2	...
Manufacturing activity index (ISM) (value)	60.7	53.5	55.0	52.2	49.1	48.3	46.3	47.1	...
Housing starts (thousands)	1,606	1,551	1,636	1,446	1,405	1,375	1,371	1,401	...
Case-Shiller home price index (value)	267	306	313	310	303	302	302.1	...	...
Unemployment rate (% lab. force)	5.4	3.6	3.6	3.6	3.6	3.5	3.5	3.4	...
Employment-population ratio (% pop. > 16 years)	58.4	60.0	59.9	60.0	60.0	60.1	60.4	60.4	...
Trade balance <sup>1</sup> (% GDP)	–3.6	–3.7	–4.0	–3.9	–3.7	–3.6	–6.6	...	...
<b>Prices</b>									
Headline inflation	4.7	8.0	8.6	8.3	7.1	6.7	5.0	4.9	...
Core inflation	3.6	6.2	6.0	6.3	6.0	5.7	5.6	5.5	...

## JAPAN

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Activity</b>									
Real GDP	2.2	1.0	1.8	1.6	0.4	1.3	–	–	–
Consumer confidence (value)	36.3	32.2	32.4	31.0	30.4	30.7	33.9	35.4	36.0
Industrial production	5.6	0.1	–3.6	4.0	0.6	–1.8	–0.6	0.4	...
Business activity index (Tankan) (value)	13.8	9.5	9.0	8.0	7.0	1.0	–	–	–
Unemployment rate (% lab. force)	2.8	2.6	2.6	2.6	2.5	2.5	2.8	2.6	...
Trade balance <sup>1</sup> (% GDP)	–0.3	–3.7	–1.9	–3.0	–3.8	–4.0	–7.7	–15.0	...
<b>Prices</b>									
Headline inflation	–0.2	2.5	2.4	2.9	3.9	4.1	3.3	3.5	...
Core inflation	–0.5	1.1	0.8	1.5	2.8	3.0	3.7	4.1	...

## CHINA

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Activity</b>									
Real GDP	8.4	3.0	4.8	0.4	3.9	4.5	–	–	–
Retail sales	12.4	–0.8	1.6	–4.9	3.5	5.9	10.6	18.4	...
Industrial production	9.3	3.4	6.3	0.6	4.8	2.9	3.9	5.6	...
PMI manufacturing (value)	50.5	49.1	49.9	49.1	49.5	51.5	51.9	49.2	48.8
<b>Foreign sector</b>									
Trade balance <sup>1,2</sup>	681	889	728	824	908	933	979.6	969.2	...
Exports	30.0	7.1	15.7	12.9	10.0	0.4	14.8	8.5	...
Imports	30.0	1.1	10.6	1.2	0.6	–7.3	–1.4	–7.9	...
<b>Prices</b>									
Headline inflation	0.9	2.0	1.1	2.2	2.7	1.3	0.7	0.1	...
Official interest rate <sup>3</sup>	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Renminbi per dollar	6.5	6.7	6.3	6.6	6.9	6.9	6.9	6.9	7.1

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 &amp; Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Refinitiv.

## EURO AREA

## Activity and employment indicators

Values, unless otherwise specified

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
Retail sales (year-on-year change)	5.4	...	1.1	-0.5	-2.6	-2.6	-3.7	...	...
Industrial production (year-on-year change)	9.9	...	2.0	3.4	2.0	0.4	-1.5	...	...
Consumer confidence	-7.5	...	-22.7	-26.9	-26.9	-26.9	-19.1	-17.5	-17.4
Economic sentiment	110.7	...	103.9	96.5	96.5	96.5	98.9	99.0	96.5
Manufacturing PMI	60.2	...	54.1	49.3	49.3	49.3	47.3	45.8	44.6
Services PMI	53.6	...	55.6	49.9	49.9	49.9	55.0	56.2	55.9
<b>Labour market</b>									
Employment (people) (year-on-year change)	1.4	...	2.7	1.8	1.5	1.6	-	-	-
<b>Unemployment rate (% labour force)</b>	7.7	6.7	6.7	6.7	6.7	6.6	6.6	6.5	...
Germany (% labour force)	3.6	3.1	3.0	3.1	3.1	3.0	2.9	2.9	...
France (% labour force)	7.9	7.3	7.5	7.2	7.2	7.0	7.0	7.0	...
Italy (% labour force)	9.5	8.1	8.1	8.0	7.9	8.0	7.9	7.8	...
<b>Real GDP (year-on-year change)</b>	5.6	3.5	4.4	2.5	1.8	1.3	-	-	-
Germany (year-on-year change)	2.8	1.9	1.7	1.4	0.8	-0.5	-	-	-
France (year-on-year change)	6.8	2.5	4.0	1.1	0.6	0.9	-	-	-
Italy (year-on-year change)	7.3	3.9	5.0	2.5	1.5	1.9	-	-	-

## Prices

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
General	2.6	8.4	8.0	9.3	10.0	8.0	6.9	7.0	6.1
Core	1.5	3.9	3.7	4.4	5.1	5.5	5.7	5.6	5.3

## Foreign sector

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Current balance</b>	2.5	-1.2	0.6	-0.8	-1.2	-0.5	-0.5	...	...
Germany	7.8	4.2	6.0	4.7	4.2	4.5	4.5	...	...
France	0.4	-2.2	-0.4	-1.4	-2.2	-1.9	-1.9	...	...
Italy	3.1	-1.2	0.6	-1.1	-1.2	-0.8	-0.8	...	...
<b>Nominal effective exchange rate<sup>1</sup> (value)</b>	94.3	90.8	90.2	88.9	91.7	93.1	93.3	94.6	...

## Credit and deposits of non-financial sectors

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Private sector financing</b>									
Credit to non-financial firms <sup>2</sup>	3.5	6.7	6.1	8.4	7.8	5.7	4.6	...	...
Credit to households <sup>2,3</sup>	3.8	4.4	4.6	4.4	4.0	3.2	2.5	...	...
Interest rate on loans to non-financial firms <sup>4</sup> (%)	1.2	1.8	1.4	1.8	2.9	3.8	...	...	...
Interest rate on loans to households for house purchases <sup>5</sup> (%)	1.3	2.0	1.5	2.1	2.9	3.7	...	...	...
<b>Deposits</b>									
On demand deposits	12.6	6.3	7.8	6.4	1.8	-3.4	-6.1	...	...
Other short-term deposits	-0.8	4.5	0.9	5.3	12.0	17.6	21.1	...	...
Marketable instruments	11.6	3.7	2.2	4.1	7.6	19.5	21.9	...	...
Interest rate on deposits up to 1 year from households (%)	0.2	0.5	0.2	0.4	1.1	1.8	...	...	...

**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.

## A strong economy in Q1 pushes annual growth to 2.5% in 2023

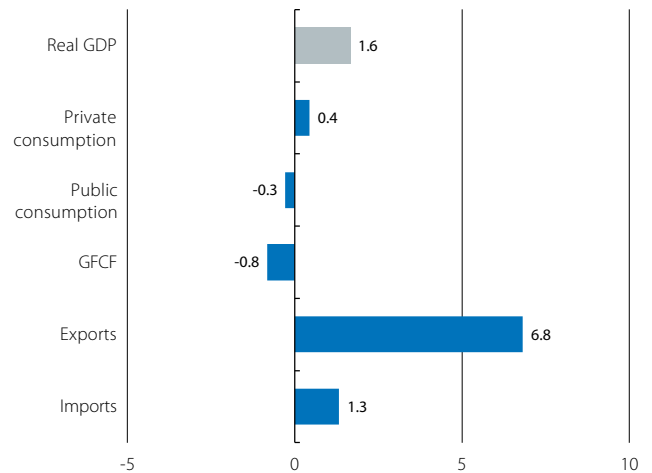
**Strong growth in Q1 supported by exports.** It has been confirmed that GDP grew by 1.6% quarter-on-quarter, reflecting the dynamism of the export sector, where exports of goods grew by 4.8% quarter-on-quarter and services by 10.8%. This behaviour was reflected in a significant drop in stocks, with domestic demand making a negative contribution (–0.8 percentage points). In turn, private consumption grew more positively this quarter than in 4Q2022, advancing 0.4% quarter-on-quarter, driven by spending on durable goods (in line with strong car sales). Meanwhile, the available indicators for Q2, although still scarce, show a positive but decelerating trend. The most noteworthy of these is the cooling of the general economic climate, reflecting a more cautious assessment across practically all sectors, accompanied by an improvement in consumer sentiment driven by better prospects for price and labour market developments. We therefore anticipate that quarter-on-quarter growth will be significantly more modest in the coming quarters, mainly due to the remaining impact of rising interest rates on the balance sheets of economic agents. The Q1 result and the expectation of moderation in successive quarters is reflected in our revision of the growth forecast for 2023 to 2.5% (previously 1%).

**Inflation retreating sharply in May.** INE's flash estimate showed a strong slowdown in inflation to 4.0% (5.7% April). In May, there were negative monthly price changes not only in the overall CPI (–0.66%) but also in all the main components: underlying (–0.31%); energy (–1.77%); and unprocessed food products (–2.85%). Our forecast for average annual inflation in 2023 has been revised downwards (to 5.0%), and at this point in time the factors contributing to a moderation in inflation seem to predominate over those working in the opposite direction. On the energy front, price decreases continue to be supported by the slowdown of prices on the international markets. In the food products group, VAT exemption was finally reflected in prices, while the first year-on-year decrease in industrial production prices since February 2021 occurred in April (–0.9%).

**A paradoxical labour market?** Recent statistics show a simultaneous increase in employment and in unemployment. In fact, according to the Employment Survey, the employed population increased by 0.4% quarter-on-quarter in Q1 (contrary to the average drop of 0.1% recorded between 2014 and 2019), accompanied by an increase in the unemployed population (11%). In this context, the active population increased strongly and the unemployment rate reached 7.2%, the highest value since Q1 2018 (excluding the pandemic). This behaviour of the labour market seems to be contrary to the

### Real GDP

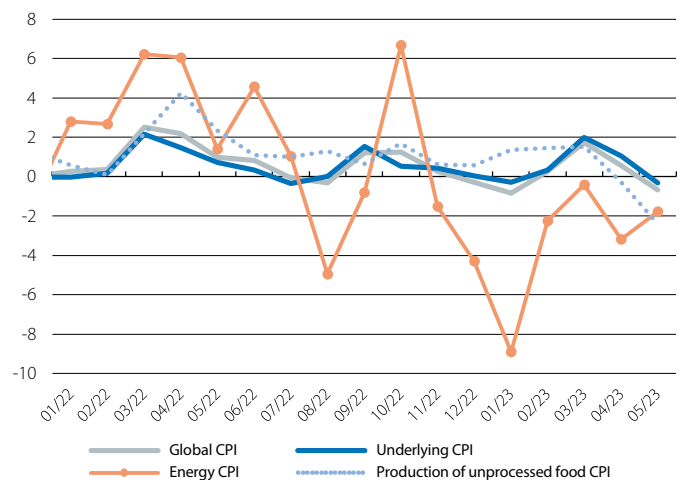
Quarter-on-quarter change in rate (%)



Source: BPI Research, based on data from INE.

### CPI: monthly variation

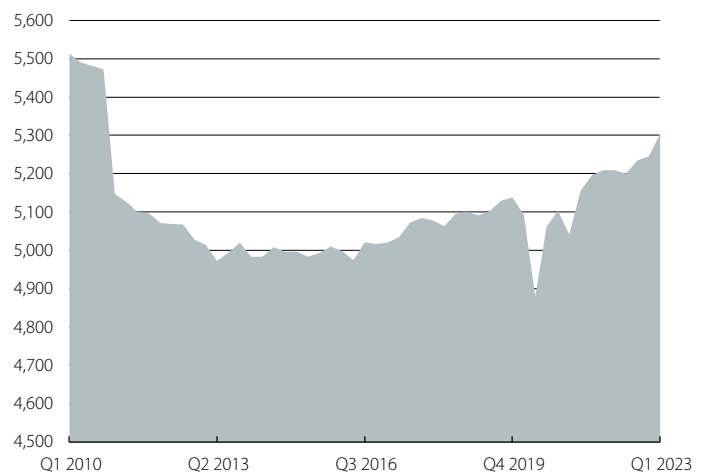
(%)



Source: BPI Research, based on data from INE.

### Portugal: active population

(Thousands of individuals)



Source: BPI Research, based on data from INE.



slowdown of the economy, continuing high inflation, worsening financing costs, prolonged war in Ukraine, and general uncertainty. In this context, we expect employment to grow only slightly in 2023 and the unemployment rate to rise to 7.1%, despite the fact that April's monthly data showed an (apparent) reduction in the unemployment rate.

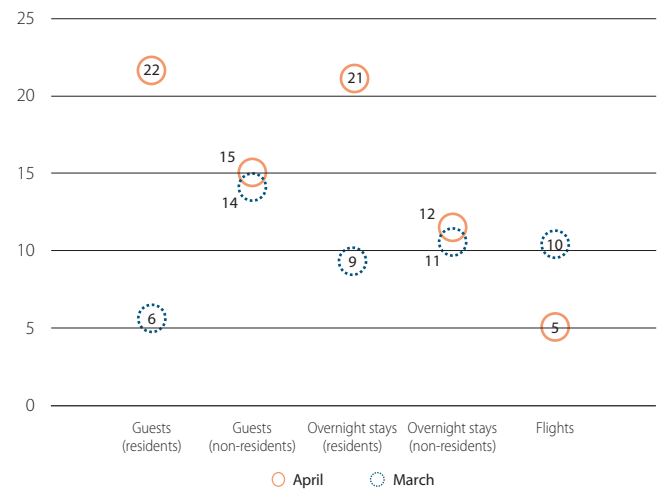
#### The strong performance of tourism in Q1 extends into April.

The tourism sector figures released for April reinforce our belief that this will be the best year for national tourism across its main metrics: guests, overnight stays, and income. In fact, compared to the pre-pandemic period, guests increased by 17.5% in April (10.4% in March) and overnight stays grew by 14.3% (10.3% in March). The sector has progressively returned to the mix observed before the pandemic, with 60% of guests and 70% of overnight stays being by non-residents. The increase in the number of tourists from the USA particularly stands out, explaining 54% of the overall growth in the first four months of the year, which rose to more than 1 million.

**Current account returns to surplus in 1Q 2023.** In this first period of the year, the current account recorded a surplus of 380 million euros, a situation not seen since 2018, with the exception of 2021 (a year marked by the pandemic). This behaviour reflects the robustness of tourism, as described in the previous paragraph, and improvement in the energy deficit. Thus, the balance of services recorded a surplus of 5.2 billion euros, almost 65% of which is explained by the tourism balance. The balance of other services also improved, partly reflecting improvements in transport services, with a strong correlation with tourism, but also due to improved balances in the ICT and business services sector. In addition, the reduction in the energy deficit to 2.1 billion, reflecting lower energy prices, also contributed to the recovery in the current account. The behaviour in Q1, the expectation that energy prices will remain contained, and the expectation that domestic demand will behave moderately all suggest that the current account will again be in surplus at the end of 2023. We estimate around 0.8% of GDP.

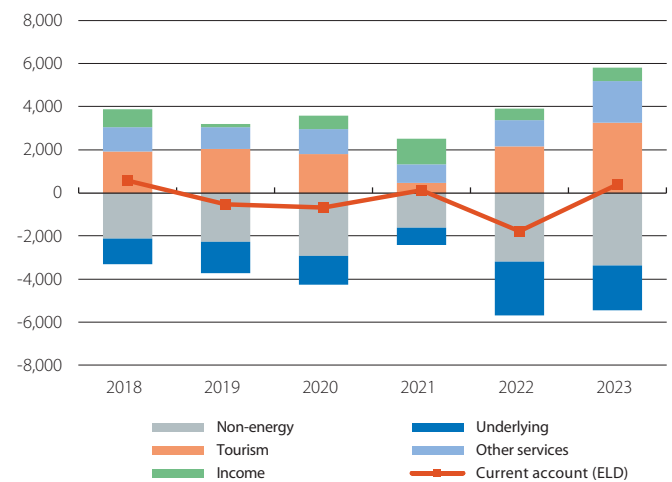
**The portfolio of credit to the non-financial private sector fell in April, which has not happened since the beginning of 2020.** More specifically, it decreased 0.6% year-on-year, a behaviour explained by the loan portfolio of non-financial companies (-2.9% year-on-year). In turn, the mortgage loan portfolio continues to decelerate strongly, but remains in positive territory (1.1% year-on-year, compared to 1.6% year-on-year in March). Although there is no information on new loans for house purchase at the close of this edition, information on bank assessment released by INE points to new housing credit operations having fallen in year-on-year terms in April. Indeed, the number of valuations carried out in April fell 34.3% year-on-year, even though the median value increased 10.0% in comparison to the same month in the previous year, settling at 1,491 euros/m<sup>2</sup>.

#### Tourism: change compared to 2019 (%)



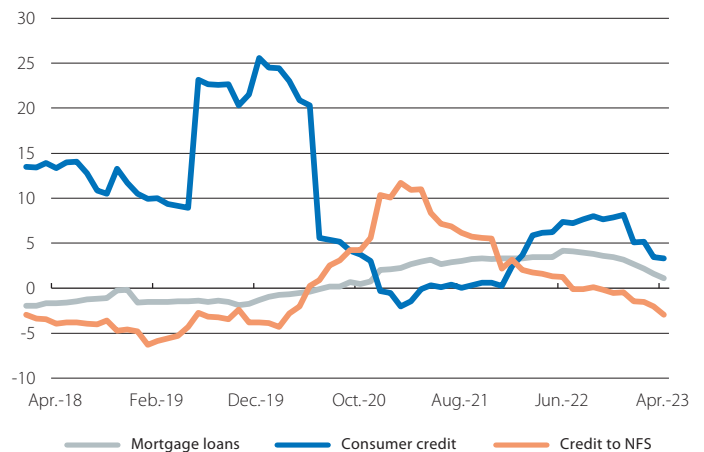
Source: BPI Research, based on data from INE.

#### Portugal: current account (year to march, billions of euros)



Source: BPI Research, a partir dos dados do Datastream.

#### Portugal: loan portfolio by segment Annual rate of change (%)



Note: Series includes credit securitisations. Mortgage loans are adjusted for other reclassifications.  
Source: BPI Research, based on data from Banco de Portugal.

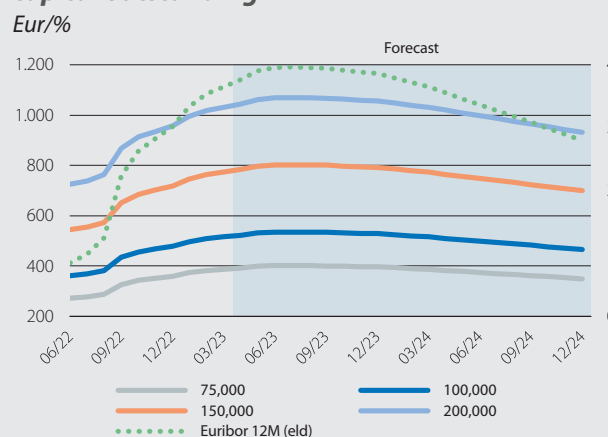


## Mortgage loans: what is the real extent of the effort the Portuguese

The Effort Rate in the context of mortgage loans («ML») is an important concept. Its purpose is to give a relative measure of how heavy the repayment burden is in relation to the borrowers' income. It is therefore a benchmark metric when financial institutions analyse the feasibility of a transaction. It is also especially relevant because it is the metric the government uses to frame the renegotiation of contracts and support for payment of instalments. In recent times we have obtained pertinent data that allows us to more accurately assess the reality in terms of the effort rates of Portuguese borrowers. On the income side, this data include the «Medium-Term Agreement on Improving Incomes, Wages and Competitiveness», together with the figures released by INE on the evolution of average monthly gross remuneration per worker, which allow us to ascertain the trends in salary increases in 2023 and provides a roadmap for coming years. On the expenditure side, the rise in reference interest rates occurred more rapidly than we initially anticipated, and we can see the peak of this movement more clearly because we have passed the peak of the inflationary surge. Last but not least is the data that the Bank of Portugal has published on the characteristics of the stock of mortgage loans in the Portuguese financial system. All these elements together allow us to fine-tune the effort metric, understand its nuances, and envision how it will likely evolve in the future. This is what we shall try to do in this article.

Firstly, to illustrate the order of magnitude of the net increase in ML instalments resulting from rising interest rates, we simulated the evolution retrospectively for various amounts of outstanding capital (75, 100, 150 and 200 thousand euros) since before the start of the ECB's decision to lift rates and how this may evolve by the end of next year<sup>3</sup> (first chart). According to our forecasts for the reference rate, the peak in the value of ML instalments should occur in July this year. At that time, ML instalments will have increased by 47% in relation to the value they presented before the beginning of the monetary tightening process. In the second table we can see the nominal increase in ML instalments forecast

### ML: value of the monthly instalment for different capital outstanding



Source: BPI Research.

### ML: value of the monthly instalment for different capital outstanding

	capital outstanding			
	€75,000	€100,000	€150,000	€200,000
<b>Instalment (EUR)</b>				
June-22	271.70	362.26	543.39	724.52
July-23	401.12	534.83	802.25	1,069.67
December-24	349.43	465.91	698.86	931.81
Δ June 22-July 23	129.43	172.57	258.86	345.14
Δ July 23-December 24	-51.70	-68.93	-103.39	-137.85

Note: We consider a loan term of 30 years, a spread of 1%, the Euribor 12M index, and the BPI Research forecasts for this reference rate.

Source: BPI Research.

up to the peak in July this year and the subsequent (partial) downward correction that we expect to occur by the end of 2024. These are significant values: the increase in the instalment of a 100,000 euro loan to July corresponds to a cut of around 13% in the average monthly gross remuneration of the Portuguese worker.

But how does this movement in rates and financial charges impact the effort rate of households with mortgages? The economic literature indicates that the initial years after the contracting of ML are those in which the probability of default is greatest.<sup>4</sup> On this subject, the Bank of Portugal has published the following data<sup>5</sup>: the loans contracted between 2019 and 2022 have an average amount outstanding of 101.8

1. For more detail, see IM12 of 2022 – «Effort rate: a reference for the renegotiation of housing loans».

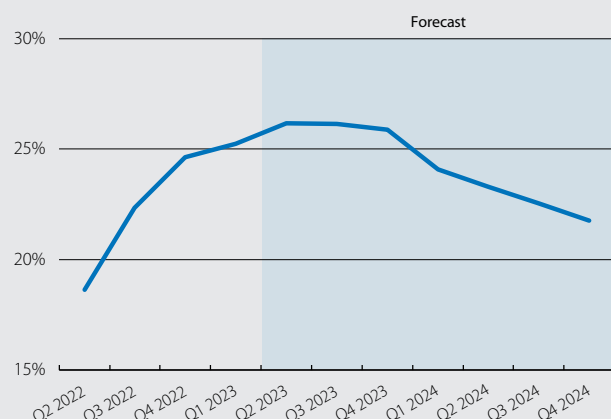
2. The government's «More Housing» programme includes a support measure for families with loans of up to 250,000 euros that have been contracted until 15 March 2023, with incomes up to the sixth income tax bracket and with an effort rate above 36%. In this case, the State will finance 50% or 75% of the interest charges associated with mortgage loans when the reference rate exceeds 3%. The maximum annual amount of support is one and a half times the Social Support Index (480.43 euros), equivalent to 720.65 euros per year.

3. We considered a loan term of 30 years, a spread of 1%, the Euribor 12M index, and the BPI Research forecasts for this reference rate.

4. On this subject see Linn & R. Lyons. «Three triggers? Negative equity, income shocks and institutions as determinants of mortgage default.» Bank of England Staff Working Paper No. 812. See also Francke, M., & Schilder, F. (2014). «Losses on Dutch residential mortgage insurance». Journal of European Real Estate Research 7.3, 307-326.

5. Financial stability report - November 2022.

### Effort rate: Average ML contracted between 2019 and 2022



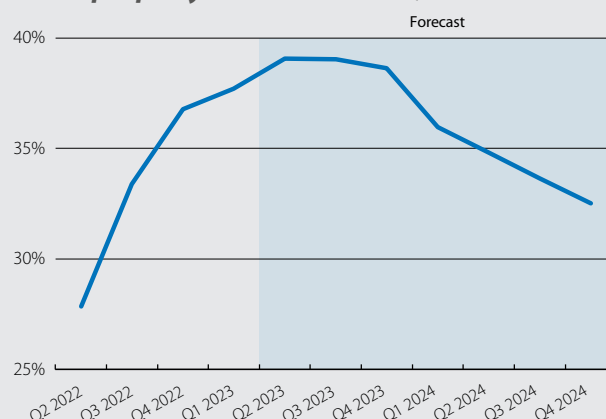
Source: BPI Research, based on data from Banco de Portugal.

thousand euros, representing 36% of the stock of ML of Portuguese banks and 22% of total contracts. We have therefore reconstructed the effort rate curve of this «average loan», considering in the numerator of the ratio the net income for 2023 according to the assumptions of the aforementioned Medium Term Agreement.<sup>6</sup> As we can see in the third graphic, despite the extraordinary increase in effort in the last year, it never exceeds 26%, placing it within risk parameters that are considered healthy. Of course, we can stress this metric if instead of the average amount mentioned we replace it with the equivalent amount to finance (with LTV of 80%) the average transaction value of a property sold in Q2 2022 (€190,000). Under these conditions, we note that the monthly effort with such a ML from Q4 2022 would exceed healthy parameters and soon approach 40%. Although a theoretical exercise, this stressed effort rate highlights that the «average priced property» is increasingly inaccessible to the «average income family».

It is thus necessary to go beyond the concept of «average» and understand exactly what the amounts in debt and household income are where the main stock of mortgages is allocated. Only this allows us to understand the real effort of families and to identify where the vulnerabilities are. This is what we show in the last graphic, anticipating what the effort rates will be in December this year by income quintiles of borrowers. Several conclusions emerge from this exercise. Firstly we should note that the stock of ML concentrated in the 20% of borrowers with the lowest incomes (1st quintile) is only 9.4%, while 36.5% of stock is concentrated in the hands of 20% of borrowers with the highest incomes (5th quintile). Secondly, we infer that by the end of this year, 18.6% of the total ML stock will face effort rates above 40%, with a third of these (6.2%) being loans from borrowers in the 1st income quintile. On the other hand,

6. The other assumptions are a loan term of 30 years, the Euribor 12 months, and a spread of 1%.

### Effort rate: ML based on the average price of the property transacted in 2Q 2022



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

### ML stock by Tx class. of effort and income quintile

	1st Quintile	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile
Effort rate	≤ 20%	4.2	11.5	25.4	41.6
	>20% ; ≤30%	10.8	25.7	32.2	32.6
	>30% ; ≤40%	18.9	25.6	23.5	16.1
	>40% ; ≤50%	18.9	17.6	11.3	6.2
	>50%	47.2	19.5	7.7	3.5
Average amount in debt (eur)		46,351	55,528	62,932	71,840
Weight in ML stock		9.4%	15.7%	18.9%	19.5%

Source: BPI Research, based on data from the Bank of Portugal - Financial Stability Report - May 2023.

65.6% of the stock will maintain very healthy effort rates, below 30%, even in the context of monetary tightening.

In conclusion, it is undeniable that the increase in interest rates has had a significant negative effect on the disposable income of families after paying ML instalments. This impact is more substantial for lower-income borrowers, translating in the current context into worrying effort rates. In any case, the stock of ML is mainly concentrated in higher income households, and new contracts signed in recent years are also mainly in this segment. This will explain the maintenance of low default rates. We believe that with current interest rate expectations ML defaults are unlikely to trigger a downward adjustment in residential property prices.

*Tiago Belejo Correia*

## Stability Programme: budget balance heading for surplus

### A Stability Programme based on a plausible macroeconomic scenario...

The Stability Programme 2023-2027 is based on a more positive scenario for economic growth than that included in the State Budget 2023. The Government now anticipates GDP growth of 1.8% in 2023 (1.3% in the 2023 State Budget), a development explained by the expectation of a more positive recovery of external demand, in line with our forecasts. Still, at the time of writing, we know that GDP growth in 2023 is likely to be close to 2.5%.

On the other hand, expectations for the labour market are more negative, with the Government anticipating an increase in the unemployment rate to 6.7% (compared to 5.6% in the 2023 State Budget). The Government's outlook is also more negative for inflation, which is expected to reach levels around 5%, exceeding the Government's predictions of around 4% in October.

For the remaining projection period, the forecasts for GDP and inflation are in line with the forecasts of other institutions, except in the case of the labour market, for which the Government points to a more favourable scenario. Thus, overall, the predicted macroeconomic scenario for the 2023-2027 period appears plausible, though it should be noted that 2023 will be more positive, which provides additional support to the projections in the stability programme.

### ...and in maintaining the consolidation of public accounts...

The Government projects the budget deficit to remain at 0.4% of GDP in 2023, clearly below the forecast in the 2023 State Budget (–0.9% of GDP). It should be remembered that the starting point in 2022 was more positive than anticipated, with the deficit standing at 0.4% of GDP that year, compared to the Government's forecast of –1.9% when the 2023 State Budget was published.

What explains the downward revision to the deficit in 2023? Compared to the 2023 State Budget, the Government has revised its revenue forecasts upwards, expecting to collect 3.282 billion euros more than expected in October, with particular emphasis on the upward revision of tax and contributory revenue (+3.327 billion euros). This is despite the impact of the VAT reduction measure on a number of food items, with an impact of 410 million euros.

Expenditure is also expected to be higher (+1.994 billion euros), with a notable increase in subsidies and social benefits (+1.515 and +1.008 billion euros compared to October, respectively). The increase in subsidies is largely explained by the accounting of the 1 billion euro gas tariff reduction measure in 2023 (instead of its recording in 2022, as was expected by the Government). In the case of social benefits, the additional payment of pensions (500 million euros) and support for vulnerable families (580 million euros) stand out. Personnel expenses were also revised upwards (+448 million euros than in

### Forecasts of the main macroeconomic variables, by institution

	GDP				Unemployment rate				Inflation rate*			
	SP	EC	BdP	BPI	SP	EC	BdP	BPI	SP	EC	BdP	BPI
2023	1.8	2.4	1.8	2.5	6.7	6.5	7.0	7.1	5.1	5.1	5.5	5.0
2024	2.0	1.8	2.0	1.5	6.4	6.3	6.9	6.9	2.9	2.7	3.2	2.8
2025	2.0	–	2.0	2.4	6.2	–	6.7	6.7	2.1	–	2.1	2.0
2026	1.9	–	–	1.4	6.0	–	–	6.5	2.0	–	–	2.1
2027	1.8	–	–	–	5.8	–	–	–	2.0	–	–	–

Note: \* HICP forecasts for SP, EC and BoP; in the case of BPI, they are related to CPI.

Source: BPI Research, based on the Stability Programme 2023-2027, BdP Economic Bulletin (March 2023), and European Commission (Spring Forecasts, May 2023).

### Main items in the public accounts

% GDP	2023	2024	2025	2026	2027	Var. % 2027/23
<b>Total Revenue</b>	<b>44.4</b>	<b>43.9</b>	<b>43.7</b>	<b>43.3</b>	<b>42.2</b>	<b>-2.2</b>
Tax Revenue	25.1	24.9	24.8	24.7	24.5	–0.6
Contributions to SS	12.2	12.2	12.2	12.3	12.3	0.1
Others	7.1	6.8	6.7	6.3	5.4	–1.7
<b>Total Expense</b>	<b>44.8</b>	<b>44.1</b>	<b>43.7</b>	<b>43.3</b>	<b>42.1</b>	<b>–2.7</b>
Social Benefits	17.9	17.9	17.8	17.7	17.5	–0.4
Personnel expenses	10.7	10.6	10.5	10.4	10.3	–0.4
Interest	2.3	2.7	2.8	2.8	2.8	0.5
Investment	3.2	3.4	3.5	3.4	2.9	–0.3
Others	10.7	9.5	9.1	9.0	8.6	–2.1
<b>Budgetary Balance</b>	<b>–0.4</b>	<b>–0.2</b>	<b>–0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.5</b>
<b>Primary Balance</b>	<b>1.9</b>	<b>2.5</b>	<b>2.7</b>	<b>2.8</b>	<b>2.9</b>	<b>1.0</b>
<b>Structural Balance</b>	<b>–0.5</b>	<b>–0.4</b>	<b>–0.4</b>	<b>–0.2</b>	<b>–0.2</b>	<b>0.3</b>

Source: BPI Research, based on data from the Stability Programme 2023-2027.

October), explained by the extraordinary 1% increase in pay to civil servants (with an estimated cost of 245 million euros) and the increase in the food subsidy (143 million euros). Finally, the downward revision of interest expenses (–362 million euros) and public investment (–280 million euros) should be highlighted.

For the following years, the deficit is expected to continue to decrease and reach a point of balance in 2026, a development that is the result not only of maintaining a scenario of economic growth, but also from the elimination of COVID measures and the package of support measures against high inflation (an issue we will analyse in the next section).

1. Support of 30 euros/month, granted to families considered vulnerable (that benefit from at least one of the following supports: energy social tariff, solidarity complement for the elderly, social insertion income, social inclusion benefit complement, old age pension, disability pension, unemployment benefit, or family allowance up to the 2nd bracket). In addition, families with children/young people with benefits up to the 4th level receive an extraordinary support of 15 euros per month for each child. Although the support is monthly, it is paid quarterly.

Looking at the entire projection horizon, the accumulated growth of tax and contributory revenue (23.1%) is below that expected for nominal GDP (27.9%), which can be explained by a measure referred to in the 2023-2027 Stability Programme as «Reduction of the tax burden» in the scope of personal income tax, but without detail. Thus, revenue as a percentage of GDP is expected to fall from 44.4% in 2023 to 42.2% in 2027. However, we believe that the Government's estimate for 2023 for tax and contributory revenue may be conservative, considering the historical relationship between tax and contributory revenue and nominal GDP. It is possible that the Government's estimate is underestimated by more than 1.200 billion euros (0.5% of GDP).

Expenditure is expected to decrease by 2.7 pp to 42.1% of GDP in 2027, explained by the reduction in the share of social transfers in GDP (see second table). However, this reduction is explained only by the fact that social benefits increase less than nominal GDP. In fact, the absolute increase in this period will be more than 8.960 billion euros, largely explained by the updating of pensions (+6.800 billion euros). At the same time, subsidy spending will reduce with the end of pandemic and inflation-related measures. On the other hand, and in a context of rising interest rates, the Government expects that the interest burden will increase to 2.8% of GDP in 2027 (that is, an additional expenditure of around 3.85 billion euros compared to 2022). However, considering our expectations for the evolution of market interest rates, it is possible that the Government has overestimated the interest charge. Indeed, for 2023, we estimate that the interest charge could increase by around 1 billion euros compared to 2022, which would put the weight of interest on GDP at 2.2%, 0.1 pp less than expected by the Government. For the following years, we forecast that the weight of interest will reach 2.4% of GDP in 2026.

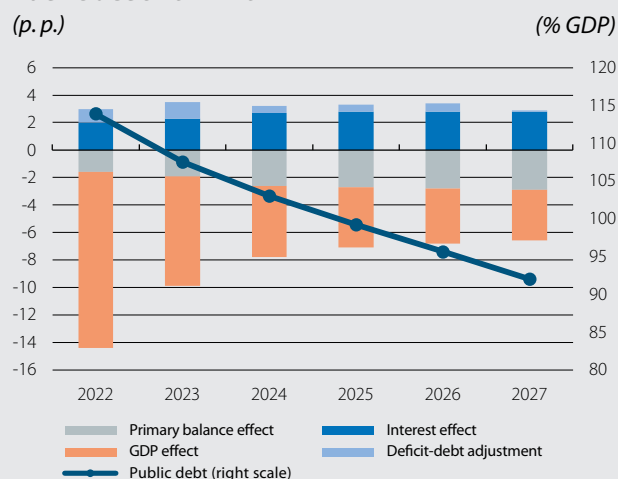
In this context of consolidation of public accounts, the public debt ratio should decrease by 14.7 pp over the projection horizon. If the expected ratio for 2023 (of 107.5% of GDP) is confirmed, this will be the lowest ratio since 2010, and if the ratio of 92% of GDP in 2027 is confirmed, this will be the lowest level since 2009.

### ...despite fiscal policy measures

The 2023-2027 stability programme presents an estimate of the impact of fiscal policy measures for the forward estimates, some of which are already included in the 2023 State Budget. On the one hand, the measures taken by the Government will lead to a reduction in collected revenue of 1.908 billion euros over the cumulative period of the projection. Of these, 1.15 billion euros concern the measure «Tax burden reduction».

On the expenditure side, they point to measures that will contribute to its worsening by almost 6.95 billion euros. The regular updating of pensions (cumulative impact of 6.289 billion euros) largely contributes to this increase. Although this is not a new measure, it shows that the Government is once again applying the updating formula enshrined in the Law.<sup>2</sup> Added to

### Public debt 2022-2027



Source: BPI Research, based on data from the Stability Programme 2023-2027.

this is the permanent effect resulting from the extraordinary 1% update of civil servants' wages in 2023 and of the food subsidy (totalling 388 million euros) and rent support (250 million euros).

According to the analysis by UTAO, the budgetary policy measures in 2023 were revised upwards from what was estimated in the 2023 State Budget, from a net expenditure of 1.6% of GDP (3.953 billion euros) to 2.9% (7.470 billion). For the following years, the impact will be much lower, reflecting the end of the main support measures against high levels of inflation and COVID measures.

The end of these measures and the maintenance of a positive macroeconomic scenario support the expected evolution of the budgetary balance up to 2027. Incorporating the assumptions of our scenario, and after a more detailed analysis, it even seems to us that a slight surplus could be reached in 2025 (0.1%), earlier than expected in the stability programme. In fact, taking into account the historical sensitivity of tax and contributory revenue to economic activity, it seems to us that its trend may be more positive than that implicit in the stability programme and that the interest burden may also be lower, reaching levels around 2.4% of GDP in 2026 (compared to 2.8% anticipated in the programme).

However, and in an environment as uncertain as the one we are currently facing, assumptions can easily be reversed, for example in the face of negative exogenous shocks or if interest rates increase more than our expectations. It is also important to draw attention to public expenditure considered to be more rigid (current primary expenditure), which, in the Government's view, should fall as a percentage of GDP, but which, in absolute terms, means an increase of more than 17 billion euros over the forward estimates, almost entirely justified by expenditure on personnel and social benefits. This increase is particularly relevant since, in a more negative economic and financial scenario, this type of expenditure is more difficult to reverse.

Vânia Duarte

2. Law No. 53-B/2006.

## Activity and employment indicators

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
Coincident economic activity index	3.4	5.7	6.5	5.1	4.3	4.6	4.8	5.0	...
<b>Industry</b>									
Industrial production index	4.5	0.4	2.0	1.8	-0.3	0.6	-4.4	...	...
Confidence indicator in industry (value)	-5.3	-3.4	-2.5	-4.8	-6.3	-5.0	-3.6	-3.7	-5.5
<b>Construction</b>									
Building permits - new housing (number of homes)	13.5	6.0	3.2	-3.2	13.2	-34.4	12.4	...	...
House sales	20.5	1.3	4.5	-2.8	-16.0	...	-	-	-
House prices (euro / m <sup>2</sup> - valuation)	8.6	13.8	14.2	15.8	13.6	12.9	11.4	10.0	...
<b>Services</b>									
Foreign tourists (cumulative over 12 months)	51.5	158.6	298.1	244.4	158.6	116.9	116.9	89.0	...
Confidence indicator in services (value)	0.1	15.1	19.5	16.9	9.9	11.1	13.3	15.9	12.7
<b>Consumption</b>									
Retail sales	4.9	4.8	3.1	3.3	0.0	1.6	0.6	2.4	...
Coincident indicator for private consumption	4.9	4.1	4.9	2.8	2.2	3.0	3.4	3.8	...
Consumer confidence index (value)	-17.2	-29.7	-30.5	-31.8	-37.0	-35.1	-33.4	-31.7	-29.8
<b>Labour market</b>									
Employment	2.8	2.0	1.9	1.1	0.5	0.5	0.6	0.7	...
Unemployment rate (% labour force)	6.6	6.0	5.7	5.8	6.5	7.2	7.0	6.8	...
<b>GDP</b>	5.5	6.7	7.4	4.8	3.2	2.5	-	-	-

## Prices

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
General	1.3	7.8	8.0	9.1	9.9	8.0	7.4	5.7	4.0
Core	0.8	5.6	5.5	6.5	7.2	7.1	7.0	6.6	5.5

## Foreign sector

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Trade of goods</b>									
Exports (year-on-year change, cumulative over 12 months)	18.3	23.0	18.9	22.7	23.0	21.5	21.5	...	...
Imports (year-on-year change, cumulative over 12 months)	22.0	31.4	31.5	35.2	31.4	24.4	24.4	...	...
<b>Current balance</b>	-1.6	-3.2	-4.4	-4.2	-3.2	-1.1	-1.1	...	...
Goods and services	-5.5	-4.9	-6.4	-5.3	-4.9	-2.9	-2.9	...	...
Primary and secondary income	3.9	1.7	2.0	1.1	1.7	1.8	1.8	...	...
<b>Net lending (+) / borrowing (-) capacity</b>	2.1	-1.1	-1.0	-1.9	-1.1	1.5	1.5	...	...

## Credit and deposits in non-financial sectors

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Deposits<sup>1</sup></b>									
Household and company deposits	9.3	6.4	8.2	7.8	6.4	0.5	0.5	-0.8	...
Sight and savings	16.3	7.3	12.9	11.2	7.3	-3.1	-3.1	-5.0	...
Term and notice	1.2	5.2	2.3	3.3	5.2	5.4	5.4	5.1	...
General government deposits	-4.1	12.4	8.5	-0.1	12.4	11.1	11.1	21.3	...
<b>TOTAL</b>	9.0	6.5	8.2	7.5	6.5	0.8	0.8	-0.2	...
<b>Outstanding balance of credit<sup>1</sup></b>									
Private sector	2.9	1.8	3.0	2.3	1.8	0.0	0.0	-0.6	...
Non-financial firms	2.2	-0.4	1.2	0.1	-0.4	-2.1	-2.1	-2.9	...
Households - housing	3.3	3.2	4.2	3.8	3.2	1.6	1.6	1.1	...
Households - other purposes	3.0	2.9	3.4	3.3	2.9	0.0	0.0	-0.2	...
General government	3.8	-2.7	-1.3	-1.5	-2.7	-2.0	-2.0	-2.0	...
<b>TOTAL</b>	2.9	1.6	2.8	2.2	1.6	-0.1	-0.1	-0.6	...
<b>NPL ratio (%)<sup>2</sup></b>	3.7	3.0	3.4	3.2	3.0	...	-	-	-

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.



## Upward revision of Spain's growth for 2023

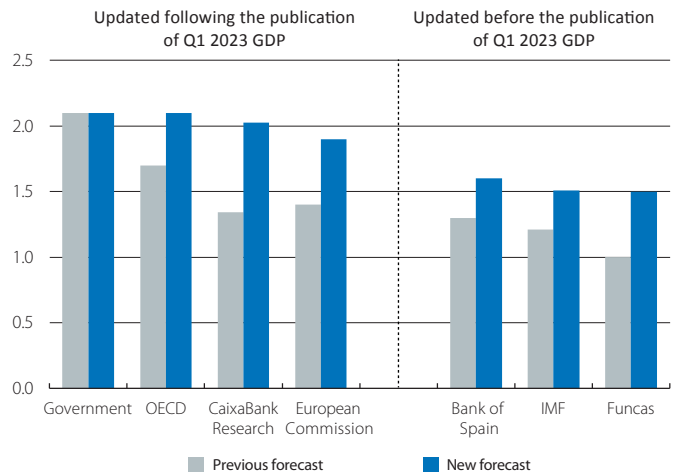
The forecast for GDP growth in 2023 is revised upwards to 2.0% (+0.7 pps). The encouraging Q1 2023 growth data published last month (0.5% quarter-on-quarter) alleviated fears of a recession in the short term, while the data published in the last few months have, in general, been better than expected. The improved economic outlook also supports the rapid moderation in energy prices witnessed in recent months. However, while 2% growth in a challenging context is certainly an encouraging development, it is important to note that much of this growth comes from the good performance of the foreign sector. Domestic demand, on the other hand, is weak, affected by the impact of the high inflation and rising interest rates (see the Focus «New economic scenario: the outlook improves for Spain» in this same report, for more information on the change in the macroeconomic forecasts).

The indicators available for the Q2 2023 show a mixed pattern. On a positive note, the PMI for the services sector stood at 56.7 points in May, well above the level at which positive growth rates are usually observed (50 points), albeit below the level of the previous two months. The consumption-related indicators offer mixed signals. On the one hand, the retail trade index in real terms grew by 0.9% month-on-month in April and, if we exclude service stations from the tally, growth amounted to 4.1% month-on-month. In contrast, according to the CaixaBank consumer indicator, Spanish bank card activity slowed in April compared to the previous months and grew by 4.1% year-on-year (9.9% in March). This weakness has continued in the latest available data up until the first half of May. In turn, the industrial sector has continued to show weakness. In May, the PMI for the manufacturing sector fell 0.6 points and stood at 48.4 points, within contractionary territory (below 50 points). Overall, the scoreboard of indicators suggests that the economy is continuing to grow, but at a more moderate pace than in the previous quarter.

The Spanish labour market continues to perform well and Social Security affiliation marks a new high in May, with 20.8 million registered workers. However, there is a slight moderation in the rate of job creation. Specifically, the number of registered workers rose by 200,411 people in May, slightly below the average for the month of May (214,000 on average in the period 2014-2019), and the year-on-year rate of growth moderated by 0.1 percentage points, to 2.9%. Correcting for seasonality, employment increased in the month by 47,883 registered workers, after growing by more than 100,000 in the previous two months. Unemployment, meanwhile, fell by 49,260 people to 2,739,110 people, which represents a smaller decline than usual in the month of May (-105,000 on average in the period 2014-2019).

### Spain: GDP forecast comparison

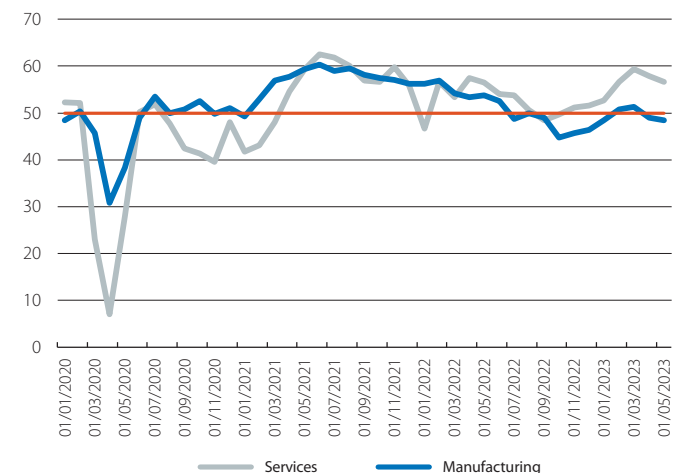
Annual change in 2023 (%)



Source: BPI Research, based on data from the government, the European Commission, the OECD, the Bank of Spain, the IMF and Funcas.

### Spain: PMI

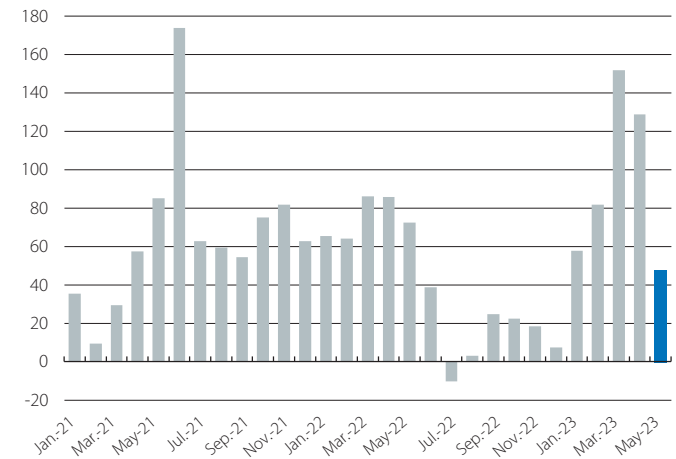
Level



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

### Spain: workers registered with S.S. \*

Month-on-month change (in thousands)



Note: \* Seasonally-adjusted data.

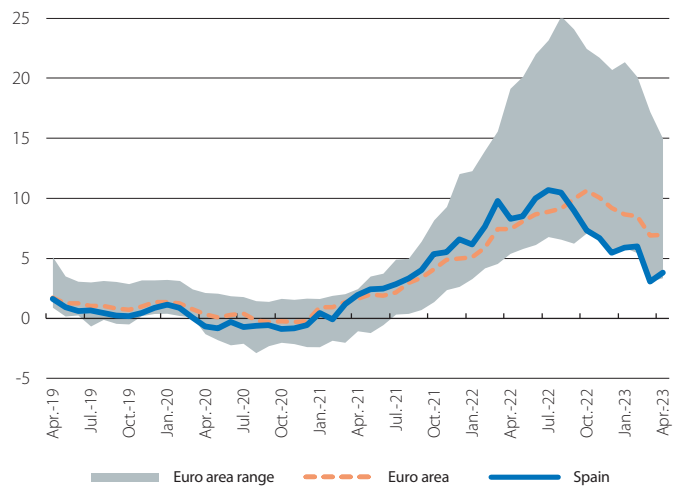
Source: BPI Research, based on data from the Ministry of Inclusion, Social Security and Migration.

**Inflation moderates more than expected in May.** Headline inflation fell sharply in May and stood at 3.2% year-on-year (4.1% in April), according to the CPI flash indicator published by the National Statistics Institute. The slowdown in prices was not dominated by base effects, as was the case in the previous two months, meaning that the signal that this moderation conveys is clear and, in this case, positive. In the absence of the breakdown, the National Statistics Institute pointed out that the containment of inflation was mainly due to an appreciable fall in fuel prices, as well as lower food inflation. Core inflation (which excludes energy and unprocessed food) also fell significantly, standing at 6.1% (6.6% in April). This was due to contained growth in the core CPI in month-on-month terms, which reaffirms the signs of an easing of price tensions.

**Housing prices rose significantly in Q1.** Home prices based on valuations grew by 2.2% quarter-on-quarter in Q1 2023, compared to 0.5% in Q4 2022, although in year-on-year terms it continued to slow down (3.1% year-on-year compared to 3.3% in the previous quarter). In the same vein, the home price index based on repeat sales and produced by the College of Registrars also registered a significant increase in Q1 2023 (1.3% quarter-on-quarter, 5.4% year-on-year). The demand for housing, meanwhile, is showing signs of cooling. In March, the number of sales fell by 5.7% year-on-year. However, it is necessary to clarify that this moderation is based on a very high starting point. Despite the year-on-year decline, sales are still 30.4% above the level of March 2019 (pre-pandemic). Despite the rebound seen in Q1 2023, we expect to see a slowdown in home prices over the coming quarters, in a context of moderation in demand in the face of rising interest rates.

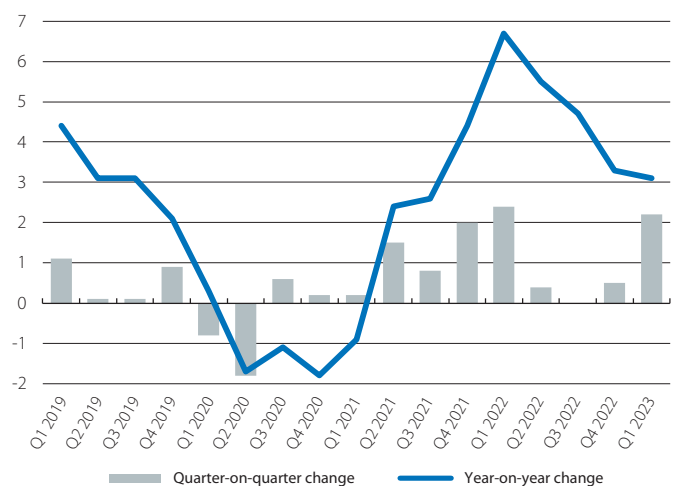
**Intense correction of the trade deficit in Q1 2023.** The deficit of the trade balance of goods stood at 6,578 million euros in Q1, 2.3 times less than a year ago (–15,416 million) and slightly below the average for the first quarters between 2014 and 2019 (–6,760 million). This result was the result of both the lower energy deficit and the notable improvement in the balance of non-energy goods. Thus, the energy deficit in Q1 fell to 8,218 million, compared to a deficit of 11,052 million in the same period of 2022, thanks to a lower volume of imports (–9.7%) in a context of lower prices (–1.1%). The balance of non-energy goods, meanwhile, registered a surplus of 1,639 million euros, marking the best Q1 figure since 2014 (deficit of 4,364 million in the same period of 2022), thanks to the greater buoyancy of exports (15.1% vs. 7.3% in the case of imports).

### Spain and the euro area: headline CPI Year-on-year change (%)



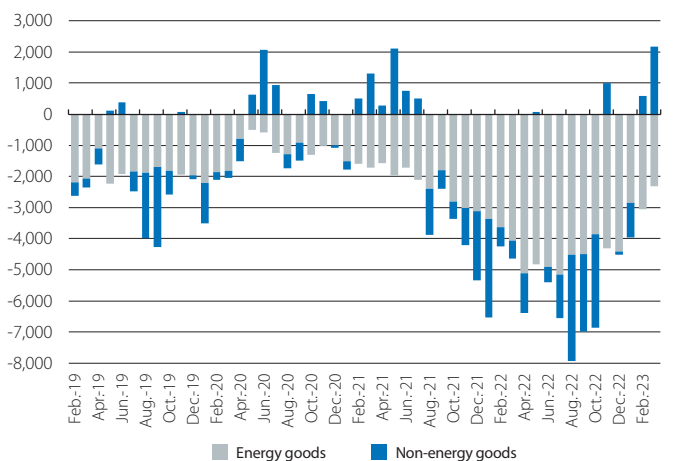
Source: BPI Research, based on data from the National Statistics Institute and from Eurostat for the HICP.

### Spain: home prices (appraisal values) Change (%)



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

### Spain: trade balance of goods \* Monthly data (EUR millions)



Note: \* Based on the Standard International Trade Classification (SITC) for goods.  
Source: BPI Research, based on data from the Customs department.



## New economic scenario: the outlook improves for Spain

It has been almost four months since our last update to the macroeconomic scenario. During these months, the Spanish economy has shown a more resilient tone than expected. Furthermore, the normalisation of gas prices, although incomplete, has been confirmed and the peak in reference interest rates is now in sight. Faced with all these changes, we have updated our macro forecast scenario.

### A better-than-expected starting point

Despite the current economic environment being fraught with challenges, the performance of the Spanish economy has been sustained by three key elements: a strong labour market, the marked correction in gas prices and a highly buoyant foreign sector.

Employment, far from slowing down, has stepped on the gas in the early stages of 2023. According to the LFS, employment grew by 1.2% quarter-on-quarter in Q1 2023 in seasonally adjusted terms, which is well above the 0.2% registered in the previous quarter. Looking at the Social Security affiliation data, this positive trend appears to be continuing in Q2 2023. The strong performance of the labour market is giving households greater solvency to cope with the inflationary pressures. It is also supporting the demand outlook for businesses and is creating an effective barrier to the rise of inequality, a crucial factor amid the current cost of living crisis.

At the same time, economic activity has benefited from the fall in the price of natural gas. Following fears that the energy crisis would intensify over the winter, in the end they were alleviated by a more temperate winter than usual, as well as by a marked reduction in consumption and high levels of gas reserves. Whereas the Mibgas benchmark gas price registered an average of around €100/MWh in 2022, during Q1 2023 the average price has stood at around €50/MWh, and so far in Q2 it has fallen to €35/MWh, thus approaching the €20/MWh average for the period 2017-2019.

As for the foreign sector, it has been highly buoyant, driven largely by tourism. To illustrate this, despite international tourist arrivals in Q1 2023 still lying 3.5% below the same quarter of 2019, their expenditure in real terms was 12.1% higher. While tourism has been the primary driver of foreign demand, it has not been the only one. The trade balance of non-energy goods registered a surplus of 1,639 million euros in the quarter, thanks to the increase in exports (15.1% year-on-year) exceeding that of imports (7.3%). This balance is the best Q1 record since 2014, and it stands in contrast with the deficit of 4,364 million registered in Q1 2022. Also, not all

the improvement in the balance is attributable to price effects. In terms of volume, exports grew by 3.6% year-on-year compared to a fall in imports of 2.2%. In addition, the pattern of exports of non-tourism services has been highly favourable. The trade balance of non-tourism services reached a surplus of 10,460 million euros, well above the balance of Q1 2022, when it stood at 5,892 million euros. This improvement has been driven by a combination of strong export growth (18% year-on-year) and a fall in imports (-6%).

In short, all these factors have led to GDP exceeding expectations during Q1, alleviating fears of a recession in the short term.<sup>1</sup>

### Key assumptions of the scenario: inflation and interest rates

However, the outlook is not without its obstacles. High inflation and interest rates are leaving their mark on the economy. Fortunately, those shocks that triggered the inflation rally are beginning to fade. As we mentioned earlier, energy prices have experienced a significant decline and are now close to their historical average levels. In addition, the famous bottlenecks, a legacy of the process of economies reopening in the late stages of the pandemic, are also beginning to dissipate and this is alleviating pressures in the early stages of the price formation chain.

The recent correction in energy prices has given way to a substantial moderation in headline inflation. With data up to April, it has already dropped to 4.1%, compared to the 8.4% average registered in 2022, and this is despite food prices still rising by 12.4%.<sup>2</sup> Core inflation, which excludes food and energy, is slightly higher than the headline inflation rate, at 4.6%. This is due to the delayed effects of the transmission of the cost increases that businesses have been facing since last year (contagion effect).

For 2023, we project that headline inflation will be 3.9% on average. This forecast incorporates the substantial fall in energy prices, but also the greater persistence of core inflation and that of food. However, we expect that these pressures will gradually ease and that by 2024 inflation will be below 3% in annual average terms.

These projections are based on the assumption that there will not be significant second-round effects. While wages are gradually incorporating the impact of inflation,

1. See the Brief Note for further information on the reported GDP figure.

2. The May inflation flash indicator shows a continuation of the trend of slowing inflation, standing at 3.2%. However, we will have to await the definitive announcement to find out the breakdown by component.

there are incipient signs that wage growth could stabilise at around 4%-4.5% this year. Wage growth of this magnitude should not pose an upward risk for inflation. In this regard, the recent wage agreement reached between the various social agents should be viewed positively, because it helps to reduce uncertainty and limit the occurrence of second-round effects.

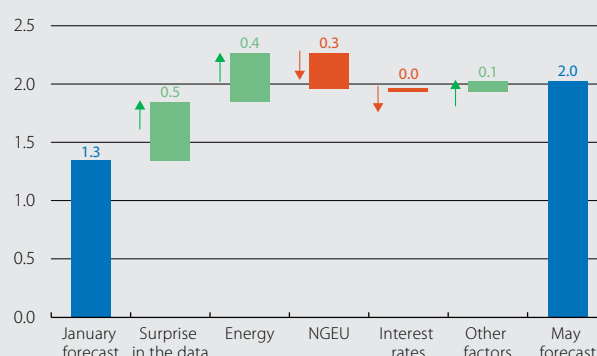
With regards to interest rates, the ECB remains concerned about the lack of obvious signs of moderation in core inflation in the euro area and it has signalled its intention to raise interest rates a little further. But it is also true that the cumulative increase of almost 4 pps (from -0.50% to +3.25%) is very substantial and that its effects are already beginning to be felt, for example, in the demand for credit. Therefore, we expect the ECB to raise the depo rate to a peak of 3.75% (which is in line with market expectations) and to keep it there until mid-2024. This reflects a more gradual path towards monetary policy normalisation than we were previously expecting. Nevertheless, based on its recent communications, we believe that the ECB will opt to keep rates higher for longer in order to ensure that inflation falls to 2% in the medium term.

However, the high inflation and interest rates are leaving clear traces in their wake. Private consumption has been declining for two consecutive quarters, while higher frequency indicators, such as our internal indicator based on card spending, are showing no signs of any clear improvement in the immediate future. In 2022, rising prices led to a sharp increase in spending. Private consumption in nominal terms grew by over 10%, compared to a more moderate growth of 3.6% in gross disposable income. Consequently, the savings rate decreased from 13.7% in 2021 to 7.2% in 2022. Given that the savings rate is approaching its historical average (6.7% between 2014 and 2019), consumption in 2023 could be more closely linked to the growth of disposable income. However, while we expect disposable income to grow at a higher rate – specifically at around 4.5%, thanks to the rebound in wage growth and the expected good performance of employment – we also project that inflation will remain high, at 3.9%. This will limit the growth of consumption in real terms. Similarly, investment is also reflecting the effects of the higher cost of credit and has been showing signs of weakness since the spring of 2022. While the European funds will continue to provide support, we expect investment will continue to experience only moderate growth during the remainder of 2023.

### Outlook

All in all, 2023 looks set to continue to be a year full of challenges. This is a year in which the economy will continue to endure high inflation and the impact of the

### Spain: breakdown of the revision of the 2023 GDP growth forecast (pps)



Source: BPI Research.

interest rate hikes, but it will also be able to enjoy some support factors. In particular, it will receive a boost from the almost complete fading of the energy shock, the good performance of the foreign sector thanks to the margin for recovery which the sectors hardest hit by the pandemic still have, and the contribution from the European funds. After incorporating all the information, we expect GDP to grow by 2.0% in 2023 as a whole, representing a 0.7-pp upward revision compared to our previous forecast. As the chart shows, this revision is largely explained by the improvement of the economic data in the latter part of 2022 and by the fall in energy prices that has been reflected in a good performance of the economy in Q1 2023. The assumption regarding the execution of European funds has limited the scale of the revision, as the forecasts now incorporate a somewhat more conservative degree of execution. Nevertheless, the effect of the NGEU funds will remain very significant, contributing 0.7 pps to annual GDP growth. As for the higher-for-longer interest rates, we expect this factor will still have only a moderate impact in 2023, becoming more pronounced in 2024.

## The 2023-2026 Stability Programme: reduction of Spain's budget deficit through economic growth

### Economic growth, key to the deficit reduction

The 2023-2026 Stability Programme presented by the government proposes a gradual reduction of the budget deficit, driven by the recovery of the Spanish economy, bringing it down from 4.8% of GDP in 2022 to 3.9% in 2023 and to 2.5% by 2026.<sup>1</sup> In contrast, AIReF estimates that by 2026 the public deficit will be 3.0% of GDP, mainly due to a less optimistic revenue forecast.<sup>2</sup>

The macro table on which the Stability Plan is based is similar to that of the consensus of analysts and has been reviewed by AIReF. The forecasts reflect cumulative GDP growth of 8.2% between 2023 and 2026, with investment playing a key role in 2024 due to the NGEU programme.<sup>3</sup> This assumes that inflation will fall to 2% in 2025 and that the labour market will remain buoyant, with an unemployment rate below 10.0% in 2026 and an average year-on-year growth of the population in employment of 2.1% in 2023-2026 (creation of 1.1 million full-time equivalent jobs by 2026).

If we analyse the expected evolution of the public accounts in some detail, on the revenues side the Programme takes into account the measures approved in the 2023 budget (the increase in the income tax rate for capital incomes, the tax on banks and the energy sector, the solidarity tax on large fortunes in 2023-2024, etc.), as well as the increase in social security contributions foreseen in the pension reform. Thus, revenues as a percentage of GDP are expected to increase to 43.4% of GDP in 2023 (43.0% in 2022) and this will continue to increase over the coming years, driven by growth in direct taxes and social security contributions above nominal GDP. In the case of direct taxes, this reflects the buoyancy of collections due to the anticipated strength of the labour market as well as the assumption that there will be a consolidation of post-pandemic structural factors, such as the materialisation of the submerged economy following the labour reform, a reduced level of tax fraud and the rise in e-commerce. As for social security contributions, the forecasts capture the buoyancy of the labour market and the increase in contributions under the pension reform. Thus, fiscal pressure is expected to increase in the coming years, despite the fact that the Programme does not contemplate any rise in tax rates.

1. This is based on a scenario that contemplates the impact of the measures approved to date.

2. In 2026, AIReF's forecast for revenues as a percentage of GDP is 0.6 pps lower than in the Stability Programme. In contrast, its forecast for public expenditure as a percentage of GDP is very similar.

3. Investment is expected to grow by 5.0% year-on-year in 2024 (0.9% in 2023).

### Spain: macro scenario per the Stability Programme

	2022	2023	2024	2025	2026
Real GDP (% growth)	5.5	2.1	2.4	1.8	1.7
Nominal GDP (% growth)	10	6.1	5.9	3.9	3.6
Unemployment rate (% annual average)	12.9	12.2	10.9	10.3	9.8
Remuneration per employee (% growth)	2	4.7	3.3	2.4	1.7
Private consumption deflator (%)	6.8	3.9	3.2	2	1.9
3-month Euribor	0.3	3.3	3	2.5	–
Natural gas price (€/MWh)	100	59	50	50	50
Yield on 10-year Spanish bond	2.2	3.5	3.6	3.8	–

Source: 2023-2026 Stability Programme, Spanish government.

### Spain: government 2023-2026 Stability Programme

Key elements	% of GDP 2022	% of GDP 2023	% of GDP 2024	% of GDP 2026
<b>Government revenues</b>	<b>43.0</b>	<b>43.4</b>	<b>43.3</b>	<b>43.8</b>
Indirect taxes (VAT, etc.)	12.1	11.9	12.0	11.8
Direct taxes	12.4	13.2	13.5	14.3
Capital taxes	0.4	0.4	0.3	0.3
Social security contributions	13.6	13.9	14.0	14.0
Other revenues *	4.6	4.0	3.5	3.4
<b>Government expenditure</b>	<b>47.8</b>	<b>47.3</b>	<b>46.3</b>	<b>46.3</b>
Wage earners' remuneration	11.6	11.3	11.2	11.2
Social benefits (not in kind)	17.2	17.7	17.6	17.7
Gross capital formation	2.8	2.7	2.6	2.4
Interest expense	2.4	2.4	2.6	2.9
Subsidies	2.0	1.8	1.3	1.4
<b>Government balance</b>	<b>-4.8</b>	<b>-3.9</b>	<b>-3.0</b>	<b>-2.5</b>
<b>Primary balance</b>	<b>-2.4</b>	<b>-1.5</b>	<b>-0.4</b>	<b>0.4</b>
<b>Cyclical balance</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.1</b>	<b>0.1</b>
<b>Structural balance</b>	<b>-3.6</b>	<b>-3.4</b>	<b>-2.9</b>	<b>-2.5</b>

Note: \* Includes revenues from property income and transfers of European funds excluding NGEU.

Source: 2023-2026 Stability Programme, Spanish government.

Public expenditure would gradually decline as a percentage of GDP due to the large increase in nominal GDP and a certain containment of non-pension and interest expenditure. Thus, primary public expenditure (i.e. excluding interest payments) would go from 45.4% of GDP in 2022 to 43.4% in 2026. Of particular note is the reduction (as a percentage of GDP) of wage earners' remuneration, which would fall from 11.6% in 2022 to 11.2% in 2026, as well as that of subsidies, from 2.0% in

2022 (very high due to the 20-cent-per-litre fuel discount, now withdrawn in 2023) to 1.4% in 2026. In contrast, pension expenditure, which is linked to inflation by law, is expected to grow faster than nominal GDP in 2023 and at a similar rate to GDP in 2024-2026.

As for interest charges – a key variable for debt sustainability – the Stability Programme projects that it will increase moderately, bringing it to 2.9% of GDP in 2026 (2.4% in 2022), since nominal GDP growth and the long average maturity of Spanish debt will limit the increase. That said, this figure is very similar to the 2012 level of 3.0%. These figures are based on the assumption that the yield on the Spanish 10-year bond will stand at 3.5% to 4.0% between 2023 and 2025, reflecting the rise in interest rates currently taking place. However, according to a sensitivity exercise performed within the Programme itself, with an additional 120-bp rate rise relative to the baseline scenario, the interest bill would reach 3.6% of GDP in 2026 and the budget deficit would stand at 3.6% of GDP<sup>4</sup> (as opposed to 2.5% in the baseline scenario).

On the other hand, public debt would gradually reduce as a percentage of GDP, but would remain high. This would go from 113.2% of GDP in 2022 to 106.8% in 2026. The bulk of this reduction is driven by nominal GDP growth.<sup>5</sup>

Finally, the structural deficit would follow a gradual decline. Specifically, it would go from 3.6% of GDP in 2022 to 2.5% in 2026, which is still a high figure. This decrease would be the result of the more prominent role in the economy of tax revenues and social security contributions, as well as the withdrawal beginning in 2024 of the spending measures introduced following the outbreak of the war in Ukraine.

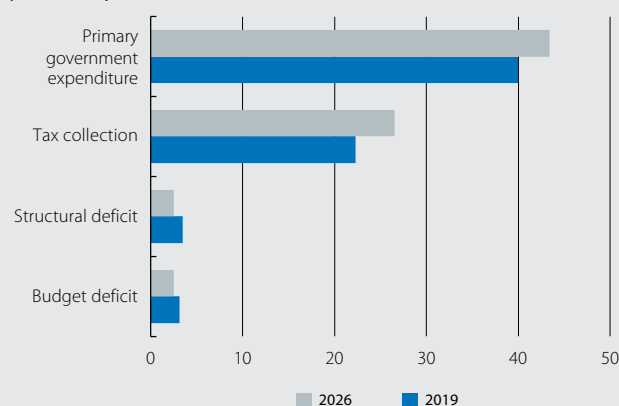
### The public accounts of the future: a comparison of 2026 with the pre-pandemic world

One particularly revealing exercise is to compare the state of the public accounts in 2026, as projected by the government in its Stability Programme, with that of the pre-COVID world. Two key results stand out from this comparison.

(i) In 2026, the relative weight of the public sector in the economy will be considerably higher than in 2019; in particular, primary public expenditure (excluding interest payments) will be 3.4 pp higher as a percentage

### Spain: comparison of the public accounts in 2026 and 2019

(% of GDP)



Source: BPI Research, based on data from the 2023-2026 and 2021-2024 Stability Programmes.

of GDP, which represents a 40.6% increase in expenditure between 2019 and 2026 (exceeding the 28.9% growth of nominal GDP). This suggests that public expenditure will experience a structural leap due to factors such as the indexation of pensions to inflation and the sustained increase in health expenditure.<sup>6</sup>

(ii) The government projects that the increase in tax revenues, following the significant growth of collections in 2021-2022, will be consolidated and will even continue without the need for new tax measures. Specifically, according to the Stability Programme, tax revenues will be 5.2 pps higher in 2026 as a percentage of GDP than they were in 2019, representing a 47.9% increase in tax revenues (exceeding the 28.9% growth of nominal GDP). In short, the Stability Programme anticipates that the strength of the economy over the coming years will facilitate the reduction of the budget deficit. However, a deficit of 2.5% of GDP clearly cannot be the end point and further deficit reduction will be necessary in order to recover fiscal policy's margin to react. There is no doubt that, one day, we will need to use it again.

4. The budget deficit would increase mechanically as a result of higher interest payments and also because this increase in rates would have a negative impact on GDP growth, which in turn would lead to lower tax revenues and an increase in benefits to cushion the shock.

5. In cumulative terms, the Programme considers nominal GDP growth of 20.9% between 2023 and 2026.

6. It appears that social benefits, which predominantly comprise pension expenditure, have increased permanently and will be 1.9 pps higher as a percentage of GDP in 2026 than prior to the pandemic.

**Activity and employment indicators**

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Industry</b>									
Industrial production index	8.8	2.8	4.3	4.6	0.9	1.6	4.5	...	...
Indicator of confidence in industry (value)	0.6	-0.9	0.4	-5.2	-5.4	-4.3	-3.2	-1.5	-5.2
Manufacturing PMI (value)	57.0	51.0	53.2	49.2	45.6	50.1	51.3	49.0	48.4
<b>Construction</b>									
Building permits (cumulative over 12 months)	4.7	15.4	18.8	8.8	2.6	-1.9	-3.4	...	...
House sales (cumulative over 12 months)	9.6	29.0	33.6	23.0	17.3	10.1	7.4	...	...
House prices	3.7	7.4	8.0	7.6	5.5	...	-	-	-
<b>Services</b>									
Foreign tourists (cumulative over 12 months)	64.7	129.8	312.5	208.8	129.8	...	...	...	...
Services PMI (value)	55.0	52.5	55.9	51.0	50.8	56.3	59.4	57.9	56.7
<b>Consumption</b>									
Retail sales	5.1	0.9	1.1	0.2	1.9	6.6	9.9	5.5	...
Car registrations	158.0	-3.0	-10.3	3.1	2.6	45.5	66.1	8.2	8.3
Consumer confidence index (value)	-12.9	-26.5	-27.0	-32.6	-28.1	-23.1	-24.5	-20.7	-21.2
<b>Labour market</b>									
Employment <sup>1</sup>	3.0	3.1	4.0	2.6	1.4	1.8	-	-	-
Unemployment rate (% labour force)	14.8	12.9	12.5	12.7	12.9	...	-	-	-
Registered as employed with Social Security <sup>2</sup>	2.5	3.9	4.8	3.5	2.7	...	2.7	3.0	2.9
<b>GDP</b>	5.5	5.5	7.7	4.8	2.9	3.8	-	-	-

**Prices**

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
General	3.1	8.4	9.1	10.1	6.6	5.1	3.3	4.1	3.2
Core	0.8	5.1	4.9	6.2	6.5	7.6	7.5	6.6	6.1

**Foreign sector**

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Trade of goods</b>									
Exports (year-on-year change, cumulative over 12 months)	21.2	22.9	22.2	23.3	22.9	20.5	20.5	...	...
Imports (year-on-year change, cumulative over 12 months)	24.8	33.4	35.2	38.1	33.4	24.0	24.0	...	...
<b>Current balance</b>	11.5	7.8	7.8	6.1	7.8	22.9	22.9	...	...
Goods and services	17.9	18.7	14.7	14.4	18.7	35.2	35.2	...	...
Primary and secondary income	-6.4	-10.9	-7.0	-8.3	-10.9	-12.4	-12.4	...	...
<b>Net lending (+) / borrowing (-) capacity</b>	22.4	19.7	19.5	18.0	19.7	36.2	36.2	...	...

**Credit and deposits in non-financial sectors<sup>3</sup>**

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

	2021	2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	03/23	04/23	05/23
<b>Deposits</b>									
Household and company deposits	6.1	4.9	5.4	5.3	3.8	1.7	0.7	...	...
Sight and savings	10.3	7.9	9.2	8.2	5.0	0.3	-1.7	-2.6	...
Term and notice	-24.4	-19.7	-25.4	-19.2	-7.3	7.7	17.9	27.7	...
General government deposits	15.5	9.6	15.6	6.6	-3.2	7.4	9.6	8.4	...
<b>TOTAL</b>	6.7	5.2	6.0	5.4	3.2	2.1	1.3	...	...
<b>Outstanding balance of credit</b>									
Private sector	0.3	0.7	0.8	1.3	0.5	-0.9	-1.0	-1.9	...
Non-financial firms	1.1	0.9	0.7	2.4	0.9	-1.0	-0.7	-2.2	...
Households - housing	0.2	1.0	1.4	1.1	0.2	-1.2	-1.7	-2.1	...
Households - other purposes	-1.2	-0.6	-0.5	-0.9	-0.1	-0.1	-0.1	-0.4	...
General government	15.3	0.2	1.9	-3.5	-1.1	-0.2	-0.4	-4.5	...
<b>TOTAL</b>	1.1	0.7	0.9	1.0	0.4	-0.9	-1.0	-2.1	...
<b>NPL ratio (%)<sup>4</sup></b>	4.3	3.5	4.1	3.8	3.7	3.5	3.5	...	...

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

Source: 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.



## Baby-boomers: who are they and where do they fit into Portuguese society?

With the end of the Second World War in 1945 and the period of reconstruction and prosperity that followed, in some industrialised countries there was a significant increase in the birth rate, a phenomenon known as the «baby boom». People born between 1946 and 1964 thus came to be called «baby boomers». This generation is often categorised as one that values collectivism, for which hard work and sacrifice are necessary to achieve success, and which has an appreciation for commitment (which will value stability and jobs for life) and a respect for human rights.

However, according to some specialists, the national statistics institute and data, Portugal largely missed out on this phenomenon. In fact, analysing the first graph, we can see that birth rates were already high in our country before the Second World War and that, even afterwards, they recorded levels similar to those seen in the USA, for example, which definitely experienced the baby boomer phenomenon. Portugal's non-participation in the Second World War, together with its underdevelopment at the time, may explain the absence of this phenomenon in our country.<sup>2</sup> Nevertheless, we will assume that the group of people born between 1945 and 1964 is the age group in Portugal that most closely resembles the baby boomer generation, a period similar to that of the countries that truly experienced this phenomenon. If we look at the first graph, it is a period of stability in the gross birth rate after a period of decline. From 1964 onwards, the birth rate took a clear path of decline. Thus, this age group will be the basis of our analysis in this dossier, divided into four articles (this being the first of them). However, and due to the difficulty of accessing statistical information, several times we will have to present data for an age group that is slightly different from this one.

**Gross birth rate: Portugal vs USA**



Source: BPI Research, based on data from INE and CDC.

### Characterisation of baby boomers: who are they, what do they do, and how is their health?

Portuguese baby boomers are people aged between 59 and 78 years. In 2021, they represented about 24% of the national resident population,<sup>3</sup> that is, almost a quarter of the population. The vast majority completed only primary education (about 70%)<sup>4</sup> and almost 70% are married. They have the greatest predominance in Bragança (where they represent 31% of the population), Guarda (31%), and Vila Real (30%), while Braga (22%), Lisbon (21%), the Autonomous Region of the Azores (19%) and Madeira (22%) are those places with the lowest predominance.

Some 18% of baby boomers are still working,<sup>5</sup> which represents about 10% of the employed population in 2021, with the vast majority being employees. Their presence stands out in public administration, defence & social security (around 11% of baby boomers worked in this sector in 2021), education (11%), trade & vehicle repair (9%), human health activities (6%), real estate development & building construction (6%), and agriculture & animal production (5%). Even so, when looking at the share of baby boomers in employment in each sector, there are some causes of concern with the approaching retirement of these people. For example, 20% of those employed in the agriculture & livestock sector and 15% in education are baby boomers. In turn, just over 1% of this population is unemployed (equivalent to about 8% of the unemployed population).

1. The time period varies slightly between the various studies and between countries. For example, some countries had a shorter baby boom which ended in the early 1950s (the case of Finland), while in others (such as the USA and France) the period was longer, starting in the mid-1940s and ending in the mid-1960s. For more information, see, for example, Leach, R. et al. (2013). «Baby boomers, consumption and social change: The bridging generation?». *International Review of Sociology*. 23. 10.1080/03906701.2013.771053.

2. For more information, see «Por que passou Portugal ao lado do baby boom», *Jornal Público* (2006).

3. The weight of the foreign population in this age group living in Portugal is around 0.6% of the total resident population in 2021 (Census 2021). Most of the analysis presented here is based on the total resident population, as it is not always possible to remove the foreign resident population.

4. Given the absence of information, only the 60-74 age group was considered.

5. Due to the absence of more disaggregated information, for the estimates in this paragraph we consider the population aged over 60 years.

Although there is not much information that allows us to characterise the financial situation of Portuguese baby boomers, we know that the vast majority receive retirement income as their main source of income (around 66% in 2022<sup>6</sup>), followed by income from work (around 20%, in line with the percentage of those still working). At the same time, in 2021, baby boomers represented the largest share of old age pensions paid by Social Security (around 78%). We do not know the average pension amount received by this age group. We only know that the average value of the old age pension in December 2021 was 508.63 euros per month<sup>7</sup> and that, in 2020, the vast majority of Social Security pensioners were in the 275.3 to 438.8 euros monthly bracket.<sup>8</sup> With regard to wealth<sup>9</sup>, we also know that almost 80% of households in the 55 to 64 and 65 to 74 age brackets owned their main residence, and that around 35% also owned other real estate in 2017. In terms of their amount of financial assets, the 55-64 age group had the vast majority in term deposits (around 55%), followed by savings deposits (16%), and voluntary pension plans (11%). The next age group (65-74 years) had more than 63% in term deposits, 14% in savings deposits, and 12% in tradable assets (this is in fact the age group that had the highest percentage of tradable assets that year). Regarding debts, 46% of households in the 55 to 64 age group had debts (63% of this being mortgages on the main residence and 26% mortgages on other properties), a percentage that falls to 23% in the 65 to 74 age group (where mortgages on the main residence represent 53% of the value of debts, 26% relate to other properties and almost 20% are loans not secured by properties).

From a more negative perspective, it is estimated that around 20% of baby boomers are at risk of poverty or social exclusion in 2021, also representing 20% of the total number of people at risk of poverty. Similarly, we estimate that in 2021 around 15 per cent of baby boomers were in situations of material and social deprivation<sup>10</sup>, and that around 7% were in a situation of severe deprivation.

Finally, most baby boomers were in reasonable health in 2021<sup>11</sup>, though around 60% have a long-term illness or health problem and almost 80% were taking some prescription medication in 2019. Still, the vast majority (around 70%) had no difficulty with household and personal care in 2019, though 15% had severe difficulties.

*Vânia Duarte*

6. In this case, considering the available information, only the age group 60-74 was assumed.

7. According to the document State Budget 2023 - Informative and complementary elements.

8. For more information, see the news item on Expresso, dated 16/09/2022, entitled "O retrato do pensionista médio em Portugal: 75 anos de idade, 28 de descontos, 490 euros de reforma".

9. Wealth corresponds to the sum of financial and real assets, minus debts. This information is based on the information by age group available in the 2017 Household Financial Situation Survey. The 2020 ISFF does not provide disaggregated data by age group.

10. As it is not possible to access the material and social deprivation rate for the age group of baby boomers, we estimated a percentage using the deprivation rates for the group of individuals aged 60+ and 75+, using Eurostat data.

11. In this case, due to the lack of more disaggregated information, the age group 55 to 74 was considered.



## What is the impact of baby boomers on pensions in Portugal?

We saw in the previous article that a large part of the baby boomer generation are already retired, but that about 18% are still employed and are expected to retire in the coming years. In this article, we will try to understand the impact of retiring baby boomers on old age pensions and what might be the additional impact resulting from the retirement of baby boomers who are still working. The whole exercise is based on simple assumptions, but it helps us to get an overall idea of the impact of this cohort on the public pension system in Portugal. Firstly, however, it is important to briefly explain how the public pension system works.

### How does the public pension system work in Portugal?

When we start working, we start contributing to Social Security, and this currently applies to workers in the private and public sectors. We emphasise the «currently», because until 2005 (inclusive), Public Administration workers and similar contributed to Caixa Geral de Aposentações (CGA). From 2006 onwards, CGA stopped accepting new subscriptions and the new workers started to contribute to Social Security.

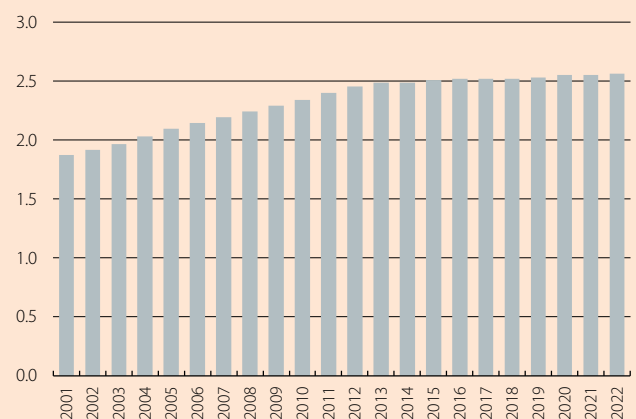
All workers now contribute 11% of their gross monthly income and companies 23.75%. These contributions serve not only to pay pensions, but also other benefits such as unemployment benefit, sickness or parental leave. However, these contributions do not serve to pay the pensions of current workers when they retire. The pension system in Portugal is based on the principle of intergenerational solidarity (also known as the pay-as-you-go system), which implies that the contributions of active workers serve to pay the pensions of people who are retired at the moment.

This takes on special importance when we talk about the ageing of the Portuguese population, in a context of low birth rates and high average life expectancy. This combination of factors poses challenges to the sustainability of the pension system in Portugal, which has already been subject to several alterations, namely with the introduction of a sustainability factor, which penalises early retirement.<sup>2</sup> Additionally, every year, the age at which an individual may retire without penalty is determined according to the average life expectancy at 65 years of age. For 2024, for example, the statutory retirement age will be 66 years and 4 months, unchanged from 2023.

### What is the impact of baby boomers on current and future old-age pensions?

At the end of 2022, more than 2,560,000 old age pensions were paid by Social Security and CGA,<sup>3</sup> as shown in the first graph, which is equivalent to about 26% of the national resident population. As we do not have the age group breakdown for 2022, we estimate that around 77% of old age pensions paid in 2021 were for baby boomers (see second graph). Another important detail, looking at the Social Security budget, is that old age pensions represented around 6% of GDP and 46% of total Social Security expenditure in 2022 (see third graph). On the CGA side, we estimate that the total burden with old age pensions was around 4% of GDP.<sup>4</sup> In this context, we estimate that the amount paid in old age pensions to baby boomers may have been around 8% of GDP in 2021.

**Number of old-age pensions paid \***  
(Millions)



**Note:** \* Includes pensions paid by CGA to Social Security. Does not include pensions for early retirement.

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

1. According to CGA information, «CGA subscribers are mainly civil servants and administrative agents (civil and military) of the Central, Local and Regional Public Administration, teachers of private and cooperative education, and workers of some public companies and publicly owned limited companies (ex-public companies)».

2. The sustainability factor was implemented in 2007 and depends on life expectancy at 65, that is, on the average number of years that an individual aged 65 can still live. This penalty is thus defined every year, standing at 2023 is 13.83%. In addition, those who want to retire before the legal age will also face a 0.5% cut in the monthly pension for each month of anticipation. However, there are exceptions to the application of the sustainability factor, such as in the case of long contributory careers (individuals aged  $\geq 60$  years and contributory career  $\geq 48$  years and  $\geq 60$  years and contributory career  $\geq 46$  years, provided that they started to contribute before the age of 17).

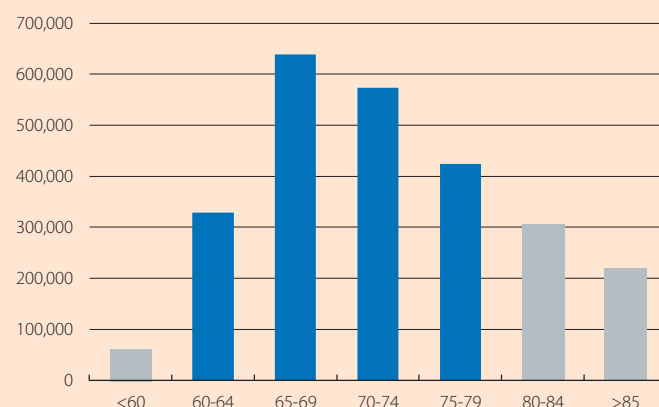
3. These figures do not include early retirement pensions, as the latest known data refer to 2021. In that year, the total number of paid pensions reached almost 2,690,000, which is equivalent to around 27% of the resident Portuguese population. In 2022, the total number of pensions reached almost 3,640,000 if we include the invalidity and survival pensions paid by Social Security and CGA.

4. Estimate for 2021, considering the number of pensioners enrolled in CGA in that year and the average monthly pension received.

We also know that, in the case of Social Security pensioners, the average monthly retirement income was around 420 euros in 2021,<sup>5</sup> and that around 72% received a monthly amount lower than the national minimum wage. The average retirement age of new pensioners was 64.7 years, compared to 62.3 years 10 years ago. As for the CGA, the average retirement age was 65.1 years in 2021 (65.2 in 2022), compared to 59.9 years in 2011. As regards the average pension, in 2021 it was 1,352 euros. More specifically, in terms of brackets, about 20% of CGA retirees received less than 500 euros, 26% received between 500 and 1,000 euros, 16% between 1,000 and 1,500 euros a month, and 38% received more than 1,500 euros.

Given this data, what impact could the retirement of baby boomers who are still working have on the pension system in Portugal? Assuming that in 10 years the baby boomers still in the labour market retire, and under a very simplistic assumption that the average pensions earned in 2021 are maintained, we estimate that the additional impact on the old age pension burden will be around 1.8% of GDP. If we assume that

**Number of retired individuals, by age group**  
(Number)



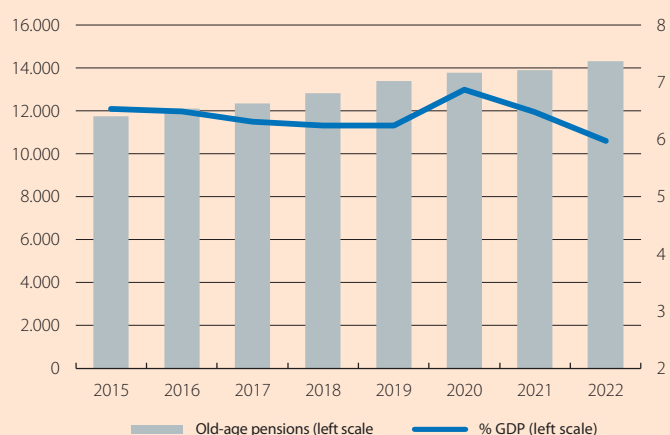
**Note:** Values for 2021. There is no disaggregating information for the CGA for 2021, so the figures used are BPI Research estimates.

**Source:** BPI Research, based on data from Pordata and CGA.

### Expenses Sec. Social with old-age pensions

(Billions of euros)

(% GDP)



**Note:** Based on the Social Security budget (public accounting).

**Source:** BPI Research, based on data from the Directorate-General for Budget and the National Institute for Statistics.

the average monthly pension will be updated every year at the expected inflation rate, the impact could range from 2.1% to 2.3% of GDP. Considering that the current amount paid in old age pensions is around 10% of GDP, the retirement of all baby boomers would imply an increase in this burden to levels around 12% of GDP.

Again, it is important to note that this exercise is very simplistic because it is not certain that all baby boomers currently working will reach retirement and the deaths of those already retired also has to be taken into account. Even so, it is an important exercise to understand the dimension of this phenomenon in the Portuguese pension system.

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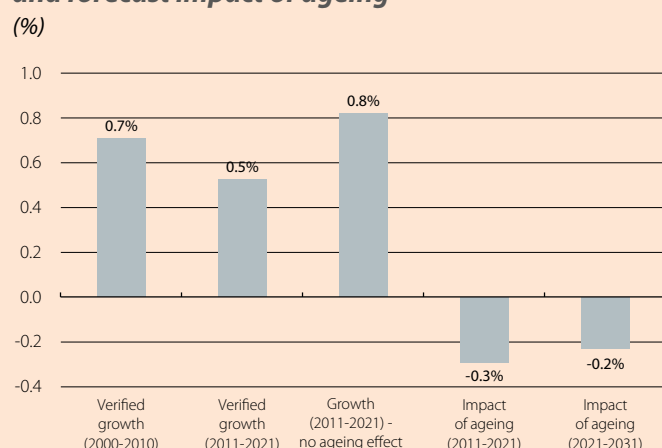
5. Considering the average annual value disclosed by Pordata (of 5,883.6 euros in 2021) and divided by 14 months.

## The macroeconomic impact of the retirement of the baby boomers: some topics for discussion

In the other articles in this Dossier, we have characterised the baby boomer generation in demographic and socioeconomic terms, and also outlined the main implications of their retirement for the pension system. We now aim to provide a more comprehensive macroeconomic overview of the main effects associated with the retirement of this generation.

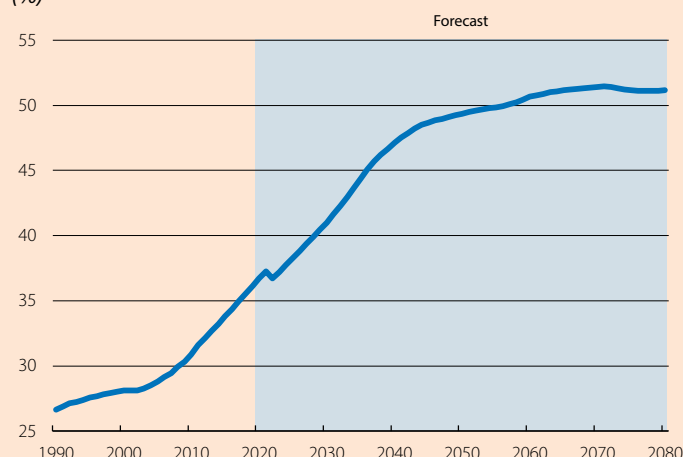
In previous issues of the Monthly Bulletin we have looked at the impact of population ageing on economic growth, calculating an elasticity of economic growth with respect to ageing as measured by the ageing ratio (whose past and expected developments are presented in the first graph). Given the dates of birth we have defined for the baby boomer generation in Portugal, most of this generation retired in the last decade, but there is still a significant part that will retire in the next one. Thus, based on INE's central scenario of projections for the resident population, we were able to calculate the effect on GDP per capita of the retirement of these baby boomers in the last 10 years and forecast its effect in the next 10.<sup>3</sup> As we can see in the second image, we estimate that between 2011 and 2021 the annualised impact of the ageing/retirement of this population on GDP per capita growth was around –0.3 pp, meaning that average annual growth could have reached 0.8% instead of the 0.5% observed during this period. For the decade between 2021 and 2031 we expect a negative impact, but smaller at –0.2 pp. A study by Banco de Portugal<sup>4</sup> also points to a negative effect, estimating that demographic evolution alone represents an accumulated drop in GDP per capita of –19.7 pp between 2016 and 2050. This trend will only be partially attenuated by the effect of growth in schooling and, consequently, in human capital. In short, an overall increase in productivity accompanied by legislative reforms (supporting birth rates, attracting workers from abroad, employment policies that extend working life) will be the key to limiting the negative effect on growth of the baby-boomer generation reforms.

### Portugal: average annual GDP per capita growth and forecast impact of ageing



Source: BPI Research, based on data from INE.

### Ageing ratio (%)



Source: BPI Research, based on data from INE.

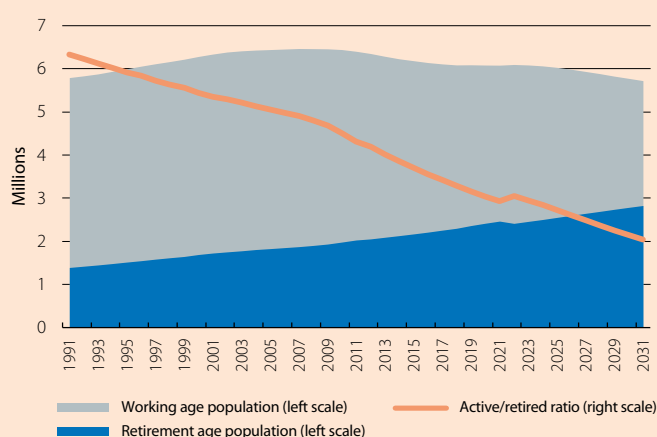
Changes are also expected in terms of consumption, with the transition of baby boomers from employment to retirement having two main consequences in this field. First, a reduction in consumption in absolute terms. A higher level of savings accumulated during working life may allow consumption to be smoothed out during retirement. However, in Portugal, the average annual expenditure of a household where the main individual is retired is 30% lower than in a household where this person is employed.<sup>5</sup> Secondly, there is a reconfiguration of the basic basket of consumer goods, including an extraordinary increase in the weight of Health expenditure (from 4.4% to 8%) and a reduction in the weight of expenditure such as Education, Clothing and footwear, Transport, Education, and Restaurants and hotels (third graph).

1. See IM04 2020 article «The impact of ageing on economic growth in Spain and Portugal».
2. The ratio of the number of people aged 60 and over to the number of people aged 20 and over.
3. We define the last 10 years in the horizon between 2011 and 2021 (the last year with data on the resident population that is not a projection) and the next 10 between 2021 and 2031.
4. Article «What is the role of demography and education in the growth of the Portuguese economy?» in the paper «Portuguese economic growth - A view on structural issues, blockages and reforms», Department of Economic Studies, October 2019.
5. According to the latest INE Household Expenditure Survey (2015/2016).

On the labour market, and returning to INE's population projections, if we assume that the remaining baby boomers will retire by 2031 (when the youngest in this group will be 67 years old), a significant decrease in the active population is expected.<sup>6</sup> In absolute terms, between 2021 and 2031, the active population will decrease by more than 350,000 people, which on a national scale is very significant - there are currently only three municipalities in the country with a population of more than 300,000 people. In 1990 there were 4.3 people of working age for every person of retirement age, by 2021 this figure will have fallen to 2.5, and by 2031 it is expected to fall to 2.0 (fourth graph). As we have seen, in the absence of increased productivity, less active population means less production and consumption, a shortage of human resources, and a less dynamic economy with less investment and innovation. Older age groups are naturally more concerned with preserving wealth (in order to subsist during retirement) than generating wealth. If we look at the INE projections without the effect of migration flows, the picture gets worse, with reduction in the active population between 2021 and 2031 standing at around 600,000 people.<sup>7</sup> As for what we can expect in terms of inflation, the result is not clear and the economic literature diverges. An ageing population can mean less aggregate demand and therefore less pressure on prices. Some economists also argue that there may be political pressure on the monetary authorities from the voting population. Younger people, who are borrowers, prefer more inflation because it reduces the real weight of their debt, while older people prefer less inflation to preserve the value of their assets.<sup>8</sup> In other words, an ageing population could lead to political pressure on monetary authorities to act more towards the preference of the older population. On the other hand,

### Working-age population, retirement age and active/retired ratio

Number



### Breakdown of annual expenditure by condition of the household reference person

(%)



Source: BPI Research, based on data from INE.

inflationary pressures can grow as the share of the population that consumes and does not produce grows.<sup>9</sup> The retirement of baby boomers would thus result in a larger share of the population consuming and not producing, generating imbalances between aggregate supply and demand that would culminate in price increases. This would also increase pressure on salaries of the (ever smaller) active population.

As we have seen, the economic effects of the baby boomers' retirement will continue to materialise, at least for the next decade, but they may also bring opportunities, such as public policies to increase the birth rate and immigration (attracting qualified human resources) to increase productivity and extend working life. Other opportunities also arise with the growth of the silver economy, such as new businesses to meet the needs of the elderly and their families, with products and services adapted in the most varied areas.

Tiago Belejo Correia

6. To give a better overview of this, we have opted to consider as "active population" those aged between 20 and 64 years old and pensioners those aged 65 or more. At INE, the concept of active population is from 16 to 89 years old.

7. Breaking the trend that occurred between 2011 and 2016, from 2017 the migration balance in Portugal is positive. See document from the Office of the High Commissioner for Migration: Oliveira, Catarina Reis; «Indicadores de integração de imigrantes: relatório estatístico anual 2021».

8. See Bullard, J., Carlos Garriga, e Christopher J. Waller (2012), «Demographics, Redistribution, and Optimal Inflation» Federal Reserve Bank of St. Louis Review, 419-439.

9. See Juselius, M., Takáts, E., «The Enduring Link between Demography and Inflation» (2018). BIS Working Paper No. 722.

## How have other pension systems ensured their sustainability?

Reforming the pension system in order to make it more sustainable is a major challenge throughout Europe, particularly in a context marked by the retirement of the baby boom generation. Although we have tools as economists to assess whether a particular reform can help improve the system's sustainability, the path ahead is shrouded in uncertainty.<sup>1</sup> In this article, we explore some of the pension reforms implemented in other countries which, according to the economic literature and various international organisations, have best managed to navigate this uncertainty.

Let's start by reflecting on how a pension system's sustainability can be evaluated. A public pension system is sustainable, according to the IMF's definition,<sup>2</sup> if under current policies, demographic projections and a conservative macroeconomic scenario it allows pension spending in the coming decades to be funded without exerting stress on the public finances or, therefore, deteriorating macroeconomic stability. In other words, it is about balancing the revenues that fund the benefits and expenditure in the medium term. These two channels – revenues and expenditure – must go hand in hand.

Focusing first on the expenditure channel, there are four major levers which can be used to keep pension spending contained. According to the variables they affect, we can classify them as: a demographic lever (linked to the ratio of the population above retirement age to the population aged over 16); another relating to the coverage rate (the ratio between the number of pensioners and the population above retirement age); a third related to the health of the labour market as reflected in the employment rate (the number of people in employment over the population over 16 years of age), and a final lever related to the relative amount of pensions (usually measured using the replacement rate: the ratio between the average pension and the average salary).<sup>3</sup> All of these levers interact and create synergies, so it is key to gauge the impact of influencing each of them separately versus together.

The first two levers related to demographics and the system's coverage are complementary. Although there are multiple ways of influencing them, in view of the ambitions and constraints of a modern welfare state (among the former, the aspiration to assist all dependent persons; and among the latter, the difficulty involved in encouraging a higher birth rate and the delayed effect of achieving it), the way to do it more quickly and with greater certainty is by altering the retirement age. Raising it helps to even out the balance between workers and pensioners. Moreover, this measure improves intergenerational equity in societies like those in the West, where life expectancy has increased and the birth rate has fallen considerably.

Some of the countries in our vicinity have established mechanisms to link the retirement age to life expectancy automatically. Specifically, 7 of the 38 OECD countries have done so, all of them European (see first table).<sup>4</sup> In four of them (Denmark, Estonia, Greece and Italy) the increase is transmitted in full – i.e. for each year life expectancy increases, the retirement age is increased by the same amount – while in the other three (Finland, the Netherlands and Portugal) it is diminished – for every year life expectancy increases, the retirement age is increased by eight months. The way in which the rule works is similar in all seven countries: every

### Retirement age is linked to life expectancy in seven OECD countries

	Increase in the retirement age in proportion to the increase in life expectancy	Need for parliamentary approval to raise the retirement age	Rule based on life expectancy at the age of:	Years between revisions of the retirement age	Period between the establishment of the new retirement age and its entry into force	Minimum increase in each revision of the retirement age	Maximum increase in each revision of the retirement age	The retirement age decreases if life expectancy falls
Denmark	1	•	60	5	15 years	6 months	1 year	
Estonia	1		65	1	2 years	1 month	3 months	•
Finland	2/3		65	1	3 years	1 month	2 months	•
Greece	1		65	3	Max. 1 year	No	No	•
Italy	1		65	2	2 years	1 month	3 months	
Netherlands	2/3		65	1	5 years	3 months	3 months	
Portugal	2/3 *		65	1	2 years	1 month	No	•

**Note:** \* For a person with over 40 years of social security contributions, the ordinary retirement age only increases by half as much as life expectancy does.

**Source:** BPI Research, based on the Pensions at a Glance 2021 report by the OECD.

1. See the article «Reforming the pension system: in search of sustainability» in this same *Monthly Report*.

2. See «Technical Notes and Manuals», IMF Engagement on Pension Issues in Surveillance and Program Work, Fiscal Affairs Department and Strategy, Policy, and Review Department, TNM/2022/004.

3. See, among others, the 2021 *Ageing Report* by the European Commission, or the *Pensions at a Glance 2021* report by the OECD. In this article, we follow the breakdown according to the following article: M.A. Martín and R. Ramos (2023), *El Gasto en pensiones en España en comparativa europea*, Bank of Spain Economic Bulletin, 2023/T1, 09 (content available in Spanish).

4. See *Pensions at a Glance 2021*, by the OECD.



## Revaluation of pensions in Europe based on automatic rules linked to changes in the labour market or demographics

Country	The underlying variable of the rule	Relative weight of the underlying variable for the revaluation of pensions (%)
Estonia	Social security contribution revenues	80% (+20% inflation)
Greece	Nominal GDP	The lower of two options: inflation, or 50% inflation + 50% nominal GDP growth
Lithuania	Volume of total wages	100%
Portugal	Real GDP	It has to be between inflation -0.75% and inflation +20% of real GDP growth
Germany	Ratio between contributors and pensioners	Partial (it also depends on wage growth and changes in social security contribution rates)
Sweden	(1+average growth of nominal wages)/1.016	100% in the absence of financial imbalances in the notional accounts of the pension system *

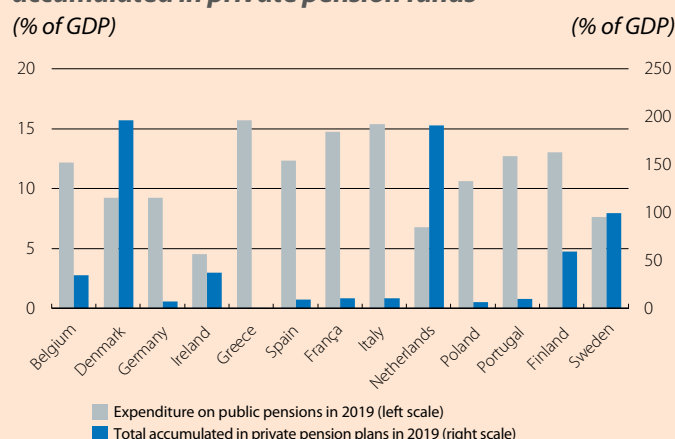
**Note:** \* Notional accounts are a redistribution system whereby pensions are calculated based on accumulated social security contributions, the returns generated and life expectancy.

**Source:** BPI Research, based on the Pensions at a Glance 2021 report by the OECD.

certain period of time, the retirement age is reviewed based on changes in life expectancy at 65 years of age. On the other hand, since the increase in life expectancy in a given country is not the same for all socio-economic groups, the homogeneous increase in the retirement age has, by default, a redistributive impact. Attempts have been made in the Danish pension system to try and mitigate this problem, such as by offering an economic supplement to the public pension for pensioners who are less well off (whether as a result of having worked fewer years or having received lower wages); given that the Danish public pension system seeks to guarantee a minimum level of income for all pensioners, this supplement serves to compensate those who, as is statistically proven, also tend to have a lower life expectancy.<sup>5</sup>

Continuing with spending policies, the levers relating to the amount of pensions and the labour market are also complementary. The sustainability of the pension system depends largely on the relationship between public pensions and the level of wages in the economy, although it also depends on certain labour policies, such as those aimed at boosting employment and productivity. Thus, sustainability is reinforced when pensions do not grow above wages, and it improves as the economy creates more jobs (in turn, the more productive those jobs are, the better). To achieve this, as many as six EU countries automatically link the revaluation of pensions to macroeconomic variables related to the evolution of the labour market or demographic variables (see second table). Specifically, in Estonia, pension increases partly depend on revenues from social security contributions increasing; in Greece, they are partly dependent on nominal GDP growth; in Lithuania, they are entirely dependent on the growth of the volume of total wages; and in Portugal, partly on real GDP growth. Germany, meanwhile, fixes the initial pension and the revaluations according to a points system which takes into account wage growth, changes in the social security contribution rate and the evolution of the ratio between pensioners and contributors. Sweden, for its part, adjusts pensions each year on the basis of average nominal wage growth, provided that this exceeds 1.6% (if it is lower, pensions are decreased), although it will make an adjustment if there are imbalances in the system's actuarial balance sheet. In addition, in Finland and Portugal, the amount of the initial pension is automatically linked to the evolution of the mortality and life expectancy data, respectively.

### Europe: expenditure on public pensions and total accumulated in private pension funds



**Note:** Pension fund data for Denmark corresponds to 2018 (latest available).

**Source:** BPI Research, based on data from the 2021 Ageing Report for public pensions and from the World Bank for private pension plans.

Another lever used in many countries to mitigate pressures on public pension systems is to supplement them with private systems, whether company or personal pension plans.<sup>6</sup> Specifically, as we see in the chart, economies such as Denmark and the Netherlands have a lower level of expenditure on public pensions as a percentage of GDP compared to the countries of southern Europe, but on the other hand much higher contributions are made to private pension schemes as a percentage of GDP. In these countries, given that it is practically mandatory to have a private pension fund by law, between 93% and 100% of working-age

5. See D. Weber, E. Loichinger «Live longer, retire later? Developments of healthy life expectancies and working life expectancies between age 50-59 and age 60-69 in Europe», Eur J Ageing 19, 75-93 (2022); J.-A. Álvarez, M. Kallestrup-Lamb and S. Kjærgaard (2021) «Linking retirement age to life expectancy does not lessen the demographic implications of unequal lifespans», Insurance: Mathematics and Economics, 99, pages 363-375.

6. For further details on the private savings component, see the article «How to manage our cognitive biases to boost private pension savings» in this same Monthly Report.



individuals have this form of savings. Also, public pensions in the Netherlands and in Scandinavian economies are generally lower relative to wages than in southern European countries. However, with the savings achieved in public spending in this regard, these countries are also able to offer extensive safety nets in old age, as well as greater pension supplements for those with fewer resources. Overall, these systems have proven effective in reducing public spending, as well as inequality and poverty in old age.<sup>7</sup>

As for the public revenues funding pension systems, it is essential to keep in mind that similar increases in revenues can be achieved in different ways, which in turn will have differing impacts on the economy. Funding pensions through social security contributions is quite common in European countries, and it is the main feature of contributory pension systems. There is, however, a debate regarding to what extent pensions could be funded through taxes. In particular, the European Commission has recommended to some countries, such as Germany, that if they offer new non-contributory pension benefits, these should not be funded through higher social security contributions.<sup>8</sup> In this regard, a group of economists at the central bank (Bundesbank) have documented that a policy replacing part of the pension system funding that comes from social security contributions with taxes on consumption would have largely positive macroeconomic effects.<sup>9</sup> Although there are various models in the EU for funding pension systems, the Commission's suggestion is usually applied: all European countries have safety nets for old age, usually funded with taxes, and many also have basic and minimum pension components that are often funded with taxes. There are also one or two examples, such as Denmark, where the public pension system is funded entirely by taxes and not by social security contributions.<sup>10</sup>

7. S.R. Martínez and M. Soto (2021). «Pension Reforms in Europe: how far have we come and gone», IMF Departmental Papers, 2021(016), A001. Torben M. Andersen *et al.* «Pension reform and wealth inequality: evidence from Denmark». Centre for Economic Policy Research, 2022.

8. Council recommendation on the 2014 National Reform Programme of Germany and delivering a Council opinion on the country's 2014 Stability Programme. COM(2014) 406 final.

9. Exchanging taxes on work for taxes on consumption partially shifts the tax burden from domestic producers to foreign producers, which would reduce the costs of domestic production, generating positive domestic macroeconomic effects. This policy would also increase the costs of domestic consumption and partially defer the tax burden on households until retirement, and it would lead to greater savings. That said, during the transition period from one system to the other, the situation of retirees and households nearing retirement deteriorates. See K. Ruppert, M. Schön and N. Stähler (2021), «Consumption Taxation to Finance Pension Payments», Deutsche Bundesbank Discussion Paper n° 47/2021.

10. See European Commission, «The 2021 ageing report – Economic & budgetary projections for the EU Member States (2019-2070)», Publications Office, 2021. S.R. Martínez and M. Soto (2021) and «Pension Reforms in Europe: how far have we come and gone», IMF Departmental Papers, 2021(016), A001.

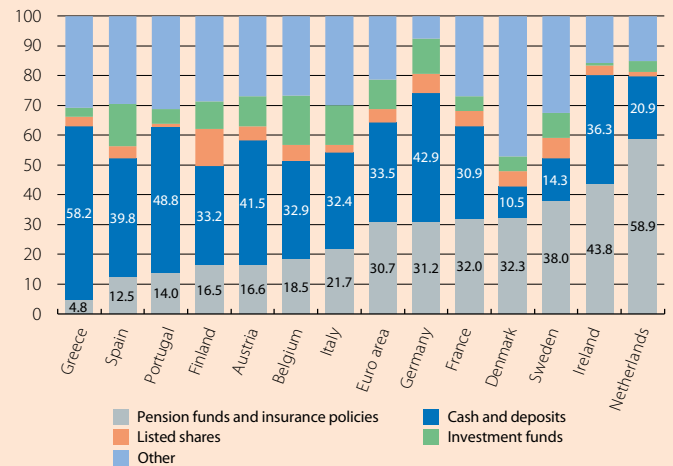
## How to make our cognitive biases work in favour of increasing private savings in the form of pensions

The public pension system, a fundamental pillar of the welfare state, presents a number of significant challenges, both in Spain and in Europe, in a context characterised by the retirement of the baby boomer generation. Indeed, nearly 60 per cent of Europe's older citizens admit to being concerned about whether they will have enough money in retirement.<sup>1</sup> Yet there has been no significant increase in savings rates in recent years. The Eurozone savings rate in 2010-2019 was 12.5% (8% in Portugal), compared to 13.3% in 2000-2009 (10.7% in Portugal). Germany is the Eurozone economy with the highest savings rate, which has been increasing (17.5% in 2010-2019 compared to 16.8% in 2000-2009).

Moreover, the composition of the financial savings of households across Europe reveals a conservative profile in most countries, with a clear preference for deposits, which represent between 20% and 40% of total financial assets. In contrast, the share of savings in private pension funds and retirement insurance is quite uneven across countries and is conditioned by the replacement rate of public pensions.<sup>2</sup> It can be seen that the higher the replacement rate of public pensions, the lower the share of workers with private pension plans tends to be. In Denmark and the Netherlands, for example, public replacement rates are among the lowest in the EU and, as participation in a private pension fund is almost mandatory by law, between 93% and 100% of people of working age have this form of savings, which provides almost 60% of the pension received in retirement. Portugal, by contrast, with one of the highest public replacement rates in Europe (around 75%), the share of the working-age population with pension plans has remained virtually unchanged since 2013 and is less than 20%.<sup>3</sup>

### Distribution of households' financial assets

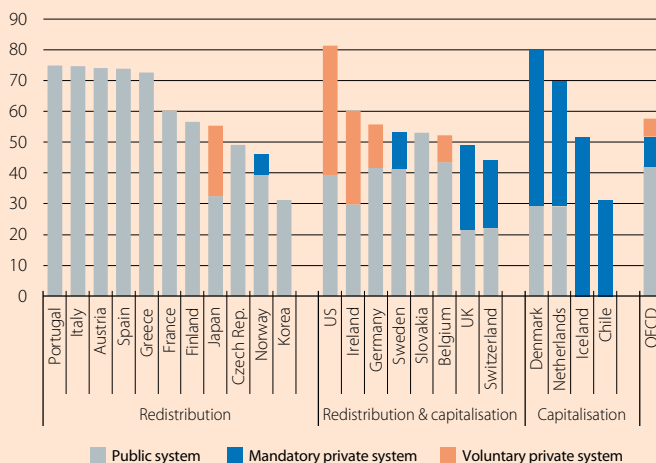
(% of total assets) Q4 2022



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

### Gross replacement rate for public and private pensions \*

Pension to be received as a percentage of the final salary received



Note: \* The replacement rate is calculated using the average pension and salary. Gross refers to before taxes.

Source: BPI Research, based on data from the Pensions at a Glance 2021 report, OECD.

### What does behavioural economics have to teach us about how we save

Often, people with the means to save, despite being concerned about their financial situation in retirement, do not allocate a substantial amount of their income to long-term savings products such as pension plans or insurance of their own accord. How can human beings behave in such contradictory or even irrational ways? Well, precisely because they are human beings.

Over millions of years, our brain has evolved into its current form, which represents only 2.0% of the average human weight but consumes 25% of our daily energy. Faced with the challenge of finding food, the brains of our ancestors could not be permanently focused, so having a «lazy» brain was a matter of survival. This explains why our brain has two modes of thinking: the automatic mode, located in the limbic system (which represents our unconscious and is impulsive), and the reflexive mode, located in the pre-frontal cortex (responsible for planning, control, and so on).

1. According to the European Insurance and Occupational Pensions Authority (EIOPA).

2. The replacement rate indicates how much the pension (public or mixed) received on retirement represents in relation to the last salary received.

3. On the other hand, people often start saving late, which limits the savings that can be accumulated for retirement. In Portugal, less than 8% of households with a head of household aged 35-44 had a voluntary pension plan in 2017 (the last year for which information on the distribution by age group is available) a savings plan or insurance, and the percentage rises to more than 10% in the 55-64 age group (Household Financial Situation Survey, 2017).

The automatic mode generates a series of cognitive or emotional reflexes that make it difficult to make «rational» decisions. Behavioural economics embodies this idea that actors do not make their decisions in a fully rational way (as has traditionally been the case in economic theory), but are determined by emotions and different kinds of biases.

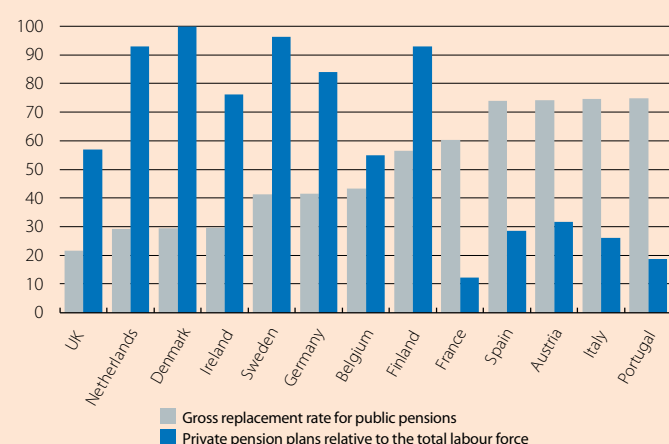
Some of these preconceptions are decisive when it comes to planning our savings, particularly with regards to the lack of self-control (too many temptations in the present that prevent us from saving); loss aversion (we are more upset by the fact that an

investment has had one year of losses than by the gains accumulated over the years with the same investment); the creation of mental accounts (we organise our money into different, non-exchangeable categories of expenditure or income); and status quo inertia (a preference for maintaining the status quo). These biases contribute to three major barriers that prevent us from «activating» our rational brain to think about retirement we do not see ourselves as older and find it difficult to identify with our future; we value our present needs much more than our future needs; and we suffer from a certain blindness to assess what our needs will be as we grow older.

However, these behaviours inherent to our human condition can be changed or adapted, as demonstrated by the results of behavioural economics, which confirm that individuals' decisions are strongly conditioned by the manner in which they are presented with the options available. Behavioural economics is often about «taking advantage» of human cognitive tendencies to «nudge» individuals to ensure that

### Gross replacement rate for public pensions and population with private pensions \*

(%)



Source: BPI Research, based on data from the Pensions at a Glance 2021 report, OECD.

their final choice is the right one, while respecting their freedom of choice by keeping alternatives available.<sup>4</sup> Behavioural economics thus presents methods that public administrations can use to guide citizens' choices.<sup>5</sup>

### The UK, a close example of how the application of behavioural theories works

The UK has had a mixed pension system since the mid-20th century, with both a public and a private pension system. However, demographic trends and projections were indicating that the public pension system was facing sustainability problems, with the private system unable to compensate for this as contributions and the level of savings had been steadily declining.

Consequently, in 2008, a new pension law was passed which included the adoption of Automatic Enrolment. This mechanism provides that employers automatically enrol workers who fulfil certain conditions in a private pension scheme<sup>6</sup> (the so-called company or occupational pension schemes, complementary to the public pension),<sup>7</sup> although the worker has one month to opt out of the system. In addition, every three years, companies must automatically re-register workers who have opted out. The system was activated in 2012 and gradually extended to all British businesses over the next six years.

The figures confirm the success of the initiative: whereas in 2013 only 32% of UK workers in the private sector had a company pension scheme, this increased to 75% in 2019. As a result, the total replacement rate for pensions reached 49% in 2021, compared to 22% for public pensions alone. In addition, the volume of assets in private pension plans has more than doubled, and by 2021 represented more than 120% of GDP, compared to 73% before Automatic Enrolment.

### The titanic challenge of controlling our pre-existing beliefs

The UK is just one example of how behavioural economics techniques can work. Other success stories include the USA, with its Save More Tomorrow (SmarT) programme, which has managed to increase the retirement savings of about 15 million people<sup>8</sup>;

4. Nudge techniques involve positive reinforcement and indirectly suggested actions to influence behaviour and decision-making. These tools were analysed by Nobel laureates Richard Thaler and Cass Sunstein in their book «Nudge: Improving Decisions About Health, Wealth, and Happiness», 2018.

5. In 2014, Cass Sunstein published his essay «Nudging: A Very Short Guide», which proposed 10 techniques to be applied in public policy programmes to help individuals make the best decisions.

6. Contributions to these private pension funds are calculated on pensionable salary. From 2019, the employer is entitled to 3%, the worker to 4%, and the State to 1%. On the other hand, only 9% of workers exercised their right to leave the system.

7. They must be at least 22 years old, earn more than £10,000 a year (this figure is reviewed annually), have a regular job in the UK, and not be already participating in another employment scheme.

8. See Thaler, R. H. e Benartzi, S. (2001), «Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving», The University of Chicago Press.

Brazil, which has ensured that 80% of public employees have a supplementary pension fund through automatic enrolment; and the Netherlands, which has informed each worker personally of their public pension situation by sending them the so-called «orange envelope».<sup>9</sup> These cases can serve as inspiration for the design of public policies to encourage private savings for retirement, although they are not master formulas and must be adapted to the idiosyncrasies of each culture. What works in one place does not necessarily work in another.

Private company pension plans becoming widespread is an important first step, but the significant increase in savings depends on tax incentives to save. In most countries, contributions can be deducted up to a certain limit from the income tax base and taxation of this part of income and its earnings is deferred until it is received in retirement. Increasing savings also depends on the profile of savers and their preconceived ideas. In Portugal, these plans are still very limited, despite the increase in recent years. Indeed, in 2021 private pension funds represented only 25 per cent of GDP, compared to over 100 per cent in the case of the United Kingdom.<sup>11</sup> An alternative way to increase aggregate savings would be for the state to top-up contributions to individual pension plans. This policy was followed, for example, in the so-called «Riester plans» in Germany or the Lifetime ISA in the UK.<sup>12</sup> The data suggests that top-ups increase the holding of retirement savings vehicles, but that most taxpayers do not contribute despite the incentive.<sup>13</sup> Human irrationality has been found again, my friend Sancho: human beings have difficulty seeing the fiscal advantages of saving for retirement unless someone explains it to them.<sup>14</sup>

9. The Netherlands has pioneered this practice and also reports on the status of employment schemes. In Portugal, the Social Security simulator for calculating the public pension has been available since 2018, but it is not yet a well-known tool.

10. While among Spanish households with higher incomes and age, tax deductions on pension plans (private or occupational) mainly generate a reallocation of their portfolios to pension funds to the detriment of other savings instruments, in other types of households new savings seem to be generated. See Ayuso, J., Jimeno, J. F. e Villanueva, E. (2019), «The effects of the introduction of tax incentives on retirement saving», Series, no. 10, pp. 211-249.

11. This is not the case for individual pension plans, where the maximum deduction is reduced from €8,000 to €1,500.

12. A savings account into which the state pays a 25% bonus on contributions (up to a maximum of £1,000 a year), provided it is used for the purchase of a first home or for retirement.

13. See De Cos, P. H. (2021), «El sistema de pensiones en España: una actualización tras el impacto de la pandemia. Contribución del Banco de España a los trabajos de la Comisión de Seguimiento y Evaluación de los Acuerdos del Pacto de Toledo», Occasional Documents no. 2106, Bank of Spain

14. Seer E. Duflo, W. Gale, J. Liebman, P. Orszag e E. Sáez (2006), «Saving Incentives for Low and Middle-Income Families: Evidence from a Field Experiment with H&R Block», Quarterly Journal of Economics 121.4.

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