SEFO

SPANISH AND INTERNATIONAL
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Assessing the impact of the interest rate tightening cycle

funcas

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Letter from the Editors

The September issue of *Spanish and International Economic & Financial Outlook (SEFO)* comes out within the context of signs of a weakening external environment, which have become more entrenched since our July issue.

EU GDP stagnated in the second quarter, dragged down by recessionary forces hitting some of the most industry-heavy economies, such as Germany among others, and expectations for the coming months have cooled. The outlook has been affected by higher interest rates, the downturn in international trade and the bursting of the credit bubble in China, with its global spillover implications, particularly for the industrial sector. Rising energy prices and the depreciation of the euro are also hampering the disinflation process. The US economy is holding up better, although the latest trends also point to a slowdown.

Under this more pessimistic backdrop, it is ever increasingly important to assess the EU's and Spain's fiscal and growth prospects going forward. Thus, we open the September issue of *SEFO* with perspectives on the upcoming post-pandemic euro area fiscal adjustment process. The fiscal response to the COVID-19 pandemic added significantly to European public debt. This was only to be expected, and in March 2020 the European Commission triggered the 'general escape clause' of the Stability and Growth Pact to accommodate the need for greater public spending. That 'general escape clause' will be deactivated on 31 December 2023. Whether or not there is a reform of the rules for European macroeconomic policy coordination, policymakers across Europe will need to begin consolidating their fiscal accounts in preparation. Such efforts will be particularly important for the six European Union (EU) member states with public debt worth more than 100 percent of gross domestic product (GDP). The high rate of inflation in the wake of the pandemic has eased some of that adjustment burden, but the swift monetary tightening introduced to calm rapid price increases will add to the challenge.

Shifting the focus to another key element of Spain's relationship with the EU, the next article in this *SEFO* provides a detailed account of Spain's progress on allocation and implementation of Next Generation EU (NGEU) funds. By the end of 2022, Spain had called tenders and grants for 43.7% of the NGEU funds allocated thus far. If we compare the volume of calls (35.83 billion euros) with the amount awarded as of year-end (16.35 billion euros), we arrive at an implementation rate of 45.6%, with more than half of the volume called yet to be allocated. Of the volume already awarded, almost three-quarters (73.4%), or 12 billion euros, have gone to the business community.

Of the aid awarded to Spanish businesses, more than half has gone to large enterprises (59.3% of total), with SMEs receiving 40.7%. By sector, the services sector has been the biggest beneficiary so far (46.9% of the total), followed closely by construction (41.6%). Within services, the information and communication sector (15.4% of the total) and wholesale and retail trade (12.1%) have been the biggest recipients. In manufacturing, a noteworthy 3.6% of the aid has gone to the automotive sector. Under the current scenario, Spain will have to accelerate the implementation process if it is to use the rest of its non-reimbursable funds by the August 2026 deadline.

Next, given the importance of the interest rate cycle in so many aspects of the economy and the financial sector, we dedicate the subsequent segment of this *SEFO* to evaluating the situation across a broad range of actors following one year of interest rate increases. At least two generations of labour market participants had never experienced positive real interest rates and were paying very low rates on their borrowings until just over a year ago. Today, monetary policy remains immersed in an intense and complex battle to stem inflation. The most obvious consequence has been a quick succession of interest rate increases. In the eurozone, the price of money has been rising for over 18 months, significantly increasing borrowing costs for households, companies, and governments. Credit has already contracted substantially, and the cost of debt has increased. Indeed, the increased cost of money has driven a slowdown in mortgage flows to year-on-year rates of growth of 2.5% as of July 2023. At the same time, however, the banks' pre-tax earnings over average total assets had increased from 0.8% to 1.1% in the first quarter of 2023 and the spread between asset and liability rates had increased by just 0.1pp to 1%. Lastly, the cost of public debt has increased considerably. Since 2021, the cost of issuing 3-year bonds in Spain has increased by 3.75pp, while the cost of issuing 10-year paper has increased by 3.16pp. As acknowledged by the heads of the central banks themselves, it is unclear how long it will take for these policies to have their intended effects. The monetary authorities' key message is that the approach has to remain conditional until uncertainty around inflation dissipates.

We then look specifically at how those rate hikes have hit the European financial sector through the lens of their performance on the most recent round of stress tests. In keeping with the stipulated biennial schedule for stress testing significant banks, the European supervisor (ECB/SSM) has completed its exercise for 2023-2025, using year-end 2022 as its starting point. In parallel, its American counterpart (the Federal Reserve) has stress tested its significant banks, publishing its results one month ahead of the ECB. Several aspects distinguish this set of tests from those undertaken since 2014 when, in conjunction with the launch of the Banking Union initiative, it was decided to place stress tests at the heart of the supervisory function. The last round of tests (in 2021) focused on the potential impairment of credit as a result of the pandemic at a time when interest rates of zero per cent were preventing the banks from generating reasonable minimum margins. Compared to the zero-rate environment that shaped all the previous stress tests, the 2023 tests are the first to take place against the backdrop of high rates that are unlocking new risks (market, interest rate and liquidity risks) that did not affect the previous rounds of tests. It is for that reason that the European and American supervisors have tentatively introduced the simulation of bond portfolio loss scenarios related with the spike in interest rates, albeit as an exploratory exercise with no immediate impact on capital requirements. While the general conclusion derived from the exercise is that the European banks are better positioned to offset potential capital depletion via stronger NII generation (as is also apparently reflected in the listed banks' market values), the upward shift in the rate curves is impacting the economic value of the banks' investment portfolios. Against this backdrop, the stress tests are and must remain a constantly evolving tool capable of adapting to new sources

of risk and new types of scenarios, notably including climate, cybersecurity, geopolitical and pandemic risks, that are not captured in scenarios that only consider stressed financial conditions but can nevertheless wreak havoc on the economy and, by extension, the health of the banking system. The supervisors need to continue to boost the quality and effectiveness of their methodologies in order to look forward and ensure that the banks remain able to carry out their financial intermediation role, especially in times of heightened uncertainty.

Relatedly, even though EU banks performed relatively well on the stress tests, given the latest bout of financial markets turbulence resulting from the fallout of Silicon Valley Bank in the US, we take this opportunity to ascertain some of the ECB's medium-term supervisory policy priorities. Compared to the recent episodes of financial instability in the US and Switzerland, where several banks suffered structural balance sheet issues forcing their intervention and/or acquisition by other banks, the European banks' earnings and capital structures look relatively strong. Without question, this is largely thanks to the intense regulatory and supervisory activity undertaken by the European authorities focused on avoiding episodes of stress similar to those observed in other geographies. Nevertheless, recent developments have highlighted the need for banks' business models to focus on risk-adjusted returns, with high interest rates favouring the maturity transformation business. Elsewhere, the banks will inevitably have to address regulatory changes related to liquidity buffers, as recent events have shown these may potentially mask underlying issues. Lastly, going forward, the focus should be on strengthening the banks' capital and liquidity self-assessments, as this will help improve dialogue with supervisory authorities, while at the same time demonstrating the viability of their business models, hence underpinning stable performance of business activities and the correct functioning of credit channels.

Subsequently, we analyse the impact of the current rate tightening cycle, in the context of ECB policy "normalisation", on the central bank's balance sheet and excess liquidity. Eurozone monetary policy has become far more sophisticated since the onset of the Global Financial Crisis in 2007-2008. Although the ultimate price stability target has not changed and overnight rates remain the channel for policy transmission to the economy, the ECB's balance sheet has taken on greater purpose relative to its traditional role as a support instrument for monetary policy, entering the field of financial stability and influencing not only overnight rates but also the entire rate curve via new and less orthodox instruments. This situation has led the ECB, along with most of the central banks, to build up a balance sheet of an unprecedented size. Indeed, excess liquidity currently stands at 3.6 trillion euros, compared to 4.8 trillion in September 2022. The situation has sparked controversy, such as that surrounding its remuneration structure; misunderstandings with respect to the importance of quantities in monetary decisions; and unknowns, including questions about the exit strategy and impacts on bond market premiums. Against that backdrop, with the ECB since 2022 on a policy path of "normalisation", it is timely to ask what that implies and whether it is possible to return to the way things were prior to 2007. Given that excess liquidity is determined by factors exogenous to monetary policy and can coexist with it indefinitely, even if the policy stance is restrictive, as it is now.

We then switch gears to focus on more socio-economic issues and, where applicable, take a deep dive into some of the direct and indirect effects of the latest wave of inflation. One key topic within this space is the issue of youth housing affordability in Spain. This issue is particularly pronounced in Spain and appears to have worsened in recent years. This may well be related to other socio-economic problems, such as the increase in the age at which young Spaniards are leaving home to above the age of 30, compared to an EU average of 26.4. The lack of a stock of an abundant supply of houses for rent at affordable prices is one of the biggest

causes. Interestingly, despite the labour market challenges facing the Spanish youth, this does not appear to be the main factor affecting youth housing affordability in Spain. The solution to this problem therefore involves increasing supply, particularly in the rental segment. There are a host of international experiences to look at. Increasingly, given constraints to public treasuries for spearheading the required increase in supply via public sector investment, responses are taking the form of targeted incentives designed to provide young people with more affordable options.

To conclude this *SEFO*, we then examine the impact that inflation has had on the rising VAT burden for Spanish households. Value added tax (VAT) receipts soared in 2021 and 2022, by 14.9% and 13.4%, respectively, according to the Spanish tax authority (AEAT, 2023). This dynamic was buoyed by the tailwind provided by rampant inflation, which jumped from 3.1% in 2021 to 8.4% in 2022. An analysis of the increase in the VAT borne by households those years and how much of the increase is attributable exclusively to the inflation phenomenon shows that Spanish households' total VAT burden increased by 263.6 euros on average in 2022, of which 138.2 euros (52.4%) is directly attributable to inflation. The VAT burden accumulated between 2021 and 2022 exclusively as a result of inflationary pressures averaged 297 euros. That sum increases to approximately 350 euros for a standard household with a level of spending similar to average household income in Spain in 2022 (32,200 euros).

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What´s Ahead (Next Month)

Month	Day	Indicator / Event
October	2	Social Security registrants and official unemployment (September)
	3	Tourists arrivals (August)
	5	Industrial production index (August)
	10	Financial Accounts Institutional Sectors (2nd quarter)
	13	CPI (September)
	16	Eurogroup meeting
	19	Foreign trade report (August)
	26	ECB monetary policy meeting
	26	Labour Force Survey (3rd quarter)
	26-27	European Council meeting
	27	GDP 3rd quarter, advance estimate
	27	Retail trade (September)
	30	Preliminary CPI (October)
	30	Non-financial accounts: Central Government, Regional Governments and Social Security (August)
	30	Non-financial accounts, State (September)
	31	Balance of payments monthly (August)
November	2	Social Security registrants and official unemployment (October)
	2	Tourists arrivals (September)
	7	Industrial production index (September)
	8	Eurogroup meeting
	14	CPI (October)
	17	Foreign trade report (September)
	29	Preliminary CPI (November)
	29	Retail trade (October)
	30	Non-financial accounts: Central Government, Regional Governments and Social Security (September)
	30	Non-financial accounts, State (October)
	30	Balance of payments monthly (September)

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What Matters

Regulation and Economic Outlook

Key Facts

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The coming fiscal adjustment in Europe

Whether or not there is a reform of the rules for European macroeconomic policy coordination, policymakers across Europe will need to begin consolidating their fiscal accounts. The high rate of inflation in the wake of the pandemic has eased some of that adjustment burden, but the swift monetary tightening introduced to calm rapid price increases will add to the challenge.

Erik Jones

Abstract: The fiscal response to the COVID-19 pandemic added significantly to European public debt. This was only to be expected, and in March 2020 the European Commission triggered the 'general escape clause' of the Stability and Growth Pact to accommodate the need for greater public spending. That 'general escape clause' will be deactivated on 31 December 2023. Whether or not there is a reform of the rules for European macroeconomic policy coordination, policymakers across Europe will need to begin consolidating their fiscal accounts in preparation. Such efforts will be particularly important for the six European Union (EU) member states with public debt worth more than 100 percent of gross domestic product (GDP). The high rate of inflation in the wake of the pandemic has eased some of that adjustment burden, but the swift monetary tightening introduced to calm rapid price increases will add to the challenge.

Introduction

One of the great lessons of the COVID-19 pandemic is about the importance of fiscal policy. Governments need to be able to spend money to offset powerful economic shocks. And, when those governments spend money effectively, they can do a lot to lessen the impact of such shocks on the economy

> “Governments need to be able to spend money in times of crisis; and they need to be able to consolidate their finances again once that crisis has passed.”

and on society. This lesson does not deny the importance of maintaining sustainable public debts. There is a healthy debate in macroeconomics about the importance of government borrowing and the usefulness of discretionary fiscal policy in fine-tuning macroeconomic performance, but there is broad agreement at the extremes of the argument. [1] Governments need to be able to spend money in times of crisis; and they need to be able to consolidate their finances again once that crisis has passed.

The fiscal response to the COVID-19 pandemic was impressive. The ratio of public debt to gross domestic product (GDP) across the euro area was 86 percent in 2019 and 97 percent in 2021. [2] The effectiveness of that response was impressive as well. Although nominal GDP contracted at the height of the pandemic, it quickly expanded again once governments were able to vaccinate their populations and relax constraints on freedom of movement. Unemployment across the euro area increased, but only temporarily and soon fell to record lows. The same is true for bankruptcies, which surged initially due to the shutdown of economic activity and the disruption of supply chains, but which nevertheless remained under control. In this sense, the economic disruption caused by the pandemic (and the policy measures introduced to protect national populations) passed much more quickly than it had during the global economic and financial crisis or the European sovereign debt crisis that followed.

Now the focus is shifting from fiscal stimulus to fiscal consolidation. Two debates have emerged within that context. One is about the rules for macroeconomic policy coordination, and the other is about the scale of the challenges that national governments will have to face – particularly in those six countries that have the largest outstanding public debts. The purpose of this article is to focus on those challenges. The broad outlines of the debate over the rules for macroeconomic policy coordination are well-established (Jones, 2021). The European Commission has made specific recommendations. [3] Those recommendations are based in large measure on joint contributions made by the Spanish and Dutch governments. [4] But negotiations within the European Council are still underway and the results will be known only later in 2023.

In the meantime, two factors make it important to focus on the magnitude of the challenges to be faced. The first is the decision by the European Council to de-activate the ‘general escape clause’ embedded in the rules for macroeconomic policy coordination at the end of December in 2023. The European Council activated that ‘general escape clause’ in March 2020 in order to give national governments more flexibility in public borrowing so that to bolster the fiscal response to the pandemic. This decision was not a ‘suspension’ of the rules; it was a resort to one of the exceptional circumstances allowed within the rules. Now that the health emergency has passed, there is no longer a

> “Whatever decision the European Council makes about whether or not to reform the rules for macroeconomic policy coordination, it is clear that the state of exception will end and some kind of rules requiring national government to consolidate their public debts will come into effect.”

“ In the wake of the latest ECB meeting, for national treasuries, the implication was that borrowing costs would not only rise again – in line with the ECB’s most recent adjustment – but also remain high for the foreseeable future. ”

strong justification for that clause to remain active (Jones, 2020). As a result, whatever decision the European Council makes about whether or not to reform the rules for macroeconomic policy coordination, it is clear that the state of exception will end and some kind of rules requiring national government to consolidate their public debts will come into effect.

The second factor concerns the sudden acceleration of inflation that took place starting in late 2021 and that gathered momentum after Russia’s full-scale invasion of Ukraine the following February. That burst of inflation forced the European Central Bank (ECB) to move quickly to withdraw the monetary accommodation it provided both through the reversal of more unconventional measures, such as large-scale asset purchases and negative interest rates, and through the more straightforward process of raising monetary policy interest rates (Jones, 2023).

That process of monetary tightening started in earnest in March 2022 and culminated in September 2023 as the Governing Council appeared to bring its interest rate adjustments to an end after raising the rate paid on deposits at the ECB to 4 percent. ECB President Christine Lagarde made it clear in her opening statement that ‘the key ECB interest rates have reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to [its policy] target.’ [5] Financial market participants immediately began betting on when that ‘sufficiently long duration’ would come to an end and interest rates would come back down again. For national treasuries, however, the implication was that borrowing costs would not only rise again – in line with the ECB’s most recent adjustment – but also remain high for the foreseeable future.

Relative magnitudes

To understand the scale of the challenge, it is useful to start with the reference values embedded in the European rules for macroeconomic policy coordination. These values point to public debts and deficits relative to GDP at market prices (or ‘nominal’ GDP). They were first introduced in the Treaty on European Union negotiated in 1991 and signed in 1992 in Maastricht as a protocol indicating that countries could qualify for participation in the single currency only if their deficits were at, below, or declining toward 3 percent of GDP at a sufficient rate, and if their debts were at, below, or declining toward 60 percent of GDP at a sufficient rate. [6]

These numbers constituted a single ‘convergence indicator’ – for ‘excessive deficits’ – insofar as accounting standards at the time varied considerably across countries and yet if you assume that nominal GDP grows at roughly 5 percent per annum –which was close to the historical average for the Cold War period– then a government that runs a deficit worth 3 percent of nominal GDP should wind up with an outstanding stock of public debt worth 60 percent of GDP (De Grauwe, 2007). Hence, if the two measures are moving consistently around those numbers, and nominal GDP growth is close to 5 percent, then together they constitute a reasonably good (if rough and ready) indicator for sustainable public finances.

The justification for these reference values has changed over time as countries adopted the euro as a common currency and governments began to worry more about fiscal stability within the monetary union than about qualification for membership. The numbers also became disconnected as nominal GDP growth rates fell below 5 percent across Europe, with the implication

being that even a small deficit (relative to GDP) could result in the accumulation of a higher stock of debt (again, relative to GDP). More important, the focus for attention moved from deficits to debts during the European sovereign debt crisis because the problem euro area governments faced was more closely connected to longer-term debt sustainability than to the shorter-term balance between revenue and expenditure.

Despite these changes, however, the focus for policy attention has remained on the ratio of deficits and debts relative to nominal GDP and the numbers 3 and 60 have been reproduced as reference values both in the secondary legislation that sets out the rules for macroeconomic policy coordination – often referred to collectively as the Stability and Growth Pact – and the revised treaty for the European Stability Mechanism. [7] Therefore, neither the ratio nor the reference values are likely to change whatever happens in the debate about the rules for macroeconomic policy coordination. Instead, the main questions are about how quickly national governments should correct any deviation from the reference values and how much flexibility those governments (and hence also the European Commission) should have in designing and implementing any fiscal adjustment programme.

Those adjustment programmes are likely to be significant if they are to close the gap between existing debts and the 60 percent reference value. As the data in Table 1 reveal, six countries in the euro area have debts in excess of 100 percent of GDP. According to the latest estimates for 2023, the range runs from Greece, with a stock of debt worth 160 percent of GDP, to Belgium and Portugal, which have outstanding debt stocks worth around 106 percent. Of course, these ratios can change quickly. Greece's debt fell to that level from almost 195 percent of GDP in 2021 and Portugal's debt fell from more than 125 percent. These are changes in the respective ratios of 19.5 percent and 16.6 percent, respectively. But the ratios can also move slowly. Belgium started in 2021 with debt worth 109 percent, and its stock of debt relative to GDP fell by only 2.9 percent over the same two-year period.

These relative movements can be understood only by unpacking the ratios into different components reflecting the change in the actual amount of national public debt outstanding, the underlying real growth in the national economy (meaning 'real' as opposed to 'nominal' GDP), and the effect of inflation as captured by the GDP price deflator. This decomposition can be found in Table 2, which shows the cumulative impact of the change in the nominal debt stock as reduced by the growth of real output and then also by the rise in nominal prices. Once all three elements are put together, it is possible to see the actual percentage change in the ratio

Table 1 **The evolution of debt-to-GDP ratios in six european countries**

Percent GDP	2021	2022	2023
Belgium	109.1	105.1	106.0
Greece	194.6	171.3	160.2
Spain	118.3	113.2	110.6
France	112.9	111.6	109.6
Italy	149.9	144.4	140.4
Portugal	125.4	113.9	106.2

Source: AMEC Database, European Commission, version date: 15 May 2023.

> “Given the efforts by the ECB to reduce inflation even if at the expense of real GDP growth, it is more likely that both elements in the denominator of the debt-to-GDP ratio will grow more slowly in the years ahead.”

Table 2 **Sources of change in debt ratios, 2021-2023**

Percent Change	Nominal Debt	Real GDP Growth	Nominal GDP Growth	Memo: Price Effect
Belgium	11.0	6.5	-2.9	-9.5
Greece	1.1	-7.1	-19.5	-12.4
Spain	9.1	1.8	-6.7	-8.5
France	8.5	5.3	-3.0	-8.3
Italy	6.9	2.1	-6.5	-8.7
Portugal	2.3	-6.6	-16.6	-10.0

Note: The change in the debt ratio in terms of nominal growth is the actual change in the debt-to-GDP ratio over the period because all parts of the ratio are included – nominal debt, real growth, and the change in the GDP price deflator; the memo regarding the 'price effect' is the contribution of the change in the GDP price deflator to that overall change.

Source: AMEC Database, European Commission, version date: 15 May 2023.

of debt to GDP. The stand-alone influence of prices is produced as a separate column.

This data makes it easy to explain how Greece was able to make such a large improvement in its outstanding public debt-to-GDP ratio. To begin with, the Greek government added very little to existing debt, which grew by just 1.1 percent over the period from 2021 to 2023. By contrast, the country's real GDP increased by 8.2 percent over the same period, reducing the ratio of debt to real GDP by 7.1 percent. Price inflation reduced the ratio by another 12.4 percent, which is how the cumulative change wound up at 19.5 percent. It is also easy to explain the contrast between Belgium and Portugal. While Belgium added significantly to its nominal debt stock over the two-year period, Portugal did not. Over the same period, the Belgian economy grew by relatively less in real terms – 4.5 percent *versus* 8.9 percent in Portugal. Hence while both countries experienced very similar bouts of inflation, Portugal made significantly better headway in lowering its debt-to-GDP ratio.

This kind of analysis is useful to highlight different sources of concern. For example, Italy, France, and Spain added significantly to their outstanding stock of debt over the 2021-2023 period. That increase in outstanding debt has been obscured by impressive real GDP growth in Spain and by significant price inflation in all three countries. The question is whether such favourable macroeconomic performance is likely to continue. Given the efforts by the ECB to reduce inflation even if at the expense of real GDP growth, it is more likely that both elements in the denominator of the debt-to-GDP ratio will grow more slowly in the years ahead. Therefore, it will be necessary to slow the growth in the stock of nominal debt to maintain any reduction in the

> The issue is not just the extent to which interest rates increase but also the amount of time they remain high.

debt-to-GDP ratio. This is not an argument in favour of austerity. It is simply a reflection of how relative magnitudes evolve.

Inflation and interest rates

There are other ways that a higher rate of real GDP growth and fast price inflation support debt stabilization. Higher GDP growth translates into more tax revenues and – through higher employment and rising incomes – lower benefit payouts. Fast price inflation boosts tax revenue as well, both by pushing taxpayers into higher brackets and through the proportional yield on indirect taxes. Of course, governments also have to pay higher prices for goods and services, but that change in the cost base operates only on part of overall government expenditure and with a lag. A slowdown in real GDP growth and a deceleration of price inflation has the opposite effect – lowering tax revenues and, with a lag, raising benefit payouts. These 'automatic stabilizers' are a necessary part of fiscal planning. That is why the European rules for macroeconomic policy coordination focus attention on 'structural' indicators that give less weight to any deviation from longer-term trends in macroeconomic performance.

The more serious challenge comes from the potential impact of monetary tightening on the cost of government borrowing. That impact can be felt quickly in terms of the yield on short-term government debt, which turns over regularly and so adapts to any change in monetary policy. The impact of monetary tightening passes through much more slowly into the cost of longer-term borrowing. The longer the average maturity of the debt, the smaller the share that will need to be refinanced at higher interest rates. And average maturities tend to be very long in the euro area. Greece benefits from very long maturities – averaging 20 years – due to the financing strategy that government pursued during the sovereign debt crisis. Spain and Portugal have an average maturity of roughly 8 years; Italy is closer to 7. This means that the pass through of higher borrowing into government finances will take a long time to have an impact (Claeys and Guetta-Jeanrenaud, 2022).

Nevertheless, those debt instruments that do roll over during a period of high interest rates will have an impact on government finances for a long time. Therefore, the issue is not just the extent to which interest rates increase but also the amount of time they remain high. This is where the ECB's determination to hold interest rates at their current level 'for a sufficiently long duration' becomes important, because – as the ECB itself has cautioned – a prolonged period of relatively high interest rates could 'further increase the debt burden and potentially heighten overall vulnerabilities' in the markets for 'higher-debt countries' (Bouabdallah *et al.*, 2021).

This ECB analysis was done already in 2021 and anticipated both the impact of acerating growth and higher inflation on existing debt-to-GDP ratios and the potential for higher interest rates to push in the opposite

> The forecast made by the European Commission in May 2023 is that – except for Spain – interest payments will remain the same or increase in 2024.

Table 3 **Government interest payments**

Percent GDP	2021	2022	2023	2024
Belgium	1.7	1.5	1.7	2.0
Greece	2.5	2.4	3.2	3.2
Spain	2.2	2.4	2.5	2.4
France	1.4	1.9	2.0	2.0
Italy	3.6	4.4	4.0	4.1
Portugal	2.4	2.0	2.2	2.7

Source: AMEC Database, European Commission, version date: 15 May 2023.

direction. So far, the evidence for that increasing friction has yet to appear. As Table 3 reveals, data for government interest payments does not show a clear trend across countries for the period from 2021 to 2023. Nevertheless, the forecast made by the European Commission in May 2023 is that – except for Spain – interest payments will remain the same or increase in 2024. Since these forecasts were made before the ECB completed its cycle of tightening policy rates, it is possible to imagine that the October 2023 revisions to this data will show an even larger impact.

The solution is for governments to raise more revenues than the need for expenditures net of the funds required to service the public debt as a means of compensating for the effects of slower nominal growth and higher interest rates. Such effort is likely to go beyond slowing down the growth in nominal new debt – particularly for those countries currently running significant deficits on their government balances net of interest. This data can be found in Table 4. Again, the forecasts for 2024 were made in May 2023 and so may be revised downward (making the situation worse, not better) in October.

Table 4 **Government balance net of interest**

Percent GDP	2021	2022	2023	2024
Belgium	-3.8	-2.5	-3.3	-2.8
Greece	-4.7	0.1	1.9	2.5
Spain	-4.7	-2.4	-1.6	-0.9
France	-5.1	-2.8	-2.7	-2.3
Italy	-5.5	-3.6	-0.5	0.5
Portugal	-0.5	1.6	2.0	2.6

Source: AMEC Database, European Commission, version date: 15 May 2023.

> “The conclusion is that the six most heavily indebted countries in the euro area will inevitably face a fiscal adjustment.”

According to this data, Belgium and France have significant deficits compared to other countries. That variation may be a reflection of the fact that those countries also pay less in terms of interest (Table 3) because they face lower borrowing costs in the market. France pays 120 basis points (or 1.2 percentage points) less than Italy on its ten-year sovereign debt, for example. The spread between Belgium and Italy is 114 basis points (or 1.14 percentage points). Even such favourable borrowing costs, however, cannot undue the underlying arithmetic. If the governments of France and Belgium need to stabilize or improve their debt-to-GDP ratios in the face of rising borrowing costs and slowing nominal growth rates, they will need to tighten their government balances net of interest.

Fiscal adjustment

The conclusion is that the six most heavily indebted countries in the euro area will inevitably face a fiscal adjustment. Such adjustment will be necessary whatever the European Council agrees to be the rules for macroeconomic policy coordination. So long as the policy target remains framed in terms of a ratio of public debt or fiscal deficits to gross domestic product with reference values fixed at 60 percent and 3 percent respectively, an outstanding stock of public debt worth over 100 percent of GDP will need to be corrected. Moreover, that correction will not be automatic. Although fast nominal output growth has strengthened government balances, the positive effect of higher growth and faster price inflation is weakening as the European Central Bank tightens its monetary policy instruments in an effort to restore price stability. This monetary tightening will not only reduce those elements that lower the debt ratio but will also raise the cost of borrowing and so create additional expenditures. Hence, governments will need to strengthen their efforts at fiscal adjustment.

Importantly, this analysis leaves out many of the crucial elements for political discretion. The timing and composition of any fiscal adjustment is a political decision; so is the choice to remain within a rules-based framework for macroeconomic policy coordination. These choices are influenced by other lessons learned about the active use of fiscal policy. The COVID-19 pandemic reminded us that having a fiscal policy is important to offset powerful economic shocks. That is now a point of consensus. The gradual normalization of macroeconomic conditions after the pandemic, however, means we also return to the debate about the usefulness of discretionary fiscal policy in fine-tuning macroeconomic performance.

Notes

[1] For an example of the debate over fiscal policy, see Barry Eichengreen *et al.* (2021).

[2] The data for 2020 are not as useful for comparison with the pre-pandemic period as the data for 2021 because the economic lockdowns used to protect society from the spread of the virus compressed gross domestic product and so inflated the debt ratio; once the lockdowns were largely removed in 2021, economic activity quickly returned to something closer to normal.

[3] The European Commission’s proposals were published on 26 April 2023. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2393

[4] See, for example: “Joint Paper by Spain and The Netherlands on Priority Issues in 2022 on the EU’s Economic and Financial Policy Agenda”(April 2022. https://www.government.nl/latest/news/2022/04/04/spain-and-the-netherlands-call-for-a-renewed-eu-fiscal-framework-fit-for-current-and-future-challenges).

[5] This statement is repeated (for emphasis) in the introduction and conclusion of the opening statement made at the press conference

on 14 September 2023. https://www.ecb.europa.eu/press/pressconf/2023/html/ecb.is230914~686786984a.en.html

[6] See "Protocol (No 12) on the Excessive Deficit Procedure" in the Consolidated Version of the Treaty on European Union (as signed at Maastricht). https://www.legislation.gov.uk/eut/teu/attachment/13

[7] Again, see Jones, "The Coming Debate about European Macroeconomic Policy."

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Allocation of NGEU funds in Spain: Companies and sectors

As of December 2022, Spain was not even at the halfway mark as regards allocation of the non-reimbursable component of funds awarded under Next Generation EU (NGEU), as tenders and grants (35.83 billion euros), reached 43.7% of the total assigned to Spain by this point. Given that Spain has until August 2026 to implement the funds, the country will need to accelerate implementation, all the more so considering the additional funds awarded under the June 2023 Addendum.

Joaquín Maudos

Abstract: By the end of 2022, Spain had called tenders and grants for 43.7% of the Next Generation EU (NGEU) funds allocated thus far. If we compare the volume of calls (35.83 billion euros) with the amount awarded as of year-end (16.35 billion euros), we arrive at an implementation rate of 45.6%, with more than half of the volume called yet to be allocated. Of the volume already awarded, almost three-quarters (73.4%), or 12 billion euros, have gone to the business community. Of the aid awarded to Spanish businesses, more than half has gone to large enterprises (59.3% of total), with SMEs receiving 40.7%. By sector, the services sector has been the biggest beneficiary so far (46.9% of the total), followed closely by construction (41.6%). Within services, the information and communication sector (15.4% of the total) and wholesale and retail trade (12.1%) have been the biggest recipients. In manufacturing, a noteworthy 3.6% of the aid has gone to the automotive sector. Under the current scenario, Spain will have to accelerate the implementation process if it is to use the rest of its non-reimbursable funds by the August 2026 deadline.

Foreword

Spain has been assigned 173.67 billion euros of NGEU funds under the Recovery and Resilience Facility (RRF) and the Recovery Assistance for Cohesion and the Territories of Europe (the REACT-EU funds, created to tackle the fallout from the pandemic), of which 89.67 billion euros are non-reimbursable transfers. Of the latter figure, 81.96 billion euros were assigned initially and a further 7.71 billion euros were allocated as part of a subsequent Addendum approved in June 2023. If we add in the allocation under the REPowerEU Plan, which is also part of the Addendum (2.6 billion euros), the total volume of funds available for award for investment reaches 176.26 billion euros, of which 92.26 billion are non-reimbursable and the remaining 84 billion euros are loans.

These funds are being implemented across the various levels of government in Spain by means of three instruments: the grants and tenders called by the state; transfers to the regional and local authorities, and the so-called Strategic Economic Recovery and Transformation Plans (PERTEs for their acronym in Spanish), modelled after the Important Projects of Common European Interest concept (IPCEIs).

The investments eligible for funding from NGEU funds in Spain are set out in the Recovery, Transformation and Resilience Plan submitted by the Spanish government to the European authorities. That plan is structured around the six pillars established by the European Union: 1) green transition; 2) digital transformation; 3) smart, sustainable and inclusive growth including economic cohesion, jobs, productivity, competitiveness, research, development and innovation and a well-functioning internal market with strong SMEs; 4) social and territorial cohesion in the Union; 5) health, economic, social and institutional resilience with the aim of increased crisis preparedness and response capacity; and, 6) policies for the next generation, children and youth such as education and skills.

The Spanish government has a dedicated website for reporting on its progress, where it provides implementation update reports, the third of which was published in February 2023. However, those reports do not provide information about matters of interest such as the level of fund execution (percentage awarded with respect to amount called), fund destination by sector and the types of companies the funds are benefitting. That is the goal of this paper: to quantify the volume of NGEU funds that have actually flowed to the real economy (*i.e.*, called and awarded via tenders and grants), ring-fence those that have reached the business community and within the latter arrive at a breakdown by sector of activity and type of firm.

To achieve this objective, we start from the list of tenders and grants published on the government's official Recovery and Resilience Plan website, complemented by information taken from the public sector contracting platform (in the case of tenders) and the national grant database. Our analysis runs as far as the end of 2022, so that the benchmark figure are the funds that had been allocated to Spain by that cutoff (81.96 billion euros of non-reimbursable transfers).

“ NEGU funds are being implemented across the various levels of government in Spain by means of three instruments: the grants and tenders called by the state; transfers to the regional and local authorities, and the so-called Strategic Economic Recovery and Transformation Plans (PERTEs for their acronym in Spanish). ”

> “In total, by year-end 2022, the volume of NGEU-funded calls amounted to 35.83 billion euros, that is 43.7% of the total assigned to Spain as of that date.”

Quantification of the NGEU funds reaching Spanish companies

In the case of funding via tenders, we have identified 10,604 tenders totalling 14.08 billion euros financed using NGEU funds. As for grants, we have pinpointed 1,936 calls for a total of 21.75 billion euros. In order to avoid double counting within the grants, we then flagged and eliminated those that were called by the state for earmarking to other public bodies for the purpose of organising new calls and which, therefore, have been accounted for via this latter channel. In total, by year-end 2022, the volume of NGEU-funded calls amounted to 35.83 billion euros. That is 43.7% of the total assigned to Spain as of that date.

However, a significant portion of the called funds had not reached the real economy as the amount actually awarded is much lower, particularly in the case of the grants. That is because there are some calls for which the proposals submitted remain under evaluation and others that have been published for which the deadline for presenting bids has not elapsed. As a result, the amount actually awarded stands at 16.35 billion euros, implying an implementation rate of 45.6%.

Table 1 **Cumulative NGEU funds to December 2022**

Millions of euros

	Tenders	Grants	Total (tenders + grants)
Amount called	14,082	21,746	35,828
Amount awarded	9,257	7,092	16,349
– Companies tracked by the SABI database	8,954	2,677	11,632
– Companies not tracked by the SABI database	92	276	369
– Universities, research centres and public bodies	6	2,367	2,374
– Foundations and associations	12	1,309	1,321
– International entities	175	20	195
– Individuals (self-employed/households)	17	442	459

Sources: Spanish Ministry of Finance, SABI database and author's own elaboration.

> “The funds that had reached Spanish companies by December 2022 that we can analyse represent 71% of all funds allocated.”

> “Out of every 100 euros of aid awarded to Spanish companies, 40.7% has gone to SMEs, with the large corporations benefitting more.”

Of the amount allocated, it is possible to identify the contractors (tenders) and beneficiaries (grants). There are several classes of recipients: companies; universities, research centres and public bodies; foundations and associations; international entities; and, individuals (including self-employed persons and households).

In the case of the recipient firms, we can cross the information from the tender and grant databases with the SABI database, so long as we have the company's tax ID number, and it is included in the database. This firm-level database is fed by information from the Companies Register and does not include all of the companies that are obliged to file their financial statements. As a result, we can monitor the NGEU funds reaching the universe of companies tracked in SABI, which excludes the self-employed. Of the 16.35 billion euros of NGEU funding effectively awarded, 12 billion euros has gone to the business sector. It is possible to track 97% of those funds as the SABI database provides information about the size of the companies (revenue and employees) and business sector (NAVE code). In sum, the funds that had reached Spanish companies by December 2022 that we can analyse represent 71% of all funds allocated (Table 1).

What type of companies are receiving the NGEU funds?

As noted earlier, having pinpointed in the SABI database the firms that have received NGEU funds via grants or tenders, we have access to information about each company's size (annual turnover and headcounts), so allowing us to classify them into four categories, in keeping with Commission Recommendation 2003/361/EC: 1) microenterprises, which employ fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed 2 million euros; 2) small enterprises, which employ fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed 10 million euros; 3) medium-sized enterprises, which employ fewer than 250 persons and whose annual turnover does not exceed 50 million euros and/or whose annual balance sheet total does not exceed 43 million euros; and, 4) large enterprises, which are the firms that do not fall into any of the previous categories.

As shown in Table 2, of the total funds awarded to the business community, large enterprises have received the largest share, specifically 59.3% (6.9 billion euros). The next biggest share has gone to medium-sized enterprises (20.1% | 2.34 billion euros), followed by small enterprises (14.4% | 1.68 billion euros) and microenterprises (6.1% | 714 million euros). That means that out of every 100 euros of aid awarded to Spanish companies, 40.7% has gone to SMEs, with the large corporations benefitting more.

This breakdown by company size varies depending on the tendering/granting body. In the case of aid provided by the state, the percentage reaching large enterprises is even higher, at 64% of the total. On the other hand, a lower 48.8% of the aid extended by the regional and local authorities has gone to the bigger companies. The reason lies with the tender component, as the larger firms participate in the state-run calls to a greater degree. Indeed, large enterprises account for almost three-quarters of the funding awarded against the NGEU funds (72.1%), with just 1.2% and 6.7% going to micro and small enterprises, respectively. In the case of grants, on the other hand, the large enterprises' share falls sharply, especially in those awarded at the regional and local levels, where their share drops to 21.5%, for a far more even distribution across the various company sizes.

Table 2 **Amount of NGEU funds awarded to enterprises by size, as of December 2022**

	Tenders					
	State	Regional/ local authorities	Total	State (%)	Regional/ local authorities (%)	Total (%)
Microenterprises	73	152	224	1.2	4.9	2.5
Small enterprises	392	526	917	6.7	17.0	10.2
Medium-sized enterprises	1,169	773	1,943	20.0	25.0	21.7
Large enterprises	4,225	1,645	5,870	72.1	53.1	65.6
Total	**5,859**	**3,095**	**8,954**	100.0	100.0	100.0
	Grants					
	State	Regional/ local authorities	Total	State (%)	Regional/ local authorities (%)	Total (%)
Microenterprises	353	136	489	16.1	27.9	18.3
Small enterprises	642	116	759	29.3	23.8	28.3
Medium-sized enterprises	269	131	400	12.3	26.8	14.9
Large enterprises	925	105	1,030	42.3	21.5	38.5
Total	**2,190**	**488**	**2,677**	100.0	100.0	100.0
	Total					
	State	Regional/ local authorities	Total	State (%)	Regional/ local authorities (%)	Total (%)
Microenterprises	426	288	714	5.3	8.0	6.1
Small enterprises	1,034	642	1,676	12.8	17.9	14.4
Medium-sized enterprises	1,438	904	2,342	17.9	25.2	20.1
Large enterprises	5,150	1,750	6,900	64.0	48.8	59.3
Total	**8,049**	**3,583**	**11,632**	100.0	100.0	100.0

Sources: Spanish Ministry of Finance, SABI database and author's own elaboration.

Fund destination by sector

Based on the business sectors reported by the various companies (via NACE codes), we note that the services sector has received the biggest share, specifically 46.9% of the total (5.45 billion euros), followed very closely by construction (41.6% | 4.84 billion euros). Lagging significantly behind is manufacturing (9.7% | 1.13 billion euros), with the energy (1.3% | 150 million euros) and primary sectors (0.5% | 60.9 million euros) garnering negligible amounts.

In the construction sector, of the 4.84 billion euros allocated, 96% was awarded via public tenders. Of those, it is worth highlighting those called by ADIF (42% of all funds awarded to businesses from the construction sector) for the construction of rail infrastructure.

If we dive deeper into the data, we see that within services, information and communication services stand out, garnering 15.4% of all funds awarded in Spain (1.8 billion euros). Within this category, a noteworthy sum has been devoted to government digitalisation which has taken the form of digital broadband infrastructure and aid for R&D projects in artificial intelligence and digital technology. Close behind is

Table 3 **Sector breakdown of the NGEU funds allocated to companies up to December 2022**

Millions of euros and percentages

	Millions of euros			Percentage breakdown		
	State	Regional/ local authorities	Total	State	Regional/ local authorities	Total
Primary sector	46	15	61	0.6	0.4	0.5
Manufacturing	855	276	1,131	10.6	7.7	9.7
Food	157	8	165	2.0	0.2	1.4
Textile, leather and footwear	14	1	15	0.2	0.0	0.1
Wood, cork and paper	43	15	58	0.5	0.4	0.5
Chemicals and pharmaceutical products	33	12	45	0.4	0.3	0.4
Rubber and plastics	90	5	95	1.1	0.1	0.8
Metallic products	171	9	180	2.1	0.2	1.6
Electrical and electronic machinery and equipment	72	25	97	0.9	0.7	0.8
Motor vehicles	223	190	413	2.8	5.3	3.6
Furniture and other manufacturing	53	11	63	0.7	0.3	0.5
Energy	96	54	150	1.2	1.5	1.3
Construction	3,641	1,197	4,839	45.2	33.4	41.6
Services	3,410	2,041	5,451	42.4	57.0	46.9
Wholesale and retail trade	465	943	1,407	5.8	26.3	12.1
Transporting	116	62	177	1.4	1.7	1.5
Accommodation and food service activities	46	21	67	0.6	0.6	0.6
Information and communication	1,461	336	1,797	18.1	9.4	15.4
Financial activities	18	14	32	0.2	0.4	0.3
Real estate activities	28	21	49	0.4	0.6	0.4
Legal, engineering and consultancy activities	759	199	957	9.4	5.5	8.2
Research and development	107	22	129	1.3	0.6	1.1
Advertising and market research	89	90	179	1.1	2.5	1.5
Administrative and support service activities	94	133	227	1.2	3.7	2.0
Education and health activities	184	179	364	2.3	5.0	3.1
Arts and entertainment activities	44	21	65	0.6	0.6	0.6
TOTAL	**8,049**	**3,583**	**11,632**	100.0	100.0	100.0

Sources: Spanish Ministry of finance, SABI database and author's own elaboration.

“ If we look at the sector breakdown by tenderer, the key difference is the greater share of the aid awarded by the regional and local authorities commanded by wholesale and retail trade, at a little over a quarter of the total, while the share garnered by the information and communication sector is much higher in state-run awards. ”

the wholesale and retail trade (12.1% | 1.41 billion euros) and legal, engineering and consultancy services (8.2% | 957 million euros). Within trade it is worth highlighting the purchase of electric buses and high-tech health equipment from specialist firms. Within manufacturing, the area to have benefitted the most from the NGEU funds is the automotive industry (3.6% | 413 million euros), with more than twice the aid received by the next biggest recipients, the metallic products (1.6% | 180 million euros) and food (1.4% | 165 million euros) sectors.

If we look at the sector breakdown by tenderer, the key difference is the greater share of the aid awarded by the regional and local authorities commanded by wholesale and retail trade, at a little over a quarter of the total. On the other hand, the share garnered by the information and communication sector is much higher in state-run awards.

Implications

Our analysis of the NGEU funds awarded up until December 2022 shows that Spain is not even at the halfway mark yet as the calls made, between tenders and grants (35.83 billion euros), represent 43.7% of the total assigned to Spain by then. Spain has until August 2026 to implement the funds, which means it still has to invest over half of its total allocation (the non-reimbursable amount) in the roughly three years left to go.

As of December 2022, the implementation rate stood at 46%, as over half of the total called had still to be awarded, piling more pressure on getting all the NGEU funds flowing to the real economy before August 2026. Spain needs to accelerate implementation, all the more so considering the additional funds awarded under the June 2023 Addendum (10.29 billion euros via the RRF and new REPowerEU Plan).

Of the total already awarded, almost three quarters (12 billion euros | 73.4%) has flowed to the business community. Large enterprises have garnered the biggest share of funds, specifically 59.3% of the total, with 40.7% going to SMEs. The services sector has been the biggest beneficiary so far (46.9% of the total), slightly outstripping construction (41.6%). Manufacturing (9.7%), energy (1.3%) and the primary sector (0.5%) have benefitted less from the NGEU funds. Within services, the information and communication sector (15.4% of the total) and wholesale and retail trade (12.1%) have received the most aid. In manufacturing, a noteworthy 3.6% of the aid has gone to the automotive sector.

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One year of rate increases: Impact assessment

Monetary policy remains immersed in an intense battle to stem inflation, manifesting itself through a quick succession of interest rate increases and consequently raising eurozone borrowing rates across the board. Credit has already contracted, and the cost of debt has increased, but the duration of the tightening cycle remains unclear as monetary authorities have signalled that their policy approach remains conditional upon the path of inflation.

Santiago Carbó Valverde and Francisco Rodríguez Fernández

Abstract: At least two generations of labour market participants had never experienced positive real interest rates and were paying very low rates on their borrowings until just over a year ago. Today, monetary policy remains immersed in an intense and complex battle to stem inflation. The most obvious consequence has been a quick succession of interest rate increases. In the eurozone, the price of money has been rising for over 18 months, significantly increasing borrowing costs for households, companies, and governments. Credit has already contracted substantially, and the cost of debt has increased. Indeed, the increased cost of money has driven a slowdown in mortgage flows to year-on-year rates of growth of 2.5% as of July 2023. At the same time, however, the banks' pre-tax earnings over average total assets had increased from 0.8% to 1.1% in the first quarter of 2023 and the spread between asset and liability rates had increased by just 0.1pp to 1%. Lastly, the cost of public debt has increased considerably. Since 2021, the cost of issuing 3-year bonds in Spain has increased by 3.75pp, while the cost of issuing 10-year paper has increased by 3.16pp. As acknowledged by the heads of the central banks themselves, it is unclear how long it will take for these policies to have their intended effects. The monetary

> In the case of Spain, although inflation rebounded to 2.6% in August (with core inflation at 6.1%), it remains well below the eurozone average (over 5%), so that the ECB's interest rate increases are proving even more restrictive for the Spanish economy.

authorities' key message is that the approach has to remain conditional until uncertainty around inflation dissipates.

Foreword

Although the Federal Reserve embarked on the process of unwinding its expansionary policy earlier, in the eurozone rates were first increased in July 2022, kick-starting what some dub monetary tightening and others simply call normalisation. That is when the European Central Bank (ECB) began to abandon its ultra-lax policy in order to tackle inflation. One year on, in July 2023, it increased its key rates further, to 4.25%. At its July meeting, the ECB signalled a potential end to the rate tightening cycle. Its president, Christine Lagarde, said that the September meeting could be key to determining whether rates are increased further, or the ECB decides to put additional tightening on ice. The Governing Council of the central bank decided to raise interest rates by 25 basis points in its meeting of 14 September. In her statement, Lagarde said, "We will continue to follow a data-dependent approach to determining the appropriate level and duration of restriction. In particular, our interest rate decisions will be based on our assessment of the inflation outlook in light of the incoming economic and financial data, the dynamics of underlying inflation, and the strength of monetary policy transmission."

In any event, just a few weeks earlier, at one of the major international events in the economic calendar, the Jackson Hole Symposium organised by the Kansas City Federal Reserve between 24 and 26 August 2023, the heads of both monetary authorities mentioned some of the main difficulties facing monetary policy at present, which cloud the path to be taken over the coming months. Jerome Powell emphasised that despite significant monetary policy tightening over the past year and the fact that inflation has fallen back from its peak, price growth remains too high. He said that the Fed is prepared to increase interest rates again if necessary and keep its policy restrictive until it is clear that inflation is moving sustainably down towards its objective. In his words, the Fed is committed to achieving and sustaining a monetary policy stance that brings inflation down to the targeted level over time. However, Powell acknowledged the challenge in determining when that stance has been achieved and referred to current real interest rates as restrictive. He also said it is not possible to identify with certainty the neutral rate of interest (that which is theoretically compatible with full employment), adding uncertainty about the precise level of monetary policy restraint. That assessment is further complicated by uncertainty about how long it will take for monetary policy to affect economic activity and inflation.

Christine Lagarde, for her part, stressed that the shifts characterising the current environment could change the type of shocks we face and their transmission through the economy. She pinpointed three key elements of robust policy-making in this setting: clarity, flexibility, and humility. Firstly, she emphasised the need for clarity around targets, assuring that price stability is essential for fostering investment. However, to achieve these goals, flexibility is crucial. Lagarde said it was not a good idea to rely exclusively on models estimated using old data or to focus too much on current data. In their stead, she suggested constructing policy frameworks that capture the prevailing complexity.

> “The interest rates used as the benchmark in Spain for pricing mortgages topped 15% during the 1980s and some of the 90s; however, considering only the timespan of the eurozone and single currency, current interest rates are high, trading at close to the peak observed right before the onset of the financial crisis, when they were at over 5%.”

Lastly, she underlined the importance of humility, acknowledging the limits of current knowledge and what policy can achieve. She said it is essential to talk about the future in a way that reflects the prevailing uncertainty in order to maintain credibility with the public.

Meanwhile, economic developments in Spain are sending mixed messages in terms of tackling this monetary paradigm. On the one hand, although inflation rebounded to 2.6% in August (with core inflation at 6.1%), it remains well below the eurozone average (over 5%), so that the interest rate increases are proving even more restrictive for the Spanish economy. Against this backdrop, in this paper we attempt to answer certain questions that are pertinent after over a year of interest rate increases.

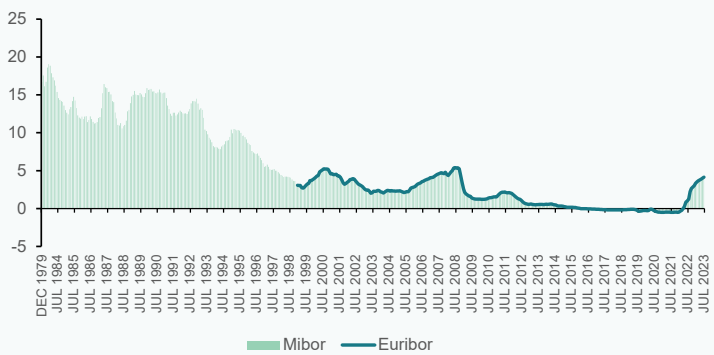
Are current rates high by historical standards?

It is common to see headlines along the lines of “interest rates rise to historical levels” in the press. While that statement is true, it needs qualifying. The most commonly used benchmark rate, Euribor, was created in 1999 as part of the single currency process. A longer-running comparable benchmark for Spain, which has traded parallel to Euribor since 1999, is Mibor, for which the series dates back to 1979. As shown in Exhibit 1,

Exhibit 1

Mibor and Euribor. December 1979–July 2023

Percentage



Source: Bank of Spain and authors' own elaboration.

> The real anomaly is not so much the level reached in the price of money but rather how quickly that level has been reached.

the interest rates used as the benchmark for pricing mortgages topped 15% during the 1980s and some of the 90s. However, considering only the timespan of the eurozone and single currency, current interest rates are high, trading at close to the peak observed right before the onset of the financial crisis, when they were at over 5%.

Behavioural factors are also important in the current context. At least two generations of labour market newcomers had yet to experience positive real interest rates and were paying very low rates on their borrowings until very recently. The real anomaly is not so much the level reached in the price of money but rather how quickly that level has been reached.

What has happened to lending activity, especially home loans?

Higher interest rates have an obvious impact on the cost of mortgages. Taking a long-term perspective, growth in credit has been relatively slow for years. One might well ask how it is possible that financing for households and companies (starting from their demand) did not register stronger growth during so many years of low rates. Much of the answer lies with the transition from the financial crisis until almost 2019, when annual flows of new loans barely increased or actually contracted, as the private sector deleveraged steadily in the wake of the financial crisis. Then the pandemic broke out and households became conservative, while companies took advantage of the expansionary financing policies designed to mitigate the effects of the lockdown. As shown in Exhibit 2,

Exhibit 2 **Household and business financing. Year-on-year change in flows**

Source: Bank of Spain and authors' own elaboration.

> In recent years, especially since official rates began to increase, growth in credit has been slowing, reaching negative levels in June.

> “While higher rates helped banks to carry out their intermediation function in a more reasonable environment, lending activity has stagnated and profit before tax relative to average assets has inched just 0.3pp higher, to 1.1% in the first quarter of 2023.”

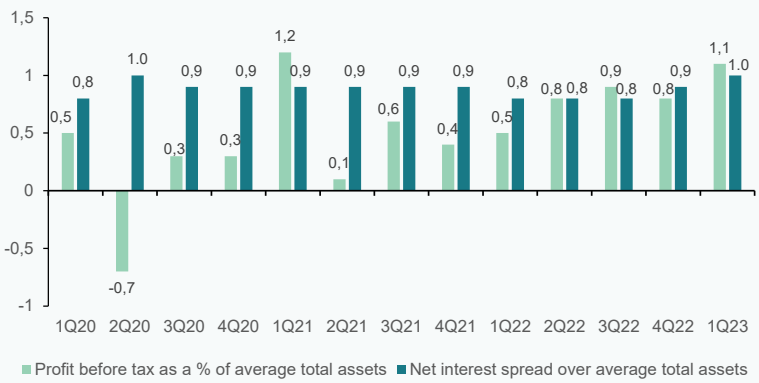
in recent years, especially since official rates began to increase, growth in credit has been slowing, reaching negative levels in June 2023 (-1.4% in business lending and -2.5% in household lending). It is also worth highlighting the monthly trend (not shown in the exhibit) in mortgage lending between January and June 2023, marked by contractions of 0.6%, 1.0%, 1.5%, 1.9%, 2.3% and 2.5%, respectively.

How have the banks been affected?

Another common topic of debate since rates started to rise has to do with the banks benefitting from the situation. A longer-term horizon is perhaps the best perspective for analysing this matter. The reduction in interest rates to below zero since the financial crisis can be justified from a theoretical standpoint. In practice, however, it evidently created a series of distortions and dysfunctions across several dimensions of the banking business with the potential to affect the broader economy. It has also been shown that if rates are left low for a long period of time they generate a significant structural profitability problem for the banks. The COVID-19 pandemic and the central banks' response further fuelled the market's expectation that interest rates would remain negative for even longer than anticipated before the pandemic. In the end, in little more than one-year rates have actually increased to their highest levels in over two decades. That has enabled the banks to carry out their intermediation function in a more reasonable margin environment. Nevertheless, lending activity has stagnated and profit before tax relative to average assets has inched just 0.3pp higher, to 1.1% in the first quarter of 2023 (most recent figure available) (Exhibit 3).

Exhibit 3

Bank earnings and their net interest rate spread



Source: Bank of Spain and authors' own elaboration.

> “Another challenge created by high interest rates lies with the fact that other financial instruments, such as bonds and certificates of deposit, offer more attractive returns such that investors may prefer not to invest in stocks.”

Exhibit 3 also shows how the spread between the rate earned on loans and paid on liabilities remained almost flat at 0.9% between 2020 and 2022, increasing by just 0.1pp to 1% in the first quarter of 2023.

How are the securities markets dealing with current interest rates?

Rising interest rates can have a significant impact on the markets in the case of share prices. A higher rate can affect companies' future earnings growth, weighing on economic growth. In 2022, when inflation was rampant, the markets performed negatively in general, notching up losses across multiple portfolios. Shares that were trading at high price-to-earnings multiples (P/Es), primarily tech and secular growth stocks, corrected the hardest in 2022.

Another challenge created by high interest rates lies with the fact that other financial instruments, such as bonds and certificates of deposit, offer more attractive returns. Investors may prefer not to invest in stocks if they believe that the value of the companies' future earnings is less attractive by comparison with bonds offering compelling yields. This pattern is unfolding at different speeds in different jurisdictions.

Another factor is the cost of debt. Companies that need to refinance will have to pay more than before, eroding their future profits. However, many companies issued bonds in 2020 and 2021 taking advantage of low rates at the time so that they are not yet facing higher borrowing costs.

Lastly, in the wake of the rate increases carried out already in 2023, the outlook for the stock markets is uncertain. The markets performed relatively well in the first quarter but have displayed greater hesitation since then. The trend since the summer is unclear. What happens next will depend on the direction monetary policy takes and the extent to which the economies withstand the restrictions imposed by the central banks. If inflation takes longer than expected to rein in, expectations could deteriorate.

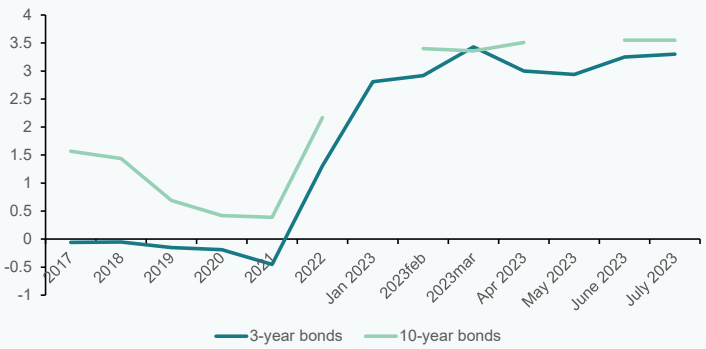
Impact on public debt

In the debt markets, especially the public debt markets, borrowing costs have risen sharply. However, even more so than in the corporate sector, the various public treasuries, including Spain's, took advantage of the years of low rates to refinance their debt and extend their maturity profiles at low and even negative rates. Medium-term, however, caution is warranted. As shown in Exhibit 4, the weighted average cost of debt has increased considerably in recent months. The rate on 3-year Treasury bonds has increased gradually from -0.4% in 2021 to 3.3% by July 2023. Over the same period, the rate on 10-year bonds has jumped from 0.4% to 3.4%.

> “The outlook for stock markets remains uncertain, predicated on the direction monetary policy takes and the extent to which the economies withstand the restrictions imposed by the central banks.”

> “Even more so than in the corporate sector, the various public treasuries, including Spain’s, took advantage of the years of low rates to refinance their debt and extend their maturity profiles at low and even negative rates.”

Exhibit 4 **Weighted average rate on 3- and 10-year Spanish bond issues**



Source: Bank of Spain and authors’ own elaboration.

Conclusion: Will we see further rate increases?

The monetary authorities are signalling two key messages at present. The first is that, although things have improved, inflation remains far from being anchored at 2%. The second is that it is currently hard to provide guidance around decision-making. The central banks’ approach is more conditional than ever. One of the main reasons being that the central banks admittedly do not know precisely how long it will take for their policy decisions to take effect. The idea taking shape is that we are nearing the end of rate tightening but that until inflation is under control, fresh increases in the price of money cannot be ruled out.

Santiago Carbó Valverde. University of Valencia and Funcas

Francisco Rodríguez Fernández. University of Granada and Funcas

> “The idea taking shape is that we are nearing the end of rate tightening but that until inflation is under control, fresh increases in the price of money cannot be ruled out.”

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Updated stress testing of the financial sector in the context of high interest rates

While European banks are better positioned to offset potential capital depletion via stronger NII generation, the upward shift in the rate curves is impacting the value of the banks' investment portfolios. Within this context, the stress tests remain a constantly evolving tool capable of adapting to new sources of risk, such as climate, cybersecurity, geopolitical and pandemic risks, that are not captured in scenarios that only consider stressed financial conditions but can still wreak havoc on the economy and, by extension, the banking system.

Ángel Berges and Jesús Morales

Abstract: In keeping with the stipulated biennial schedule for stress testing significant banks, the European supervisor (ECB/SSM) has completed its exercise for 2023-2025, using year-end 2022 as its starting point. In parallel, its American counterpart (the Federal Reserve) has stress tested its significant banks, publishing its results one month ahead of the ECB. Several aspects distinguish this set of tests from those undertaken since 2014 when, in conjunction with the launch of the Banking Union initiative, it was decided to place stress tests at the heart of the supervisory function. The last round of tests (in 2021) focused on the potential impairment of credit as a result of the pandemic at a time when interest rates of zero per cent were preventing the banks from generating reasonable minimum margins. Compared to the zero-rate environment that shaped all the previous stress tests, the 2023 tests are the first to take place against the backdrop of high rates that

are unlocking new risks (market, interest rate and liquidity risks) that did not affect the previous rounds of tests. It is for that reason that the European and American supervisors have tentatively introduced the simulation of bond portfolio loss scenarios related with the spike in interest rates, albeit as an exploratory exercise with no immediate impact on capital requirements. While the general conclusion derived from the exercise is that the European banks are better positioned to offset potential capital depletion via stronger NII generation (as is also apparently reflected in the listed banks' market values), the upward shift in the rate curves is impacting the economic value of the banks' investment portfolios. Against this backdrop, the stress tests are and must remain a constantly evolving tool capable of adapting to new sources of risk and new types of scenarios, notably including climate, cybersecurity, geopolitical and pandemic risks, that are not captured in scenarios that only consider stressed financial conditions but can nevertheless wreak havoc on the economy and, by extension, the health of the banking system. The supervisors need to continue to boost the quality and effectiveness of their methodologies in order to look forward and ensure that the banks remain able to carry out their financial intermediation role, especially in times of heightened uncertainty.

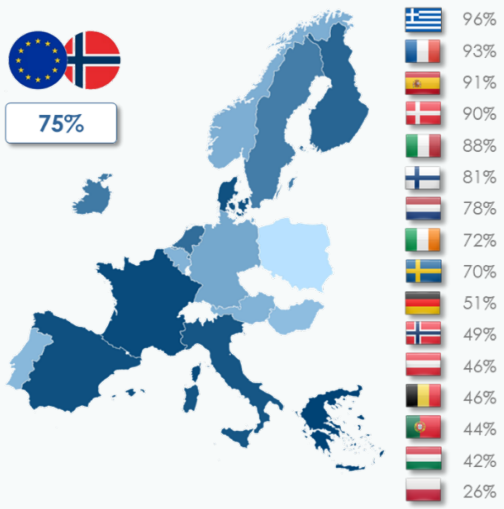
EBA 2023 stress tests: Methodology, scenarios and results

In January 2022, against the backdrop of a complex environment marked by Russia's invasion of Ukraine and the central banks' firm determination to bring inflation back to target, the European Banking Authority (EBA) launched its newest set of stress tests.

For this round of tests, the EBA has increased the universe of major banks whose results are published individually to 70 banks representing on average roughly 75% of their respective banking systems' total assets, which is larger than the sample tested in 2021 (50 banks with asset coverage of around 70%).

The rest of the significant banks under the Single Supervisory Mechanism (SSM) are

Exhibit 1 **2023 stress test coverage**



Sources: Authors' own elaboration based on EBA and ECB data.

“ Over the past decade or so, the stress tests have moved towards a bottom-up approach, framed by guidelines provided by the EBA, allowing the banks to actively participate in generating the required projections, delivering increasingly granular information, which creates greater analytical risk but adds sophistication to the tests. ”

also tested and the results of each of their tests, while not published separately, are used as input for determining the level of capital required by the ECB as part of its Supervisory Review and Evaluation Process (SREP).

Methodology: Key aspects and key new developments

Stress-testing methodology has evolved over time in the various jurisdictions in which they are carried out. In Europe, the methodology was made more uniform following the creation of the Single Supervisory Mechanism in 2014, when the loss of confidence triggered by the bank crises engulfing several countries, including Spain, made it imperative to create effective tools capable of injecting transparency into bank asset valuations in order to reinforce the financial system’s credibility. Since then, the EBA has been responsible for the methodology used in the five rounds of stress tests it published biennially (only interrupted by the coronavirus health crisis), with the ECB and the rest of the national supervisors monitoring them and taking the results on board for the purposes of setting minimum capital requirements.

Over the past decade or so, the stress tests have moved towards a bottom-up approach, in which, framed by certain limits and guidelines provided by the EBA, the banks actively participate in generating the required three-year projections, providing increasingly granular information, which creates greater analytical risk but adds sophistication to the tests.

The European regulator (EBA) has paid closest attention to five key areas in its methodological guidelines: (i) credit risk, (ii) market risk, counterparty risk and credit valuation adjustments (CVA), (iii) net interest income, (iv) conduct and other operational risks; and, (v) non-interest income, expenses and capital.

In addition to these areas, for which the banks are allowed to calibrate their models within the guidelines set by the EBA, for the first time in 2023, the EBA’s methodology includes ‘top-down’ parameters, defined by the supervisors, to project net fee and commission income. This modification implies a paradigm shift by moving the responsibility for carrying out the prospective business performance estimates from the banks to the supervisors: under this approach, the banks simply provide the supervisor with the starting data requested and apply the ‘top-down’ growth parameters for test purposes.

In addition to this change in the fee and commission estimation model, there have been a few important changes to the methodology for generating the net interest income projections:

- The methodology for projecting interest expenses has been changed to avoid impacts deemed inconsistent with banking industry dynamics: [1] sight deposits costs are modelled using a beta coefficient of 0.5 times the short-term interbank curve (1-month Euribor) in the case of deposits taken from households and 0.75 times in the case of sight deposits taken from non-financial companies.

- There is new guidance for reassessing the margin on new liabilities at the starting

> “The adverse scenario is more severe relative to the baseline scenario in the case of the Spanish economy with a difference between the forecasts in the two scenarios of 12.1 percentage points in Spain compared to 10.5 points in the EU, where 2022 GDP is the base (100).”

point: [2] due to differences between the spot rate and the annual average curve in fixed-rate portfolios and differences between the spot rate and the curve at year-end 2022 in floating-rate portfolios and sight deposits.

- Elsewhere, the banks were allowed to offset the costs from replacing maturing TLTRO funding instruments by decreasing the volume of replacement funding with available liquid assets. Constraints were put in place on both the amount and the perimeter of liquid assets that banks could use. [3]

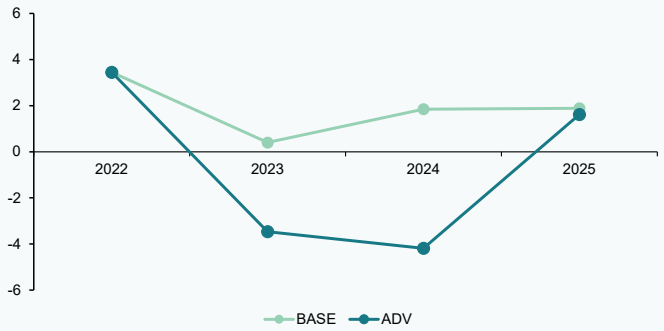
Macroeconomic and financial scenarios

In the adverse scenario, the economic contraction modelled results in a reduction

Exhibit 2

Trend in the main macroeconomic variables in the EU, 2023 stress test scenarios

YoY change Real GDP (%), EU, 2023 stress tests



YoY change HICP (%), EU, 2023 stress tests

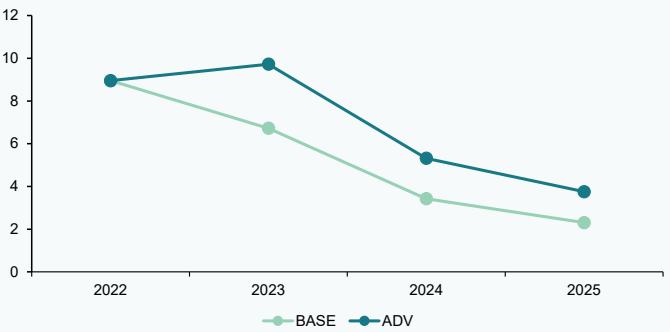
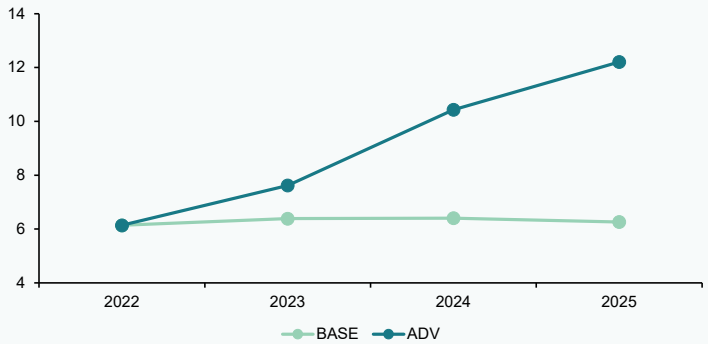


Exhibit 2 **Trend in the main macroeconomic variables in the EU, 2023 stress test scenarios**

Continued

Unemployment (%), EU, 2023 stress tests



Source: Authors' own elaboration based on EBA data.

in GDP of 6% in the European Union and of 5.4% in Spain. Note that the adverse scenario is more severe relative to the baseline scenario in the case of the Spanish economy with a difference, or 'delta', between the forecasts in the two scenarios of 12.1 percentage points in Spain compared to 10.5 points in the EU, where 2022 GDP is the base (100). Inflation is also more severe in the adverse scenario, with HICP reaching close to 10% in 2023 in both Spain and the European Union, easing thereafter.

The employment indicators modelled are significantly worse throughout the entire projection horizon: unemployment is forecast to spike to 18.5% in Spain (+6.5pp) *versus* the baseline scenario and to 12.2% in Europe (+5.9pp).

In this adverse scenario, the interbank and swap rate curves sustain a sharp upward shift across all tenors during the first year as a result of more aggressive monetary intervention in order to mitigate the effects of persistent inflation. The increase in rates is particularly pronounced at the short end of the curve (+245bp in 1-month Euribor relative to the rate prevailing at year-end 2022) and a little less aggressive at the long end (+176bp in the 10-year IRS relative to year-end 2022), so generating greater pressure on bank funding costs, which are mainly benchmarked against short-term rates on account of their shorter duration.

Moreover, the increase modelled in long-term rates is very asymmetric, with the peripheral European economies penalised relatively more: the yield on the 10-year Spanish bond is estimated at 7.02% in 2023, with the Italian bond at 7.96%, whereas the German and French 10-year bond yields are modelled at 4.23% and 4.69%, respectively.

Results of the conventional stress tests

The results published correspond to the scenarios and methodologies detailed above, subject to additional adjustments made by the supervisors in order to cast the projections provided by the banks in a more prudent light.

> “Despite the severity of the scenarios contemplated in the most adverse scenario, the European banks look capable of maintaining solid solvency levels, giving the supervisors confidence in the financial system’s ability to continue to support the economy, even in times of pronounced stress, with the Spanish banks among most resilient.”

Despite the severity of the scenarios contemplated in the most adverse scenario, the European banks look capable of maintaining solid solvency levels. Their common equity tier 1 (CET1) ratio remains above 10% in the harshest scenario, which marks a cumulative decrease of 459 basis points from 2022 levels, an improvement on the 2021 stress test results (cumulative decrease of 485bp), giving the supervisors confidence in the financial system’s ability to continue to support the economy, even in times of pronounced stress.

The results are heterogeneous across the various banking systems:

- The Spanish banks are among most resilient, projected to yield a cumulative drop in CET1 of 230bp. The smaller cumulative decrease allows the Spanish banks to project similar capitalisation levels to the European banks as a whole in 2025 (just above 10%), despite starting from substantially lower levels.
- The German and French banks fare relatively worse, showing significant shrinkage of their capitalisation levels. The German and French banking systems have relatively reduced income generation capacities, leaving below-average capitalisation levels relative to their European peers.

As shown in Exhibit 3, the ability to generate net interest income is the main reason for the Spanish banks’ resilience in the face of the stress tests relative to the broader universe of European banks.

Exhibit 3 **Capital depletion across the European and Spanish banks, adverse scenario, 2023 stress tests**

Percentage

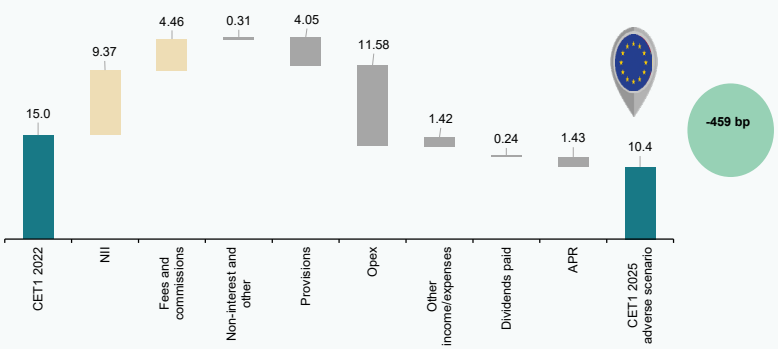
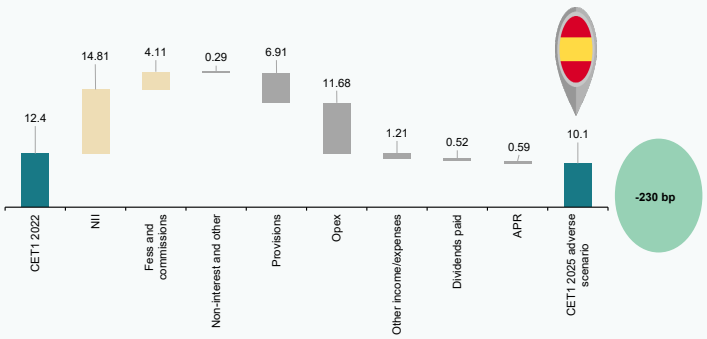


Exhibit 3

Capital depletion across the European and Spanish banks, adverse scenario, 2023 stress tests

Percentage

Continued

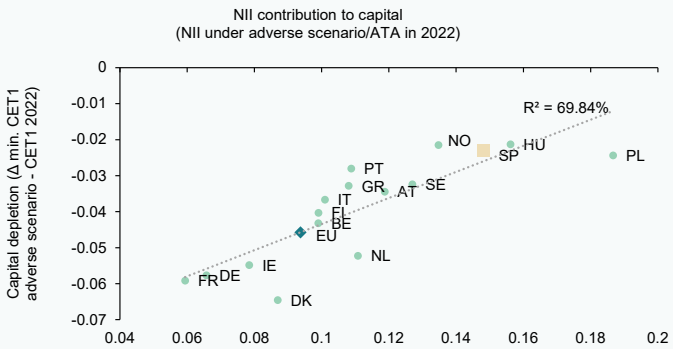


Source: Authors' own elaboration based on EBA data.

That relatively greater earnings generation capability as the reason for lower capital depletion is not only evident at the aggregate banking system level but also across the individual EU countries, as shown in Exhibit 4. The countries whose

Exhibit 4

Contribution of NII to capital generation and capital depletion, adverse scenario, 2023 stress tests



Source: Authors' own elaboration based on EBA data.

> "The ability to generate net interest income is the main reason for the Spanish banks' resilience in the face of the stress tests relative to the broader universe of European banks."

entities' net interest income (NII) makes a bigger contribution to capital in the starting point year (2022) have banking systems that are best positioned to absorb CET1 erosion via other impacts (credit risk, market risk, *etc.*) given that the methodology precludes NII growth in the adverse scenario.

More specifically, the Spanish banks with a higher percentage of assets at floating rates and greater international diversification reported organic growth in capital in 2022 and, in general, continue to do so throughout the projection period.

The ECB's standalone data collection exercise to assess unrealised losses on bond portfolios

Shortly after the stress tests were launched in Europe, a number of regional US banks and Credit Suisse were caught up in bank runs, prompting the ECB to ask the banks for additional information about their fixed-income portfolios, with a particular focus on those carried at amortised cost, for which valuation fluctuations are not recognised either in profit and loss or in equity. The ECB asked for this information in order to fortify its oversight of the banks' liquidity and interest rate risk in the current climate of rising rates but this is not part of the stress tests nor an input for determining minimum capital requirements and therefore cannot yet be considered part of the stress test methodology *per se*. [4]

The estimate made by the ECB, using information as of February 2023, is based on the difference between the carrying amount of bond positions in portfolios carried at amortised cost and their fair value. Since the yields on bond securities have increased sharply over the past 18 months, the banks would suffer losses in the event that assets had to be sold off at market value.

According to the information collected by the supervisors, the cumulative unrealised losses of the 98 significant institutions comprising the SSM stand at close to 73 billion euros, which is 5.5% of those instruments' carrying amount (1.3 trillion euros).

A couple of observations with regard to this estimate:

(1) The ECB factors in the banks' hedging instruments, mainly interest rate derivatives, which mitigate the unrealised losses by around 40 billion euros.

(2) These potential losses would only materialise in the event of an extreme event forcing the sale of these portfolios ('gone concern'), so changing the business model for which they are held for accounting standard purposes from held-to-maturity (the business model under which no valuation impacts are recognised in earnings or equity).

Of total estimated unrealised losses as of February 2023, the biggest share (46% of the total) is concentrated among banks resident in Italy and Spain, which also happen to be the banks with the highest volumes of these assets on their balance sheets (646 billion euros | 49% of the total).

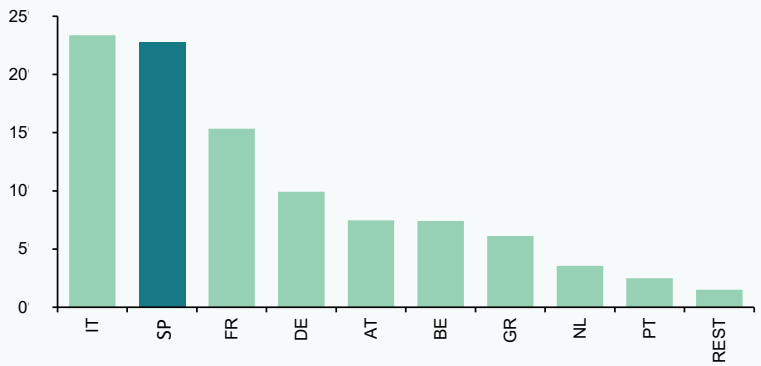
In addition, the ECB estimates that in a scenario of sharp interest rate increases such

"The ECB asked for information about the banks' fixed-income portfolios in order to fortify its oversight of the banks' liquidity and interest rate risk in the current climate of rising rates but this is not part of the stress tests nor an input for determining minimum capital requirements and therefore cannot yet be considered part of the stress test methodology *per se*."

Exhibit 5

Breakdown of unrealised losses on fixed-income portfolios at amortised cost by banking system (Feb. 2023)

Percentage



Source: Authors' own elaboration based on ECB data.

as that modelled in the stress tests, the amount of these unrealised losses would increase by a further 155 billion euros (net of hedges). The European supervisor has stressed that this scenario-based exercise, the results of which have not been published bank by bank, are in no way part of the stress tests and cannot be interpreted as an additional impact of those tests.

Contrast with the Fed's stress tests in the US

One month before the ECB, the Federal Reserve (the Fed) presented the results of its stress tests on the major US banks. Unlike the EBA's stress tests, the Fed uses a wholly top-down approach, looking nine quarters out and it publishes the results annually.

The Fed modelled a harsher scenario in terms of NII generation and impairment provisions, characterised by a sharp contraction in GDP (-5.9%) and increase in unemployment (+5.6pp) in year one of the projection period and, in contrast to the European tests, a drop in rates across all curve tenors.

In the adverse scenario, the tested banks' CET1 contracts by 541 billion dollars on aggregate, dipping by 2.3 percentage points of average total assets at the point of lowest capitalisation in the nine quarters projected to 10.1%, compared to 12.4% at present. All the supervised institutions would, nevertheless, remain above the minimum required level of capitalisation in the worst-case scenario.

Of the cumulative depletion observed in the adverse scenario, 78% (424 billion dollars) is attributable to higher loan impairment losses. Specifically, the spike in provisions is concentrated in the credit card, SME and non-residential real estate segments, where provisions are high relative to asset volumes.

By comparison with prior tests, the 2023 stress tests point to a similar level of capital depletion (2.3pp) as in prior years (albeit somewhat smaller), mainly as a result of the projected interest rate trajectory. The drop in the rate curve relative to the levels observed in 2022 has a negative impact on future NII generation but does mitigate

the losses on bond portfolios at fair value through equity.

Lastly, and similarly not part of the stress tests or used as an input for capital requirement calculation purposes, the Fed also carried out additional analysis of market shocks on bond portfolios. The Fed's assessment differs from the European exercise in several ways:

- The Fed only models this 'exploratory market shock' for the eight global systemically important banks, whereas the European supervisor assessed unrealised losses for the 98 significant banks under the ECB's direct supervision.
- The Fed analysed the potential losses on held-for-trading portfolios, while the ECB assessed the portfolios classified at amortised cost which are expected to be held to maturity.
- The Fed models a scenario for this shock that is totally different from that prescribed in its annual stress tests, in which inflation and interest rates both continue to climb higher, potentially unlocking higher losses on those portfolios.

Most surprisingly, the impact on capital of this exploratory shock is equivalent to just 1.1pp of CET1, which is slightly smaller than the impact on held-for-trading portfolios modelled in the Fed's stress tests (1.3pp of CET1). The reason given by the Fed is the reduced sensitivity of these portfolios to counterparty credit impairment in a context of economic recession than in a climate of rising interest rates.

As a result, this second assessment provides the US supervisor with comfort around the resilience of the financial sector in the face of different scenarios, inflation paths and interest rate trends.

Conclusions and challenges for future stress tests

The new rate environment has created challenges for the bank supervisors, which were accentuated by the spell of banking crises unleashed in March, initially affecting some regional American banks but later engulfing a global Swiss bank.

While the general conclusion is that the banks are better positioned to offset potential capital depletion via stronger NII generation (as is also apparently reflected in the listed banks' market values), the upward shift in the rate curves is impacting the economic value of the banks' investment portfolios. Even if those losses do not materialise, as the banks intend to hold the investments to maturity, it is important to analyse them for the purposes of setting a minimum amount of capital framed by a bank resolution or 'gone concern' perspective.

Against this backdrop, the stress tests are and must remain a constantly evolving tool capable of adapting to new sources of risk and new types of scenarios, notably including climate, cybersecurity, geopolitical and pandemic risks that are not captured in scenarios that only consider stressed financial conditions but can nevertheless wreak havoc on the economy and, by extension, the health of the banking system.

Notes

[1] The definition of the adverse scenario marked by sharp rate increases, especially at the short end of the curve, explains the severity of this measure. Moreover, given the static balance sheet assumption, the banks cannot model, for example, shrinkage in liability balances or a potential shift from sight to term deposits on account of cost pressures.

[2] The margin on new business is projected using the sum of the initial margin and the tightening in the risk premium over the IRS. To the extent that the initial margin is shaped significantly by rates that were very volatile in the reference year (2022), the requirement to use average rates (which are lower, yielding higher margins) *versus* year-end rates (which are higher, yielding lower margins) is an important one.

[3] Although the European banks have largely repaid their TLTRO funding, when the stress tests were performed, there were prepayment

windows looming in June 2023 and 2024. The supervisor introduced a funding cost penalty for replacing any TLTRO funds not offset by liquid assets held at current accounts with the Eurosystem of central banks.

[4] The current EBA stress test methodology factors in impacts, via market risk, on the measurement of portfolios of assets at fair value through equity and at fair value through profit or loss.

Ángel Berges. Vice-President of Afi

Jesús Morales. Senior consultant at Afi

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The European Central Bank's supervisory priorities

The shift in the macroeconomic environment facing the financial sector and the attendant switch in monetary policy tack, together with the recent episodes of financial turbulence in a number of markets, have strengthened the European Central Bank's resolve to reinforce the resilience of the European banking system. Despite the current environment's risks, through an assessment of the ECB's supervisory priorities, recent findings support the strength and adaptability of the European banking sector, so mitigating the probability of future episodes of financial turbulence, such as those observed in other regions.

Diego Aires, Antonio Mota, Fernando Rojas and Francisco del Olmo

Abstract: Compared to the recent episodes of financial instability in the US and Switzerland, where several banks suffered structural balance sheet issues forcing their intervention and/or acquisition by other banks, the European banks' earnings and capital structures look relatively strong. Without question, this is largely thanks to the intense regulatory and supervisory activity undertaken by the European authorities focused on avoiding episodes of stress similar to those observed in other geographies. Nevertheless, recent developments have highlighted the need for banks' business models to focus on risk-adjusted returns, with high interest rates favouring the maturity transformation business. Elsewhere, the banks will inevitably have to address regulatory changes related to liquidity buffers, as recent events have shown these may potentially mask underlying issues. Lastly, going forward, the focus should be on strengthening the banks' capital and liquidity self-assessments, as this will help improve dialogue with supervisory authorities, while

> “ Supervisory concern is currently focused on fixed-income asset valuations (particularly sovereign bond holdings), as the banks have built up significant exposure to this asset class in recent years to offset the drop in demand for bank credit and the fallout from higher savings rates. ”

at the same time demonstrating the viability of their business models, hence underpinning stable performance of business activities and the correct functioning of credit channels.

Foreword

The turbulence sustained in the financial system in the early months of 2023, concentrated in the US regional banks and the Swiss banking system, further highlights the need to prioritise bank oversight measures. However, in contrast to earlier episodes of banking instability, the recent events were shaped by the change in the macroeconomic setting, on the one hand, and the shift in monetary policy direction, on the other, marked by the elimination of the main unconventional measures (specifically, the ECB's TLTROs, PSPP, *etc.*) and a rapid rise in interest rates in response to more persistent inflation than initially expected (Lagarde, 2023).

These shocks are being felt most keenly by businesses and households. The business sector has sustained an earnings shock as a result, mainly, of global supply chain bottlenecks, growth in raw material costs and higher energy costs, all of which accompanied by increased leverage as a result of the economic policies deployed to tackle the pandemic [1] (Blanco *et al.*, 2021; Blanco and Mayordomo, 2023), leaving some firms very vulnerable to the increase in interest rates. As for the household sector, the build-up in savings during the pandemic and recent quarters, coupled with the growth in household wealth and deleveraging, has cushioned the impact of inflation and higher borrowing costs (Bank of Spain, 2023), albeit not preventing an increase in financial vulnerability. As a result, the supervisor has urged the banks to prudently plan and set aside provisions and capital (Bank of Spain, 2023b).

In addition to the outlook for household and business finances, the financial markets and specifically the trend in interest rates constitutes another source of risk for the banks. Concern is currently focused on fixed-income asset valuations (particularly sovereign bond holdings), as the banks have built up significant exposure to this asset class (whose value varies inversely with interest rates) in recent years to offset the drop in demand for bank credit and the fallout from higher savings rates.

Another prime source of concern for the supervisors is bank balance sheet stability in the face of structural change in their composition. In the past, and particularly before the pandemic, the trend in the interest rate curve [2] increased the banks' risk tolerance for investments (retail and wholesale) at fixed rates in order to generate reasonable returns.

The problems, from the standpoint of financial stability, emerged when macroeconomic conditions changed, intensely and briskly, and the central banks switched – suddenly – to monetary policy normalisation. When all this happened, the banks that were significantly exposed to assets bearing fixed rates (structural or balance sheet risk) were able to hold them so long as they were not significantly concentrated and there was no financial turbulence requiring their

> "In its most recent review, the ECB pinpointed a large volume of latent risks for the banks triggered by the prevailing geopolitical and macroeconomic situation, risks the SSM will concentrate on for the 2023-25 cycle."

recognition at market value (recognising losses). However, the rapid withdrawal of deposits due to the existence of these very risks at certain institutions required some banks, particularly in the US, to restate their assets to market value all of a sudden. It is worth noting the contrast with the European banks whose business models are more oriented around retail banking, and which present more diversified and granular sources of financing, as well as being subject to specific interest rate and liquidity risk regulations binding upon all financial institutions irrespective of their size, significantly curtailing the accumulation of these structural risks.

The risk factor scenario described in this section, coupled with the warning shots fired by the bank runs observed in the American and Swiss banking systems, has affected macro-financial and financial stability supervisory priorities, as outlined next.

Supervisory priorities: Strengthening the banks' resilience to immediate macro-financial and geopolitical shocks

The ECB's supervisory division, known as the single supervisory mechanism, or the SSM, fine-tunes the supervisory priorities for the European banking system annually on the basis of the results of the stress tests and supervisory reviews. Specifically, it establishes a map of priorities which is reviewed annually, framed by a medium-term horizon, in this instance 2023-2025.

In its most recent review, the ECB pinpointed a large volume of latent risks for the banks triggered by the prevailing geopolitical and macroeconomic situation, risks the SSM will concentrate on for the 2023-25 cycle. The risks associated with the geopolitical and macroeconomic situation have been classified as priority 1 within the three main risks flagged by the supervisor for this cycle. The other two supervisory priorities are: (2) addressing digitalisation effectively and strengthening management bodies' steering capabilities; and, (3) stepping up efforts to address climate change.

"Due to the impact it is having on financial stability in other geographies, we believe it is key – and timely – to focus our analysis on priority 1." As indicated by the SSM in its recent publication (ECB, 2023a), it is "(...) essential for supervisors to keep monitoring and reviewing the adequacy and soundness of banks' provisioning practices and capital positions as well as projections and distribution plans as part of their regular supervisory activities". This includes the assessment of banks' paths towards

> "The supervisor is specifically concerned about the real estate sector and the financial systems more exposed to floating-rate mortgages, since, following a period of negative interest rates, the probability of underestimating repayment capabilities has increased."

compliance with the minimum requirement for own funds and eligible liabilities (MREL)...".

As part of its ongoing work procedures, the SSM detects the main vulnerabilities of supervised banks, as depicted in Exhibit 1.

Among the vulnerabilities identified, the supervisor has stressed the need to strengthen the credit risk management cycle, a supervisory activity initiated since the outbreak of the pandemic. Although non-performance has not trended upwards in the wake of the shifts identified earlier, the trend in the environment in recent quarters, particularly in the transformation of maturities, has highlighted a series of risks evidencing the need for the banks to step up managerial oversight in order to assess and anticipate credit risk on exposures to vulnerable sectors. The supervisor is specifically concerned about the real estate sector and the financial systems more exposed to floating-rate mortgages (Muellbauer, 2022), since, following a period of negative interest rates, the probability of underestimating repayment capabilities has increased.

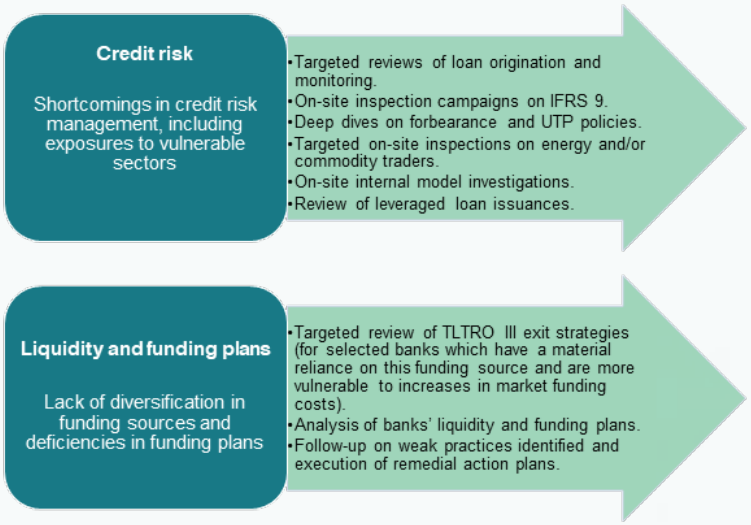
The gradual remediation of the vulnerabilities identified should result in better classification of distressed borrowers, as well as adequate implementation of the provisioning practices stipulated in current regulations.

As a result, the SSM has established a series of supervisory activities designed to deliver its medium-term targets, while transparency is considered key to enabling the system to move towards self-regulation.

Elsewhere, in relation to liquidity risk, the supervisor has flagged a high concentration of funding sources, to which end it has asked the banks to draw up and execute sound multi-year funding plans, taking into account challenges stemming from changing funding conditions.

Although the supervised institutions reported comfortable liquidity coverage ratios (LCRs) and net stable funding ratios (NSFRs), some

Exhibit 1 **Supervisory priority 1: Strengthening the banks' resilience to immediate macro-financial and geopolitical shocks**



Source: ECB (2023).

> "In relation to liquidity risk, the supervisor has flagged a high concentration of funding sources, to which end it has asked the banks to draw up and execute sound multi-year funding plans, taking into account challenges stemming from changing funding conditions."

banks have increased their central bank funding, mainly via the ECB's targeted longer-term refinancing operations (TLTROs), the unconventional facilities designed to inject liquidity into the financial system to stimulate bank lending, so downscaling their market-based funding and reducing funding diversification. The expected repayments or prepayments (at the time of writing the first and main prepayment window had lapsed on 28 June 2023, with the European banks cancelling 29.46 billion euros) will require the banks to diversify their funding sources and replace part of their central bank funding. Nevertheless, the system loan-to-deposit statistics do not point to funding pressure.

The supervisor has similarly announced a series of activities designed to remedy the vulnerabilities identified which are mainly focused on analysing the banks' liquidity and funding plans and fostering funding source diversification.

Data-driven assessment of the European financial system's potential sources of instability

In this section, based on the data gleaned from the results of SREP 2022 (ECB, 2023b), we attempt to dive deeper into the health of the European banks in order verify whether the system is effectively exposed to the above-listed risks.

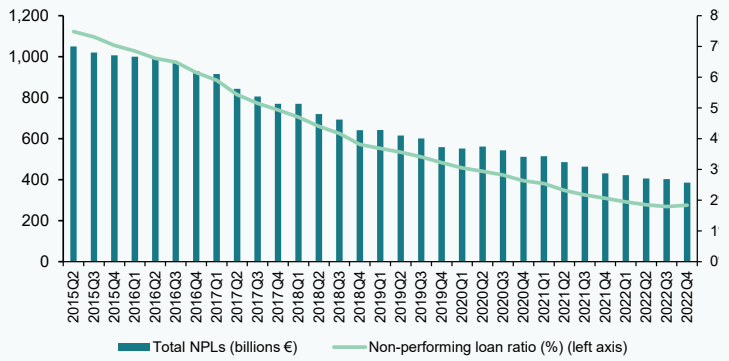
The first step in assessing the European banks' performance around credit risk is to analyse the trend in non-performance. Exhibit 2 illustrates a downward trend in the non-performing loan ratio in both absolute and relative terms in recent years. The European banks have therefore demonstrated their ability to digest non-performing assets, which have decreased by over half of the NPL stock existing in 2015, evidencing a significant net annual decline, even during the height of the pandemic crisis, as shown in the ECB's most recent financial stability report (ECB, 2023c).

The data therefore suggest that credit risk has not materialised to a significant degree. More important, however, is to assess the volume of assets showing potential signs of future impairment. The ECB's most recent report talks of latent risk via stage 2 exposures, namely those presenting a significant increase in credit risk without becoming non-performing. Stage 2 exposures have been increasing since 2018, mainly in the corporate segment but also in the household segment. As already noted, this increase is mainly related with the increase in costs derived from the current bout of inflation and sharp increase in interest rates, which is hitting companies that are highly leveraged (a situation exacerbated by the pandemic) particularly hard. This has prompted the SSM to set reinforced management of the credit risk cycle as one of

> "The European banks have demonstrated their ability to digest non-performing assets, which have decreased by over half of the NPL stock existing in 2015, evidencing a significant net negative annual decline, even during the height of the pandemic crisis."

Exhibit 2

Non-performance in the European banking system



Source: ECB.

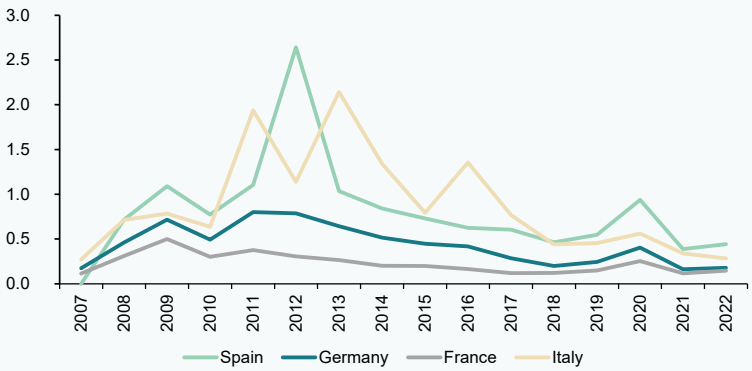
its top, if not the top, supervisory priorities, so that the banks anticipate these risks and quantify and classify them in order to get an accurate picture of the risks lingering on their balance sheets.

The first step to this end is to assess the banks' first line of defence, which is their very business model. In other words, the sustainability of their models in terms of accommodating the need for new provisions as a result of a significant increase in credit risk. In order to get a clearer picture of this risk, Exhibit 3 shows the trend in the cost of risk, defined as annual NPL provisions over total assets. Here we paint an aggregate picture

Exhibit 3

Trend in the cost of risk

Percentage



Source: ECB.

> "From an aggregate standpoint, the European banking system is not showing signs of potential liquidity or funding issues, with banks adapting their sources of funding naturally to the change in monetary policy, as is evident in the repayment of the TLTRO III funds."

for the main eurozone countries, illustrating the impact of provisions on earnings over time, particularly during the financial crisis of 2008 and the subsequent sovereign debt crisis in the eurozone.

The data provided reveal an average cost of risk between 2008 and 2014 of 1.17% of average total assets (ATAs) in Spain, compared to 0.63% in Germany, 0.32% in France and 1.24% in Italy.

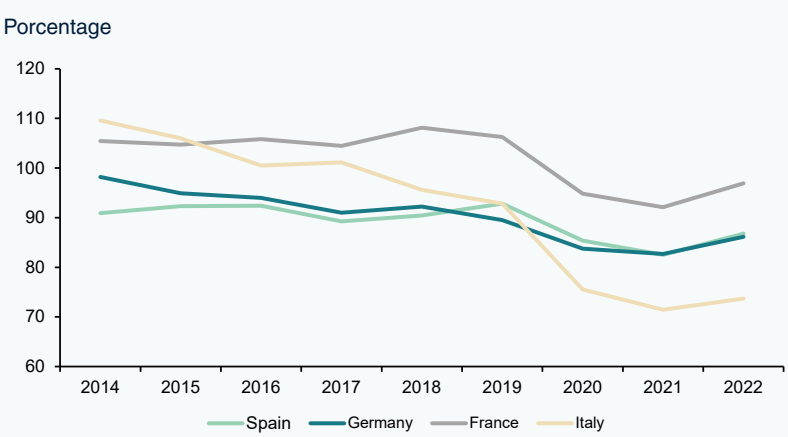
As for liquidity risk, the ratios reported by the European banks on aggregate are adequate and sufficient, specifically an LCR of approximately 160% in 2022, with no major differences between the major banking systems, and an NSFR of around 120%.

Analysing the various banking systems' funding strategies, measured using the loan-to-deposit ratio, reveals that the banks have been replacing market funding with retail deposits, as shown in Exhibit 4, particularly in the wake of the COVID-19 period when household savings increased sharply (and faster than lending activity).

Turning to the funding obtained via the TLTROs, its repayment has not generated to date, significant financial market issues. Proof of the scant tension prompted by the repayment process is the lack of stress in the short-term refinancing (repo) and interbank market rates.

As a result, in light of the data analysed, it can be said that, from an aggregate standpoint, the European banking system is not showing signs of potential liquidity or funding issues, with banks adapting their sources of funding naturally to

Exhibit 4 **Loan-to-deposit ratio**



Source: ECB.

the change in monetary policy, as is evident in the repayment of the TLTRO III funds.

Conclusion

There is no doubt that the current environment poses a challenge for the economic agents, the banking system being no exception. In light of the risks to which the banking system is exposed, this paper attempts to put the European banking system's current situation into context against the backdrop of the ECB's number-one macroprudential risk oversight priority – strengthening banks' resilience to macro-financial and geopolitical shocks. Compared to the recent episodes of financial instability in the US and Switzerland, where several banks suffered structural balance sheet issues forcing their intervention and/or acquisition by other banks, the European banks' earnings and capital structures look relatively strong. Without question, this is largely thanks to the intense regulatory and supervisory activity undertaken by the European authorities focused on avoiding episodes similar to those observed in other geographies.

Nevertheless, recent developments have highlighted the need for the banks to continue to work to articulate their business model development around a clear-cut focus on risk-adjusted returns, with high interest rates favouring the maturity transformation business.

Elsewhere, the banks will inevitably have to address changes in LCR and NSFR regulations. Indeed, recent events have proven that those metrics, despite the banks reporting sufficient liquidity buffers, fail to reflect concentration across the various funding sources, potentially masking underlying issues.

Lastly, going forward, the focus should be on strengthening the banks' capital and liquidity self-assessments (ICAAP and ILAAP, respectively), as this will help improve dialogue with the supervisor, all the more so in light of the looming regulatory changes around the liquidity metrics, while demonstrating that the banks' business models are viable and sustainable over time with respect to different stress scenarios and proving that there are no issues around capital planning that could prevent the ordinary performance of their business activities and the correct functioning of credit channels. To that end, the ECB's recently published supervisory bulletin included a new risk appetite framework (RAF) designed to facilitate a tighter focus on the supervisory priorities so as to translate into greater flexibility on the part of the supervisory authorities by assigning greater priority to the most relevant risks emerging from its various successive assessments.

Notes

[1] The state-guaranteed loans provided through the ICO have played a significant role in increased indebtedness.

[2] Prior to the pandemic, Euribor was trading in negative terrain and the swap markets were discounting rates staying at around 0% for the next 10 years, creating the impression that rates would stay ultra-low for the foreseeable future.

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Higher interest rates, excess liquidity and the ECB's balance sheet

Although the ultimate price stability target has not changed and overnight interest rates remain the channel for policy transmission to the economy, the ECB's balance sheet has taken on greater purpose relative to its traditional role as a support instrument for monetary policy. Against this backdrop, with the ECB now embarked on the path of policy "normalisation", it is timely to assess whether it is possible to return to the way things were before 2007, given that excess liquidity is determined by factors exogenous to monetary policy and can coexist with it indefinitely, even if policy is restrictive, as it is today.

Ignacio Ezquiaga and José Manuel Amor

Abstract: Eurozone monetary policy has become far more sophisticated since the onset of the Global Financial Crisis in 2007-2008. Although the ultimate price stability target has not changed and overnight rates remain the channel for policy transmission to the economy, the ECB's balance sheet has taken on greater purpose relative to its traditional role as a support instrument for monetary policy, entering the field of financial stability and influencing not only overnight rates but also the entire rate curve via new and less orthodox instruments. This situation has led the ECB, along with most of the central banks, to build up a balance sheet of an unprecedented size. Indeed, excess liquidity currently stands at 3.6 trillion euros, compared to 4.8 trillion in September 2022. The situation has sparked controversy, such as that surrounding its remuneration structure; misunderstandings

“While implementing its monetary policy, the ECB took up an additional role, acting essentially as intermediary, standing in for the suppliers and demanders of liquidity which had disappeared from an interbank market paralysed by the banking crisis.”

with respect to the importance of quantities in monetary decisions; and unknowns, including questions about the exit strategy and impacts on bond market premiums. Against that backdrop, with the ECB since 2022 on a policy path of “normalisation”, it is timely to ask what that implies and whether it is possible to return to the way things were prior to 2007. Given that excess liquidity is determined by factors exogenous to monetary policy and can coexist with it indefinitely, even if the policy stance is restrictive, as it is now.

The crisis and the ECB’s balance sheet

In the context of the urgent and exceptional circumstances characterising the financial crisis of 2008, when the normal transmission channels became blocked, the monetary policy toolkit had to be reinvented for two prime reasons: (i) the interbank market had ceased to do its job and needed replacing in order to create stability; and, (ii) with the money and debt markets in a state of shock or dysfunctional, intervention was required in the formation of overnight rates, as well as rates at longer tenors and, once they reached zero, the entire curve.

While implementing its monetary policy, the ECB took up an additional role, acting essentially as intermediary, standing in for the suppliers and demanders of liquidity which had disappeared from an interbank market paralysed by the banking crisis. Replacing the former by taking their funds, which they were no longer lending to the market out of concerns about their counterparties. Replacing the latter because nobody in the market was lending to them on a normal basis. This situation quickly generated significant territorial asymmetry in the TARGET accounts and excess liquidity which the ECB had been draining daily to prevent overnight rates from falling below the levels benchmarked from time to time.

LTROs and other longer-term operations

The ECB’s longest-term operations are structured as main refinancing operations (MROs), *i.e.*, as repos (temporary purchases with a repurchase agreement); they are backed by the same classes of collateral as MROs but provide the banks with liquidity for longer than the week provided by the MROs.

In 2014, the Eurosystem designed other operations with maturities of over three months known as non-regular operations. The use of this facility was triggered by the need to reduce uncertainty around liquidity when the financial crisis broke out. During the years of necessarily highly expansionary policy, these operations had maturities as long as 48 months, as was the case with the so-called targeted longer-term refinancing operations

“The ECB made use of two kinds of facilities in recent years: those designed to tackle the financial crisis and those designed in the wake of the pandemic.”

> "While ECB asset purchases originally came about in response to the complexity caused by the euro crisis of 2012, they went on to become key to continuing to fine-tune monetary policy once interest rates bumped up against the zero bound, preventing the ECB from continuing to directly influence the longer-term interest rate curve."

(TLTROs). The ECB made use of two kinds of facilities in recent years: those designed to tackle the financial crisis and those designed in the wake of the pandemic.

Volume-wise, the TLTROs were the most significant. The TLTROs provided long-term repo financing at a flat rate. At one juncture they were provided for four years and at a cost of zero when the MRO rate was likewise at zero. The idea was to ease lending conditions for the private sector and stimulate bank lending to the real economy (which is why they were dubbed 'targeted' operations). In later rounds, TLTRO III and TLTRO II, the interest rate applied was linked to the participating banks' lending activity.

On 30 April 2020, the ECB announced a new series of seven additional longer term refinancing operations (PELTROs) in order to inject liquidity into the eurozone's financial system and ensure that the money markets continued to operate smoothly throughout the pandemic. On 10 December 2020, the ECB's Governing Council decided to offer a series of four further PELTROs in 2021 by way of liquidity back-stop in order to keep the money markets working properly.

Asset purchases: Trend and breakdown

On 10 May 2010, the central banks of the Eurosystem began to repurchase securities under the scope of the Securities Markets Programme (SMP) in order to address sources of stress and dysfunctions in certain market segments – country asymmetries and fragmentation – which were thought to be impeding monetary policy transmission. Those purchases were the prelude for what would become the asset purchase programmes (APPs). Following Mario Draghi's decisive "whatever it takes" speech on 6 September 2012, the ECB began to purchase assets directly and did away with the SMP. [1]

The Eurosystem began to purchase securities under the umbrella of its APPs in October 2014. The APP would quickly emerge as the most important unconventional monetary policy measure in quantitative and qualitative terms, with the announced pace of asset purchases becoming a key monetary policy signal. [2]

Clearly, while the purchases originally came about in response to the complexity caused by the euro crisis of 2012 (SMP), they went on to become key to continuing to fine-tune monetary policy once interest rates bumped up against the zero frontier, preventing the ECB from continuing to directly influence the longer-term interest rate curve (shaping negative real long-term rates).

Unlike the situation facing the Fed in the US, the fact that eurozone countries have different national public debt markets made it vital to have a systematic and objective purchase mechanism capable of neutrally or naturally addressing the existence of different domestic secondary markets.

Chronologically, the APP purchases were structured into the following specific programmes:

- The asset-backed securities purchase programme (ABSPP): from 21 November 2014 to 19 December 2018.

> “Both the purchases and the maturing principal reinvestment policy were articulated around the policy of market neutrality, *i.e.*, they were structured in accordance with the average residual term of each market and its geographic area.”

- The third covered bond purchase programme (CBPP3): from 20 October 2014 to 19 December 2018.

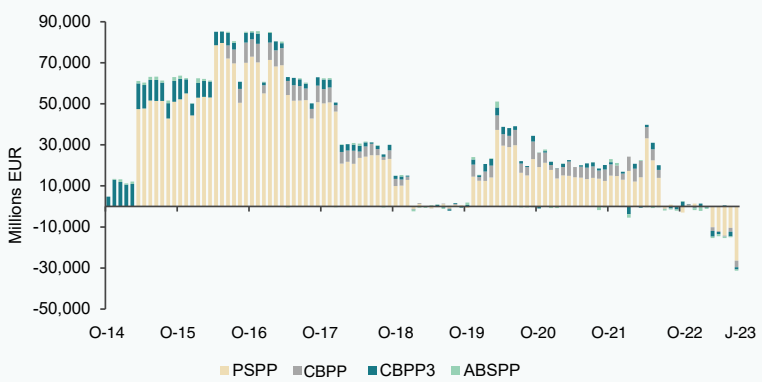
- The public sector purchase programme (PSPP): the Eurosystem made net public sector securities purchases under the scope of the PSPP between 9 March 2015 and 19 December 2018. From January to October 2019, the Eurosystem only reinvested the principal repayments from maturing securities held in the PSPP portfolio. Securities purchases under the PSPP recommenced on 1 November 2019 and continued until the end of June 2022.

- The corporate bond purchase programme (CBPP): from 8 June 2016 to 19 December 2018.

Both the purchases and the maturing principal reinvestment policy were articulated around the policy of market neutrality, *i.e.*, they were structured in accordance with the average residual term of each market and its geographic area. To maintain a regular and balanced presence in the market, it was also decided to distribute the reinvestment of maturing principal over time.

Beyond the various APPs, on 18 March 2020, the ECB announced a 750 billion euro pandemic emergency purchase programme (PEPP), which was increased in size to 1.85 trillion euros in December 2020. That programme was designed in response to the unprecedented circumstances caused by the coronavirus emergency (COVID-19). Net purchases under the PEPP ended in April

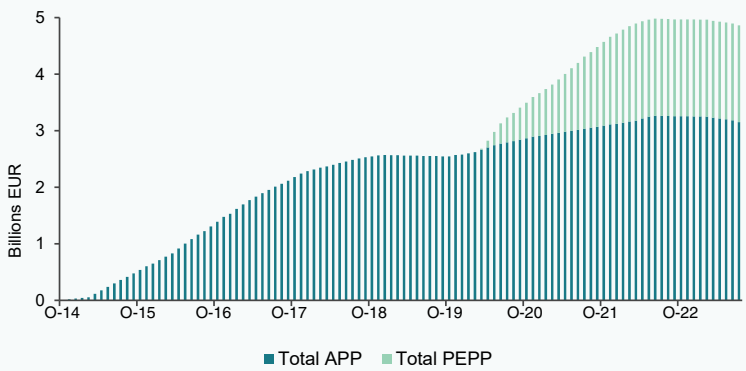
Exhibit 1 **Net asset purchases by programme under APP, 2014-2023**



Source: Authors' own elaboration based on ECB data.

> "By keeping the market better informed not only about the immediate actions already decided upon but also its forward-looking intentions, the ECB helped reduce uncertainty while cutting down on the frequency of its interventions."

Exhibit 2 **Total outstanding balance under the APP and PEPP**



Source: Authors' own elaboration based on ECB data.

2022. Principal repayments from maturing securities acquired under the PEPP are being reinvested in full.

Forward guidance

Forward guidance is the provision of systematic information about future monetary policy intentions, framed by the ECB's ongoing assessments of prospects for its price stability target.

The ECB began to use forward guidance in July 2013 when its Governing Council said that it expected interest rates to remain "at current or lower levels for an extended period of time". The ECB continued to provide forward guidance regularly until March 2022.

By keeping the market better informed not only about the immediate actions already decided upon but also its forward-looking intentions, the ECB helped reduce uncertainty while cutting down on the frequency of its interventions.

Normalisation and restrictive level of rates

After 15 years of expansionary monetary policy, in early 2022, the ECB began to normalise its monetary policy. It looked as if we were finally leaving behind a protracted credit and confidence crisis, extended by the onset of the pandemic. The reawakening of inflation, fuelled by the reopening of the economy in the wake of the pandemic, opened the door to ending policy accommodation and, ultimately, embarking on tightening in spring

> The reawakening of inflation, fuelled by the reopening of the economy in the wake of the pandemic, opened the door to ending policy accommodation and, ultimately, embarking on tightening in spring 2023.

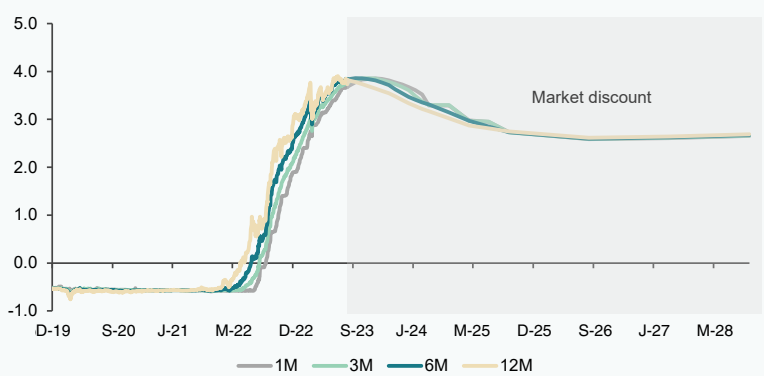
2023. Russia's invasion of Ukraine, far from curbing demand, only provided new reasons for continuing to roll back the ECB's highly expansionary positions in light of the effect on energy and many other commodity and food prices. In parallel to increasing its key rates to 4.5% in the case of MROs, the ECB abandoned its forward guidance and devoted itself to managing its large legacy balance sheet.

Interest rates reach restrictive levels

2022 started with benchmark euro interest rates at close to zero or in negative territory and with a massive ECB balance sheet – 6.2 trillion euros – with the ECB's aim, as already noted, of articulating liquidity policy and shaping the entire curve. The latter task meant injecting massive amounts of liquidity into the banks short of reserves and those to

Exhibit 3 **Trend in the €STR OIS at 1, 3, 6 and 12 months**

Percentage



Source: Authors' own elaboration based on Bloomberg (data as of 28 August 2023).

> The MRO rate of 3.75% established on 16 March 2023 (3% for the DFR) marked the start of a key phase in monetary tightening: entry into restrictive territory, with the ECB raising its MRO rate again to 4.5% in August.

whom nobody would lend money while in parallel draining – so sterilising the monetary impact of the volumes injected – the surplus reserves of the banks that were unwilling to lend money.

Shortly after, benchmark rates began to increase. Returning the deposit facility rate (DFR) to zero in July set the plan in motion; from there rates were lifted to a level that could be considered neutral, of 2%, at the Governing Council meeting of December 2022. In our opinion, the MRO rate of 3.75% established on 16 March 2023 (3% for the DFR) marked the start of a key phase in monetary tightening: entry into restrictive territory, with the ECB raising its MRO rate again to 4.5% in August. The current phase is accentuating the slowdown in demand and in the most stubborn components of core inflation.

Balance sheet

As for its balance sheet, the normalisation process has proceeded at a slower pace, as foreshadowed by the ECB itself. Excess liquidity had played a stabilising role beyond monetary policy, making the gradual nature of its withdrawal expected. In March 2022, the ECB decided to eliminate net purchases under the APP and ruled out the introduction of new TLTRO series. In fact, the origin of this excess liquidity is not linked to monetary policy. It is more related to the sluggishness of credit and the accumulation of liquidity positions in companies and families after the 2008 crisis.

Since then, three decisions stand out as regards the reconfiguration of the ECB's toolkit:

- In September 2022, the ECB reduced remuneration on excess reserves to zero (the lower between the DFR and zero). That prompted the banks to deposit their excess liquidity in the deposit facility, prompting a drop in excess reserves from 3.8 trillion euros at the end of 2021 to a negligible level of around 200 million euros. Symmetrically, use of the deposit facility has increased to around 3.64 trillion euros at present. There was no change in monetary content in the strict sense but the move did reorder the ECB's balance sheet: the deposit facility resumed its role as the daily drainage tool, at a rate determined exogenously by monetary policy, and the banks started to once again keep their excesses to a minimum to meet their reserve requirement (1% of customer deposits).

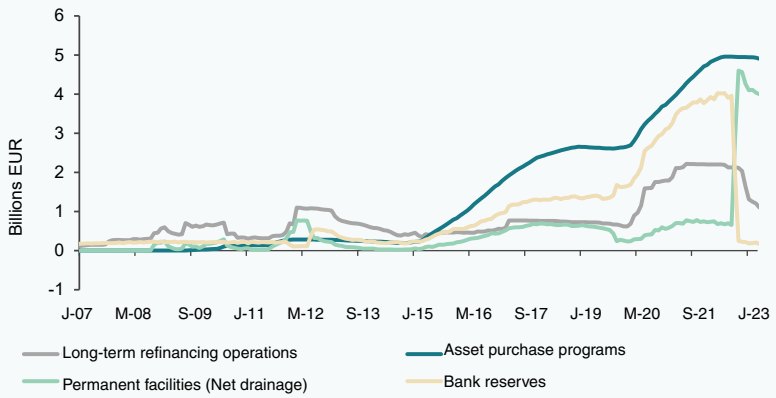
- The ECB raised the cost borne by the banks on outstanding TLTROs from November 2022 by setting the rate at the DFR rate (compared to zero), so giving the banks a reason to accelerate their repayments, as is indeed happening.

- On 27 July 2023, the ECB also decided to remunerate the banks' minimum reserves at zero. Previously, they had been remunerated at the MRO rate, so that this move implied a considerable improvement in the interest borne by the ECB, increasing elbow room around monetary policy now that rates are at significantly higher levels.

As for its asset portfolio, the ECB has taken decisions even more gradually. Initially, it decided not to reinvest all of the principal payments from maturing securities comprising the APP so that the portfolio would decline by 15 billion euros a month until the end of June 2023. Then, having assessed the portfolio down-sizing, the ECB decided to eliminate the reinvestment of those sums from July 2023. Notably, these announcements have had scant impact on the debt markets.

“ In March 2022, the ECB decided to eliminate net purchases under the APP and ruled out the introduction of new TLTRO series. ”

Exhibit 4 **ECB balance sheet: A selection of components**



Source: Authors' own elaboration based on Bank of Spain data.

Elsewhere, the ECB plans to reinvest the principal from maturing securities purchased under the scope of the PEPP until at least the end of 2024. Moreover, any future elimination of that portfolio will be managed with a view to avoiding interference with prevailing monetary policy thrust.

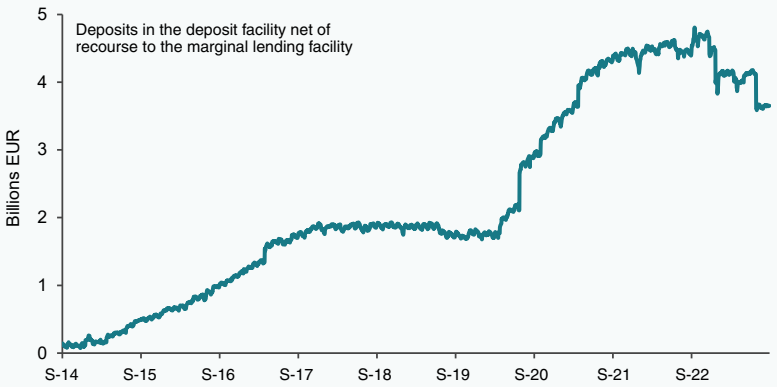
Conclusion

Despite the impact of these steps to downsize the ECB's balance sheet, excess liquidity, and therefore its net withdrawal, will remain in the background of monetary policy in the coming years. Use of the deposit facility, the key monetary policy instrument, stood at 3.64 trillion euros as of July 2023. The bond portfolio amounted to 4.85 trillion euros as of the same date, having declined by close to 100 billion euros in the first seven months of the year. The maturity and prepayment of TLTRO III funds, induced since year-end 2022, has had the effect of reducing their outstanding balance by over 1.5 trillion euros, leaving just 598 billion euros to be repaid as of July 2023.

As a result, excess liquidity currently stands at 3.6 trillion euros, compared to 4.8 trillion in September 2022. The ECB therefore has still a lot of liquidity to drain via the deposit facility. And will for some time. Factoring in the 0.6 trillion euros of TLTRO II funds, *caeteris paribus*, the system's position *vis-a-vis* the ECB will not be rebalanced until the asset portfolio decreases by a further 3 trillion euros. Excess liquidity is determined by factors exogenous to monetary policy and can coexist with it indefinitely, even if its tone is restrictive, as it is now.

In the context of its balance sheet, the system's excess liquidity gets drained by the ECB – at a DFR whose level reflects once again its monetary policy strategy and not a concession to the banks–. [3] Given the current benchmark rate structure, if the market's net position required the ECB to inject rather than to withdraw liquidity, the overnight rate would be guided by the MRO rate (for injecting liquidity) and not by the DFR (for withdrawing it). By way of hypothesis, it is interesting to consider that this situation would imply a 50bp shift relative to the overnight rate (€STR). There is a gap of 50bp between the DFR and MRO rate as a result of the reduction of the latter (from 100bp) when the ECB replaced variable rate tenders for its main refinancing operations with a fixed rate tender procedure with full allotment as far back as October 2008.

Exhibit 5 **Excess liquidity in the Eurosystem**



Source: Authors' own elaboration based on ECB data.

Notes

[1] For more information, refer to the press release of 6 September 2012, Technical features of Outright Monetary Transactions; the ECB's decision of 14 May 2010 (ECB/2010/5), and its press release of 10 May 2010: ECB decides on measures to address severe tensions in financial markets.

[2] The ECB's Governing Council recalibrated its net purchases regularly.

[3] One of the most widespread misunderstandings around monetary policy tools pertains to the remuneration of minimum reserves.

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Youth housing affordability in Spain *versus* the EU

Spanish youth face significantly more difficulties accessing affordable housing than is the case in other European countries –a situation which has worsened in recent years. The main factor appears to be the shortage of rental housing, suggesting that policies should be geared towards promoting supply in that segment of the market, rather than acting in an untargeted manner or supporting demand.

Raymond Torres

Abstract: The issue of housing affordability for youth is particularly pronounced in Spain and appears to have worsened in recent years. This may well be related to other socio-economic problems, such as the increase in the age at which young Spaniards are leaving home to above the age of 30, compared to an EU average of 26.4. The lack of a stock of an abundant supply of houses for rent at affordable prices is one of the biggest causes. Interestingly, despite the labour market challenges facing the Spanish youth, this does not appear to be the main factor affecting youth housing affordability in Spain. The solution to this problem therefore involves increasing supply, particularly in the rental segment. There are a host of international experiences to look at. Increasingly, given constraints to public treasuries for spearheading the required increase in supply via public sector investment, responses are taking the form of targeted incentives designed to provide young people with more affordable options.

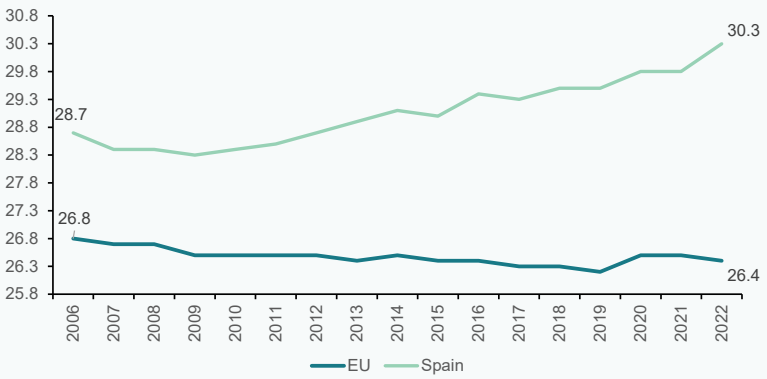
Foreword

The scarcity of affordable housing is of grave concern for young people and their families and a central topic of public debate. The housing situation also has tangible consequences for labour force integration, mobility and

integration into society in general (Causa and Pichelmann, 2020). A lack of housing opportunities for the youth –and its impact on the age at which young people leave their parental home– is also a factor behind the current low birth rate according to a number of studies (Stone, 2018).

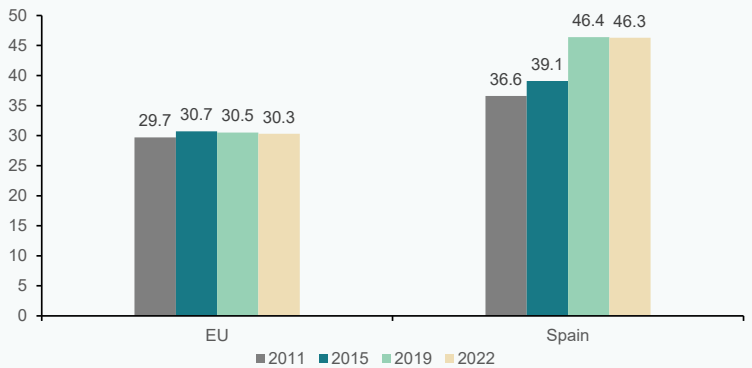
The fact is that the age of emancipation in Spain is over 30, compared to 26.4 on average in the European Union (Exhibit 1). Moreover, that age is trending higher, whereas it is stabilising in the EU. The percentage of youths living with their parents has increased sharply, especially in the 24-35 age bracket, where over 46% were living at their parents' home last year, up almost 10 points from a decade ago (Exhibit 2). The gap with the other large European countries is therefore widening.

Exhibit 1 **Age leaving the parental home**



Source: Eurostat.

Exhibit 2 **Percentage of youths (aged 25 to 34) living with their parents**



Source: Eurostat.

> "The high volume of pent-up demand from young people unable to leave home, coupled with sustained price growth, points to supply scarcity as the main hurdle."

The goal of this paper is to analyse young Spaniards' standing in the property market by comparison with that of their peers in surrounding countries and take a brief look at some initiatives that could help alleviate the situation.

A stretched rental market: The key factor

The high volume of pent-up demand from young people unable to leave home, coupled with sustained price growth, points to supply scarcity as the main hurdle. Since the real estate bubble burst, home-building has been growing at a slower pace than demand for housing. Since 2015, house starts have been averaging around 75,000 units per year, compared to the nearly 120,000 new homes created annually during that same period. Moreover, new supply has tended to be concentrated in the home ownership segment, an adverse development for young people in particular.

An analysis based on Eurostat data suggests that the availability of an abundant pool of housing for rent at affordable prices –rent being young Europeans preferred route out of the parental home– is unquestionably the biggest problem in Spain. In the past, many young Spaniards were able to afford home ownership at a time when supply was rife and mortgages were readily available. At the start of this century, nearly six out of every ten youths were living in an owned home, with one out of four paying rent. After the bubble burst, however, supply collapsed and mortgages have become much harder to come by, so that today, just 30% of Spanish youths are living in their own homes. [1] This trend has been exacerbated by the rise in interest rates, so that the youths living in an owned home mainly come from high-income households or have inherited money or property.

All of which explains the apparent correlation between the density of the stock of rental housing and the percentage of youths that has managed to move out from their parental home (Exhibit 3). In Scandinavia and Central Europe, where rental markets are relatively deep, the immense majority of young people can afford to move out. To the contrary, young people find it hard to leave parents' home when the stock of rental housing is stretched, as is the case in Spain and other Southern European countries.

The shortfall of supply has translated into expensive rents. Four out of every ten tenants devote over 40% of their disposable income to paying rent, twice the European average. There is no breakdown by age bracket at the European level but the Spanish data show that the percentage of young tenants who bear excessive rents is even higher. In contrast, the percentage of people living in owned homes whose mortgage service costs are equivalent to over 40% of their disposable income is in line with the European average.

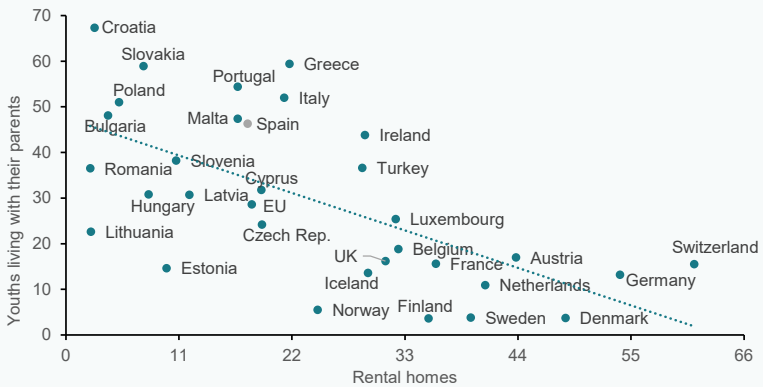
Reflecting the displacement of demand away from owner-occupied housing, rents

> "Rental housing is the route preferred by young Europeans out of the parental home, and lack of it is unquestionably the biggest problem in Spain."

> “Four out of every ten tenants devote over 40% of their disposable income to paying rent, twice the European average.”

Exhibit 3

Density of the rental housing stock and percentage of youths (aged 25-34) living with their parents, 2022



Note: The rental housing data are expressed as a percentage of total available housing.
Source: Author's own elaboration based on Eurostat figures.

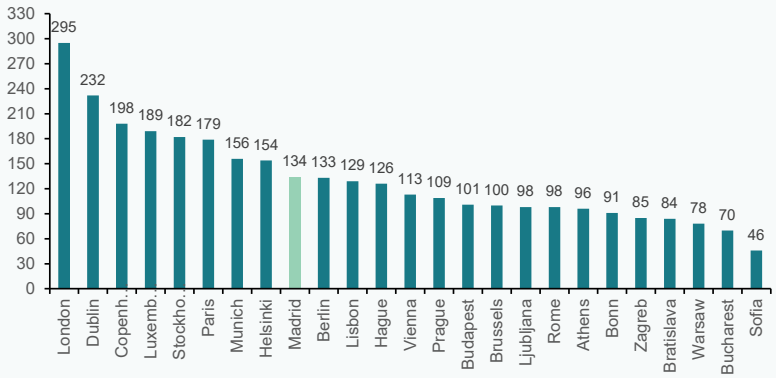
have increased quickly in recent years: between 2015 and 2022, the average rent in Madrid increased by 39%, compared to an average of 26% in other European capital cities. The result is that as of today the average cost of renting a home in the Spanish capital is higher than in other major cities such as Berlin, Brussels or Rome (Exhibit 4). That gap would be even more pronounced if differences in purchasing power across the various cities were taken into account.

In some countries, governments subsidise access to the housing market either by placing a pool of social housing on the market or by providing direct assistance with rent payments. The most noteworthy examples can be found in the Scandinavian markets, France, Ireland and the UK. These policies, however, while justifiable in social terms, do not appear to be particularly effective at boosting the percentage of young people who can afford to move out from home. Indeed, social housing policies are useful from the

> “Social housing policies are useful from the distributional perspective but will only help address the aggregate scarcity problem if accompanied by a general increase in supply.”

Exhibit 4

Average rents in the main European capital cities in 2022, Brussels = 100*



**The exhibit refers to the cost of renting a two-bedroom apartment of similar characteristics in different cities.*
Source: Author's own elaboration based on data from the Estate Agency Rent Survey.

distributional perspective but will only help address the aggregate scarcity problem if accompanied by a general increase in supply.

The labour market: A less important role

The labour market is another potential factor. Youth unemployment in Spain, which was close to the European average at the start of the century, shot up in the wake of the financial crisis. The gap narrowed during the subsequent years of economic recovery but never disappeared: in 2022, the unemployment rate among youths aged between 25 and 29 was more than 8.2 percentage points above the EU average, and in the 20 - 24 age bracket that gap stood at 13.3 points.

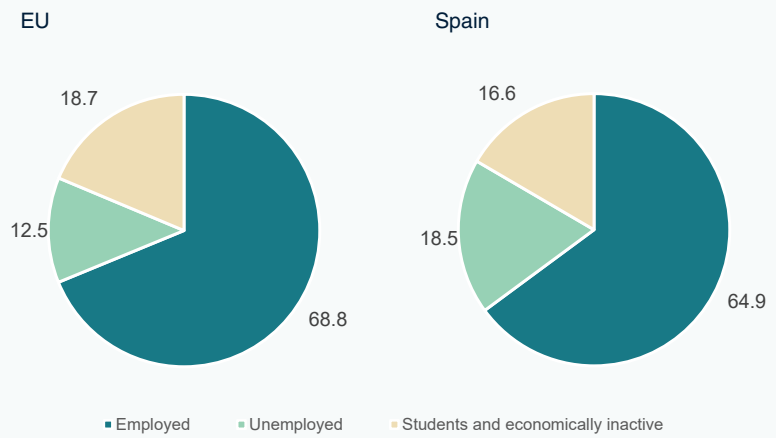
However, although finding employment facilitates access to housing, it does not appear to be the main factor. Nearly two out of every three people between the ages of 25 and 34 living with their parents have a job, a percentage that is only slightly below the European average (Exhibit 5). Moreover, most of these youths are working full time. Evidently, an increase in pay would allow them to assume the cost of housing (hence the importance of training, skills anticipation and job quality policies), all other factors remaining equal; however, if pay increases come across the board, the cost of housing would also increase, as the underlying issue is the scarcity of housing opportunities, *i.e.*, supply.

> "In 2022, the unemployment rate among youth aged 25-29 was more than 8.2 percentage points above the EU average, and in the 20 - 24 age bracket the gap stood at 13.3 points."

Exhibit 5

Youths (aged 25-34) living with their parents by employment status, 2022

Percentage of total youths living with their parents



Source: Author's own elaboration based on Eurostat figures.

In sum, in the last few years, the average age at which young Spaniards leave home has deviated further from the European average. The main cause lies with the scarcity of rental housing, a segment of the market that is crucial to young people being able to move out of home, judging by international experiences. The labour market, meanwhile, is a less significant factor in explaining the difficulties facing young people in accessing the housing market.

Implications for housing policy

Based on the above diagnosis, the solution to the housing problem therefore involves boosting supply, particularly in the rental segment. Public investment in social housing for rental is one option, albeit curtailed by two potential limits: (i) the need for rapid action, which may clash with the administrative procedures in place; and, (ii) government budget constraints (Causa and Pichelmann, 2020). Moreover, housing policy needs to be compatible with the incentives in place and consistent across the various levels of government.

The Canadian government's Rapid Housing Initiative is a particularly relevant case in point. By speeding up the required red tape and creating a one-stop application window through which local governments could obtain financing, the programme managed to create more than 10,000 additional units in just six months. [2]

This type of initiative, cited as a case study by the OECD, is particularly useful for providing a housing solution for vulnerable

> "Housing policy needs to be compatible with the incentives in place and consistent across the various levels of government."

groups, including youths living in precarious situations. However, for home-seekers with a certain level of income, such as the young people stuck living with their parents despite being in full-time work, the initiatives need to be targeted at making the market work better so as to respond to their needs.

This consideration, coupled with the constraints on public spending, is why the role of government in new housing investment is diminishing in most European markets. Instead, governments intervene through a set of market initiatives. Firstly, in some countries including Germany, the UK and Ireland, the strategy has been to multiply the concession of land for private construction, subject to criteria such as reserving a percentage of the new builds for rental housing, for example, the re-zoning initiatives in Stuttgart, London and Dublin. (Scanlon, 2017). In Switzerland, some cantons are providing zoned land at below market prices or under long-term lease arrangements in order to reduce investment costs and stimulate the supply of rental housing. In all instances, the direct cost for the public coffers is small, although the programmes entail implicit assistance by providing developers with building permits on advantageous terms.

Secondly, some cities are offering soft loans and other forms of assistance targeted exclusively at the construction of social rental housing. Examples include Paris and Vancouver (the "Rental 100" programme). These measures can be complemented by investments in public infrastructure in an attempt to stimulate construction and channel housing that is currently vacant on account of its distance from the major city centres onto the market. Studies show, however, that this policy, in addition to constituting a direct cost for the public coffers, might crowd out the supply of unsubsidised rental housing (refer, for example, Del Pero *et al.*, 2016). In light of this displacement effect, it may be preferable to focus public policy on the development of rental housing in general (neutral supply incentives) and to subsequently offer specific assistance to disadvantaged youth (select demand support).

Thirdly, regulatory initiatives have also been launched. In response to the pressures posed by tourism, some European cities have opted to limit the supply of holiday rental alternatives in order to nudge those properties back onto the free market. Others exact levies from vacant houses with the same aim. These incentives may help boost options for young people, particularly in tourist-saturated markets. And indeed some studies indicate that these forms of intervention can be effective at the local level, (García López *et al.*, 2020) though their impact at the aggregate level may be limited.

Finally, these international experiences suggest that in Spain, housing policies targeted specifically at the rental segment would be particularly cost-effective at helping young people move out of their parental home. Such an approach would unquestionably prove more effective than multiplying the guarantees and aid provided to home-buyers, albeit requiring cooperation among the various levels of government, especially the regional and local authorities, where responsibility for housing policy implementation is largely concentrated.

Notes

[1] It is also worth noting the reforms of 2012 which did away with the mortgage tax break whereby borrowers had been allowed to deduct 15% of their (primary residence) mortgage costs for income tax purposes.

[2] For more information about the results of this initiative, refer to: https://www.cmhc-schl.gc.ca/professionals/project-funding-and-mortgage-financing/funding-programs/all-funding-programs/rapid-housing

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Raymond Torres. Funcas

Impact of inflation on the VAT burden for Spanish households in 2021 and 2022

Value added tax (VAT) receipts soared in 2021 and 2022, by 14.9% and 13.4%, respectively, according to the Spanish tax authority (AEAT, 2023). An analysis of the increase in the VAT borne by households those years and how much of the increase is attributable exclusively to the inflation phenomenon shows that Spanish households' total VAT burden increased by 263.6 euros on average in 2022, of which 138.2 euros (52.4%) is directly attributable to inflation.

Desiderio Romero-Jordán

Abstract: Value added tax (VAT) receipts soared in 2021 and 2022, by 14.9% and 13.4%, respectively, according to the Spanish tax authority (AEAT, 2023). This dynamic was buoyed by the tailwind provided by rampant inflation, which jumped from 3.1% in 2021 to 8.4% in 2022. An analysis of the increase in the VAT borne by households those years and how much of the increase is attributable exclusively to the inflation phenomenon shows that Spanish households' total VAT burden increased by 263.6 euros on average in 2022, of which 138.2 euros (52.4%) is directly attributable to inflation. The VAT burden accumulated between 2021 and 2022 exclusively as a result of inflationary pressures averaged 297 euros. That sum increases to approximately 350 euros for a standard household with a level of spending similar to average household income in Spain in 2022 (32,200 euros).

Methodology used to calculate the VAT receipts induced by inflation

The proxy used for the total VAT borne by households is expressed as follows:

$$Rt_{it}=S_{it}\cdot(1+HCPI_{it})\cdot r^{*}_{it} \quad [1]$$

where S_{it} is spending on goods and services in year t (net of indirect taxes and the change in prices during that period), *HCPI* is the specific consumer price index for each household and t^{*}_{it} is its weighted average VAT tax rate. The VAT borne by each household can be broken into two components:

(i) "Pure" VAT receipts, or VAT net of inflation: $Rp_{it}=S_{it}\cdot t^{*}_{it}$

(ii) The revenue induced by the increase in prices: $Ri_{it}=S_{it}\cdot HCPI_{it}\cdot t^{*}_{it}$.

To estimate the breakdown of total VAT receipts by each of these two components, R_p and R_i, we need to have the *S, t** and *HCPI* values for each household. Those variables were calculated using micro data taken from the Spanish Household Budget Survey (SHBS) for 2021 and 2022 (INE, 2022, 2023). The SHBS is a representative survey with socio-economic information for around 24,000 households resident in Spain. It is an ideal survey for our purposes and certainly the only one that lends itself to estimating the VAT borne by households in fine detail. Nevertheless, surveys of this nature present two shortcomings which need to be underlined: (i) underreporting of certain classes of expenditure, such as alcohol, beer and tobacco; and, (ii) limited representativeness of households at the tail ends of the distribution curve. The SHBS only includes current spending and therefore does not encompass investments in real assets such as housing, commercial premises, or land. As a result, any comparison between the VAT revenue figures estimated on the basis of the SHBS and those provided by the tax authority (and of the resulting average rates) should be read with caution.

The calculation of the VAT borne by Spanish households and its disaggregation between pure VAT and inflation-induced revenue requires first analysing the impact of inflation on each of the households in the survey. The consumer price index (CPI) published by Spain's statistics office, the INE, provides information about the average amount of price growth sustained by all Spanish households. However, as outlined in detail in Romero-Jordán (2023a), each household has its own price index (HCPI), the level of which is the result of the interaction between two factors. Firstly, it is the result of the specific composition of each household's shopping basket, which can vary significantly as a result of variables such as income levels, household structure or geographic location. Secondly, it depends on the change in prices, in each period, in the items comprising that specific shopping basket. We will return to this matter further on.

Structure of tax bases, average rates and HCPI

As shown in Table 1, consumption patterns changed suddenly in 2020 as a result of the lockdown, with the share of goods carrying the super-reduced VAT rate sustaining extraordinary growth (2.52 points). The items carrying the super-reduced rate are largely food staples, including bread, milk, eggs, fruit, and fresh vegetables. 2021 marked the start

> "The period between 2019 and 2022 was characterised by growth in the share of goods carrying the super-reduced rate (6.51%) and reduced rate (0.55%), offset by a drop in the share commanded by goods carrying the standard rate of 2%, resulting in a decrease in the weighted average VAT rate from 15.04% in 2019 to 14.87% in 2022."

Table 1 **VAT base structure, average rate and revenue since 2019**

	2019	2020	2021	2022	Change 2019-2022 (%)
Items at super-reduced rate	13.45	15.97	15.05	14.33	6.51
Items at reduced rate	33.40	31.84	32.54	33.59	0.55
Items at standard rate	53.15	52.19	52.40	52.08	-2.00
Weighted average rate	15.04	14.78	14.86	14.87	

Source: Author's own calculations based on the SHBS, 2019-2022.

of a gradual transition back to pre-pandemic patterns: the share of the items carrying the super-reduced rate dropped somewhat (by 0.92 points on average), while those carrying the reduced and the standard rate increased (by 0.7 and 0.21 points, respectively). [1] The energy crisis of 2022 slowed the return to pre-pandemic circumstances, once again reducing the share of items carrying the standard rate of VAT by 0.32 points. In short, the period between 2019 and 2022 was characterised by growth in the share of goods carrying the super-reduced rate (6.51%) and reduced rate (0.55%), offset by a drop in the share commanded by goods carrying the standard rate of 2%. As a result of that change of mix, the weighted average VAT rate decreased from 15.04% in 2019 to 14.87% in 2022. It will take a few years to ascertain more accurately: (i) whether these changes in spending patterns prove temporary; (ii) their impact on the weighted average VAT rate; and, (iii) their impact on tax collection as reduced inflationary pressures slow growth in VAT receipts.

Exhibit 1 provides the distribution of the average rate by percentile of adjusted expenditure and yields two conclusions. Firstly, there are no apparent relevant differences in the breakdown of the average rate between 2021 and 2022. Secondly, except for the first five percentiles, in Spain, the average rate of VAT is progressive in relation to household spending.

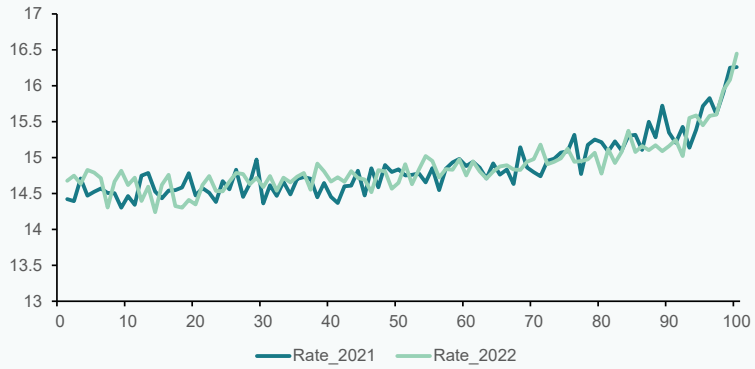
As for inflation, CPI averaged 3.1% in 2021 and 8.4% in 2022. Following the methodology outlined in Romero-Jordán (2023a), Exhibit 2 shows the HCPI for each percentile of equivalent adjusted expenditure borne by each household in each of 2021 and 2022. It shows how the households affected the most by inflation were those with lowest purchasing power. The explanation is simple: food and energy, two of the components commanding the highest shares of those households' expenditure in 2021 and 2022 were among the most affected by price growth. Exhibit 2 also shows how the percentage of

> "The households affected the most by inflation were those with lowest purchasing power, explained by the simple fact that food and energy, two of the components commanding the highest shares of those households' expenditure in 2021 and 2022, were among the most affected by price growth."

Exhibit 1

Weighted average VAT rate in 2021 and 2022

Percentiles of equivalent adjusted expenditure



Source: INE (2022, 2023) and author's own elaboration.

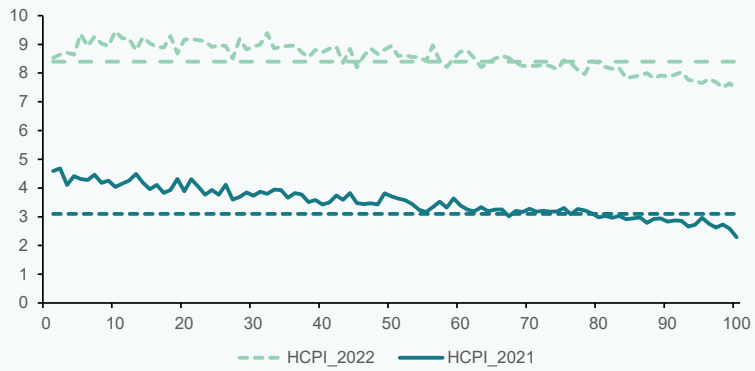
households with an above-average HCPI was 70% in 2021, rising to 80% in 2022. In other words, in relative terms, the percentage of households affected to a greater degree by the growth in prices increased in 2022 (for further details, refer to Romero-Jordán, 2023a).

On average, inflation induced 79.4 euros of additional VAT in 2021 and 217.6 euros in

Exhibit 2

HCPI in 2021 and 2021

Percentiles of equivalent adjusted expenditure



Note: The horizontal lines depict the levels of CPI observed in 2021 and 2022.
Source: INE (2022, 2023) and author's own elaboration.

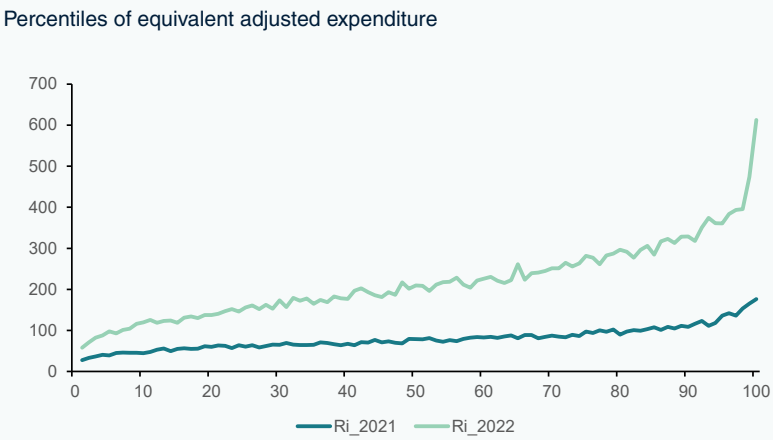
“ The figures imply an increase in the overall VAT burden for households of close to 400 euros for a standard household with adjusted expenditure similar to average income in Spain in 2022 (32,300 euros). ”

2022 (Exhibit 3). Moreover, households above the 30th percentile of equivalent adjusted expenditure bore over 150 euros of VAT in 2022 as a result of inflation. In 2021, on the other hand, only the households in the last five percentiles breached that threshold.

Absolute and relative impact of inflation on VAT revenue in 2021 and 2022

As shown in Table 2, the VAT burden averaged 2,592 euros in 2021 and 2,855 euros in 2022, an increase of 263.6 euros on average. There are significant differences depending on the level of household expenditure, however. Those situated in the first decile, whose average adjusted expenditure amounted to 6,070.6 euros, bore 671.3 euros of VAT in 2022, annual growth of 45.2 euros. Note that this decile includes households that spend an average of 500 euros a month. Meanwhile, those encompassed by the last decile, whose average adjusted expenditure tops 62,500 euros, bore 7,256.2 euros of VAT in 2022, annual growth of 490.5 euros. Between the first and last deciles, therefore, the difference in VAT borne in 2022 amounted to around 450 euros. The figures imply an increase of close to 400 euros for a standard household with adjusted expenditure similar to average income in Spain in 2022 (32,300 euros). In relative terms, the average growth in VAT revenue was 10.2% in 2022, with the peak recorded in the households included in the sixth decile (12.5%). Albeit not strictly comparable, that growth of 10.2% is slightly lower, although in line, with the increase of 13.4% indicated in the statistics compiled by the tax authority (AEAT, 2023) for total VAT receipts.

Exhibit 3 **VAT revenue induced by inflation (Ri) in 2021 and 2022**



Source: INE (2022, 2023) and author's own elaboration.

Table 2 **Distribution of the VAT tax burden by decile of adjusted expenditure in 2021 and 2022**

Decile	Deciles of adjusted expenditure Average in 2022 Euros	Total revenue (Rt)				Revenue attributable to inflation (Ri)			Cumulative Euros (5) + (6)	Relative impact % (7)/(3)
		2021 Euros (1)	2022 Euros (2)	Δ		2021 Euros (5)	2022 Euros (6)	Δ		
				Euros (3)	% (4)			Euros (7)		
1	6,070.6	626.1	671.3	45.2	7.2	30.3	58.9	28.6	89.2	63.3
2	10,405.9	1,033.7	1,133.9	100.2	9.7	42.0	95.6	53.6	137.6	53.5
3	13,536.5	1,337.3	1,465.1	127.8	9.6	50.6	118.7	68.1	169.4	53.3
4	16,556.0	1,659.5	1,801.3	141.8	8.5	59.3	147.2	87.9	206.5	62.0
5	19,824.9	1,965.4	2,195.7	230.3	11.7	66.5	175.2	108.7	241.7	47.2
6	23,330.5	2,313.1	2,603.1	290.0	12.5	76.2	202.5	126.3	278.7	43.6
7	27,563.1	2,763.3	3,094.2	330.9	12.0	87.3	240.2	152.9	327.5	46.2
8	32,916.4	3,287.7	3,695.9	408.2	12.4	97.4	280.1	182.8	377.5	44.8
9	40,859.5	4,167.8	4,636.5	468.7	11.2	115.5	341.4	225.9	456.9	48.2
10	62,569.0	6,765.7	7,256.2	490.5	7.2	169.0	515.7	346.7	684.7	70.7
	25,362.3	2,592.2	2,855.8	263.6	10.2	79.4	217.6	138.2	297.0	52.4

Source: INE (2022, 2023) and author's own elaboration.

The average VAT burden generated specifically by the impact of inflation (Ri) was 79.4 euros in 2021, ranging between 30.3 euros in the first decile and 169 euros in the last decile. In 2022, the average increased to 217.6 euros, coming in at 58.9 euros for the 10% of households that spent the least and 515.7 euros for the 10% that spent the most. By comparison, the average VAT burden induced by inflation was 2.74 times higher in 2022 than in 2021. As noted above, the average rate of VAT barely changed between 2022 and 2021 despite the fact that inflation was nearly three times higher in 2022 and adjusted expenditure increased by 10.3%. [2] In cumulative terms, between 2021 and 2022, the increase in the tax burden attributable exclusively to inflation averaged 297.0 euros per household. That tax bill ranged between 89.2 euros in the first decile and 684.7 euros in the last one. The cumulative increase for a standard household with adjusted expenditure similar to average income in Spain in 2022 was close to 350 euros. [3]

The VAT induced by inflation increased by an average of 138.2 euros between 2021 and 2022. That increase is greater the higher the

> "The average VAT burden induced by inflation was 2.74 times higher in 2022 than in 2021."

> “On average, of the 263.4 euro increase in the VAT borne by Spanish households in 2022, 138.2 euros was the direct result of inflation.”

level of adjusted household expenditure: from 28.6 euros in the first decile to 346.7 euros in the last decile. The last column in Table 2 shows that, on average, 52.4% of the increase in revenue in 2022 was shaped by the impact of inflation, which is slightly lower, albeit in line, with the 60.6% estimated by AIReF (2022) for total VAT revenue. This value helps understand the extraordinary growth in VAT revenue in 2022, which was amplified by the highly favourable inflation tailwind. [4] On average, of the 263.4 euro increase in the VAT borne by Spanish households in 2022, 138.2 euros was the direct result of inflation.

Cumulative VAT attributable to inflation by region and socio-economic category in 2021 and 2022

By region, Table 3 provides the average VAT burden attributable to inflation. The data provided refer to the cumulative impact between 2021 and 2022. The regions have been ordered from highest to lowest VAT burden. Table 4 replicates the calculations by the size of the municipality where the households reside and household structure, the level of education of the breadwinner and relative spending levels. By region, the highest cumulative incremental tax burden was borne in Navarre, at 341.8 euros; this region ranks highest in adjusted expenditure and also presents slightly above-average cumulative growth in HCPI (12.4% *versus* 12.1%). At the other end of the spectrum lies the Canary Islands which presents the lowest cumulative additional revenue value (240.7 euros), ranks second-to-last in adjusted expenditure, and reports considerably below-average price growth (10.9% *versus* 12.1%). The cumulative incremental VAT induced by inflation is higher in households living in smaller-sized municipalities. This pattern of a more pronounced impact on households in rural areas holds irrespective of the age of the breadwinner (over or under the age of 65) or the fact of having minors living in the household. At any rate, the differences between each of the categories of households are very small. For example, in households over the age of 65, the difference between those living in urban *versus* rural areas is less than 25 euros on average (169.1 euros *versus* 147.6 euros).

The cumulative impact on VAT increases in line with the level of education of the breadwinner, used as a proxy for household financial wherewithal. The cumulative average is close to 400 euros for households where the breadwinner holds a PhD and under 240 euros in households without the equivalent of primary schooling. Lastly, we provide calculations for the VAT borne for different levels of spending relative to the minimum wage in force in 2023 (currently 15,120 euros per annum). The data confirm that the cumulative inflation impact is an increasing function of expenditure, ranging from 127.8 euros on average for households that spend less than 15,120 euros per annum to 1,262.7 euros for households whose average annual exceeds 105,000 euros.

> “The cumulative incremental VAT induced by inflation is higher in households living in smaller-sized municipalities and in rural areas, although irrespective of the age of the breadwinner or the fact of having minors living in the household.”

Table 3

Cumulative VAT induced by inflation between 2021 and 2022 ordered from highest to lowest values

Spanish region	Average adjusted expenditure 2022	Cumulative HCPI 2021-22	Average rate 2022	Cumulative VAT due to inflation, 2021-2022					
				Average	p25	p50	p75	p95	p75-p25
Navarre	27,904.4	12.4	14.8	341.8	165.2	279.4	444.4	820.2	279.2
Galicia	26,318.7	13.3	15.1	340.0	158.4	271.0	447.3	842.9	288.9
Murcia	26,807.0	12.4	15.0	330.9	161.3	270.6	429.2	817.1	267.9
Castile & Leon	24,279.4	13.8	14.9	324.8	154.7	268.6	438.1	768.9	283.4
Aragon	26,029.7	12.4	14.7	315.9	156.9	259.9	406.2	772.3	249.3
Castile-La Mancha	22,633.1	14.6	15.2	311.8	146.0	255.1	413.4	750.4	267.4
Madrid	29,054.7	10.7	14.9	301.1	145.8	237.6	387.6	741.0	241.8
Extremadura	21,927.1	13.5	14.8	293.5	134.5	237.7	384.9	731.9	250.4
Balearic Islands	27,094.2	11.2	15.1	291.3	143.1	236.2	384.7	710.9	241.6
Andalusia	23,951.9	12.3	14.8	288.6	139.1	234.3	376.3	693.7	237.2
Asturias	24,348.0	12.3	14.8	288.6	133.9	222.6	378.5	728.1	244.6
Cantabria	23,260.7	12.1	15.0	286.9	132.7	227.3	378.6	714.9	245.9
La Rioja	24,455.8	12.2	14.8	286.3	143.4	230.3	366.1	691.1	222.7
Basque region	27,265.9	10.6	14.6	284.2	141.9	231.5	370.6	694.1	228.7
Catalonia	27,045.8	10.9	14.9	280.6	132.7	225.9	364.9	690.4	232.2
Valencia	24,156.8	11.6	14.9	279.7	137.4	228.5	363.9	671.2	226.5
Ceuta	26,622.8	11.0	14.4	278.7	127.3	217.4	359.4	745.9	232.1
Melilla	22,324.1	11.4	14.4	241.8	98.8	189.3	301.6	644.0	202.8
Canary Islands	22,513.7	10.9	14.8	240.7	112.3	195.3	321.3	585.1	209.0
	25,362.3	12.1	14.9	297.0	141.3	238.8	388.4	730.7	247.1

Source: INE (2022, 2023) and author's own elaboration.

Table 4 **Impact of inflation by socio-economic category, 2022**

Rank	Adjusted expenditure Average in 2022 (1) Euros	Average VAT rate 2022 (2) %	Cumulative HCPI 2021-22 (3) %	Inflation-induced VAT by household 2021 (4) Euros	Inflation-induced VAT by household 2022 (5) Euros	Cumulative 2021-22 (4) + (5) Euros
Size of the municipality of residence of the household						
> 100,000 inhabitants	25,906.0	14.83	10.7	71.0	201.4	272.4
50,000 - 100,000 inhabitants	25,881.2	14.90	11.5	79.3	210.1	289.4
20,000 - 50,000 inhabitants	25,434.4	14.91	11.9	80.2	217.6	297.8
10,000 - 20,000 inhabitants	25,411.1	14.86	12.6	85.0	226.6	311.6
< 10,000 inhabitants	24,170.1	14.88	14.4	90.0	242.7	332.7
Over the age of 65 and population density						
Urban	14,079.5	14.82	11.2	41.2	106.4	147.6
Intermediate	12,358.9	14.67	13.4	44.7	115.9	160.6
Rural	10,909.0	14.42	17.3	49.9	119.2	169.1
Under the age of 65 and population density						
Urban	27,128.2	15.00	10.8	75.5	218.4	293.9
Intermediate	25,917.3	15.06	12.1	83.2	236.8	320.0
Rural	25,327.5	15.18	14.4	92.7	261.7	354.4
Couple with two children under the age of 16 and population density						
Urban	34,961.4	14.88	10.6	91.0	271.5	362.5
Intermediate	31,963.8	15.12	11.9	105.5	279.4	384.9
Rural	30,084.0	15.32	13.4	104.3	302.3	406.6
Level of education						
Illiterate	13,902.1	13.84	14.2	60.0	132.8	192.8
Primary education	17,167.5	14.42	13.9	75.4	162.1	237.5
Second level	25,311.6	14.90	11.7	78.8	213.5	292.3
240-credit degree	30,226.9	15.07	11.2	85.8	250.6	336.4
PhD	35,725.1	15.39	10.6	92.3	300.3	392.6
Spending level relative to the minimum wage						
Up to 1x the min. wage	9,418.1	14.72	13.6	41.2	86.6	127.8
1x - 2x the min. wage	20,456.7	14.72	12.0	73.8	179.5	253.3
2x - 3x the min. wage	34,032.2	14.97	11.0	107.6	288.5	396.1
3x - 4x the min. wage	47,726.6	15.25	10.5	148.4	399.2	547.6
4x - 5x the min. wage	61,953.0	15.52	10.1	182.8	507.9	690.7
5x - 6x the min. wage	75,162.4	15.90	9.7	211.7	621.4	833.1
6x - 7x the min. wage	89,641.9	15.96	9.6	234.4	735.4	969.8
Over 7x the min. wage	122,495.3	16.56	9.0	288.4	974.3	1,262.7

Source: INE (2022, 2023) and author's own elaboration.

Notes

[1] Among other items, meat, fish, all processed foods, public transportation, and water carry the reduced rate. All services, including energy services, are also taxed at the reduced rate.

[2] That increase in adjusted expenditure is lower, although in line, with the 15.0% growth in final spending subject to VAT gleaned from the tax authority's statistics (AEAT, 2023).

[3] The reduction in the rate of VAT on food in effect since 2023 is expected to reduce households' average tax bill by around 100 euros per annum (Romero-Jordán, 2023b). That tax relief is roughly equivalent to one-third of the cumulative additional VAT burden induced by inflation.

[4] By way of comparison, according to the tax authority (AEAT, 2023), VAT receipts increased by 1.9% with CPI at 0.7% versus, for example, revenue growth of 13.9% in 2022 with headline inflation at 8.4%.

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Recent key developments in the area of Spanish financial regulation

Prepared by the Regulation and Research Department of the Spanish Confederation of Savings Banks (CECA)

Royal Decree-law 5/2023 in support of the impact of the war and other situations of vulnerability (published in the *Official State Journal* on 29 June 2023)

This Royal Decree-law introduces the following changes in the financial arena:

I. Structural changes in corporations

It transposes Directive (EU) 2019/2121, known as the Mobility Directive, in order to regulate structural changes, both domestic and crossborder, in limited liability companies taking the form of conversions, mergers, divisions or the universal transfer of assets and liabilities. It also repeals Law 3/2009 (3 April 2009) on structural changes in corporations.

It introduces provisions regarding limitations and exclusions applicable to the various regulated structural change transactions, common provisions applicable to all structural changes and specific provisions for each different type of structural change.

This new regime likewise applies to conversion, merger, division and universal transfer of asset and liability transactions between credit institutions, without prejudice to those entities' specific legislation.

As for corporate enterprises, it amends Royal Legislative Decree 1/2010 in order to eliminate the international transfer of a company's registered office (now known as a crossborder conversion) from the powers reserved to shareholders in general meeting and foster shareholder and creditor protection.

II. Covered bonds

Elsewhere, it amends the covered bond regulatory framework enacted via Royal Decree-law 24/2021 as follows:

- The overcollateralisation requirement;
- The rules for valuing the assets comprising the cover pool;
- The rules for managing the addition and removal of loans to/from the pool;
- Loan restructuring authorisation by the cover pool monitor whenever required by a mandatory regulation;
- The procedure to be followed by the special administrator in the event that the liabilities in the covered bond programme are lower than the assets;
- Clarification with respect to the cover pool monitor registration regime; and,
- The penalty regime related with the activities undertaken by the external cover pool monitor.

III. Right to be forgotten

A provision has been added to Spain's General Consumers and Users Defence Act (Royal Legislative Decree 1/2007) to annul clauses that exclude one of the parties to a contract on account of having HIV/AIDS or other health conditions. It likewise annuls clauses that exclude one of the parties for having had cancer prior to entering into the contract or legal arrangement five years after the end of treatment without subsequent relapse.

Irrespective of the sector and prior to execution of the consumer agreement, a consumer may not be asked to provide cancer-related information from five years after the end of treatment without subsequent relapse.

Elsewhere, Law 50/1980 (8 October 1980), on insurance contracts, specifies that people taking out life insurance policies are not obliged to disclose whether they or the insured parties have had cancer from five years after the end of treatment without subsequent relapse and prohibits all contracting discrimination or restrictions on such grounds. Lastly, it is forbidden to discriminate on grounds of having HIV/AIDS or having survived cancer or other health conditions.

IV. Evictions and repossessions

The legislation extends some of the protective measures in situations of housing vulnerability that were introduced via Royal Decree-law 11/2020. Specifically, it extends the suspension on eviction and repossession procedures (in the instances and following the steps already established) until 31 December 2023 and the scope for landlords and property owners to apply for the compensation contemplated in Royal Decree-law 37/2020 until 31 January 2024.

V. Credit cooperatives

It clarifies the regime applicable to credit cooperatives such that: (i) members whose reimbursement has been refused by the cooperative's government body will not have preference in the entity's bankruptcy or liquidation or in the allocation of its corporate assets or in the dividend payment order, and, (ii) the mandatory reserve fund set up by the cooperative can assume losses in full.

It sets out the regime for amending credit cooperatives' bylaws and limits members' right of separation.

VI. Regular home purchase support measures

Approval of surety lines for a period of up to 15 years with partial coverage by the state for a maximum amount of up to 2.5 billion euros for youths up to the age of 35 and families with minors in their care that take out mortgages with financial institutions for the purchase of their first house for regular and permanent residence.

VII. Other changes

- Law 10/2010 (AML/CTF): regulates access to and use of the Central Beneficial Owners Register.
- Law 10/2014 (on the structuring, supervision and capital adequacy of credit institutions): adds one year to the deadline for ruling on penalty proceedings applicable to credit institutions.
- Royal Legislative-Decree 1/2020 (Spain's bankruptcy act): addition of structural modifications to agreement proposals.
- Royal Decree law 20/2021: introduction of a new window, until 31 July 2023, for applying for the moratorium on principal and interest payment obligations for secured and unsecured loans or credit extended to people affected by the seismic movements and volcanoes affecting La Palma Island.

VIII. Effectiveness

This new piece of legislation took effect the day after its publication with the exception of the provisions transposing the European Mobility Directive, which took effect one month after its publication, and the provisions applicable to accessing and using the Beneficial Owners Register, which will take effect in conjunction with the implementing regulations.

Royal Decree 668/2023 amending the pension plan and fund regulations to foster occupational pension schemes (published in the *Official State Journal* on 20 July 2023)

This piece of legislation amends the pension plan and fund regulations enacted via Royal Decree 304/2004 and completes implementation of Law 12/2022 (30 June 2022) regulating occupational pension schemes.

The key developments are:

- Open-ended pension funds. Pension fund classification has been simplified into two categories: occupational pension schemes and open-ended pension funds. The idea behind the latter is to channel investment of assets of other pension plans in the same category as the open-ended fund, together with the investment of the assets of the plan and any affiliated pension plan(s). It also regulates the particulars for changes made subsequent to the creation and inscription of open-ended publicly sponsored occupational pension schemes and itemises the conflicts of interest applicable to the members of the Special Monitoring Committee.

- Simplified occupational pension schemes. The new legislation regulates aspects such as their merger into occupational pension funds, who shall be considered sponsors and investors, the related specifications, the terms for mobilising investor and beneficiary rights and the control committee's functions.

- It also regulates the transformation of previously existing occupational pension schemes or other company retirement and savings plans into a simplified occupational pension scheme and the timeline for adapting to the corresponding requirements (12 months from ratification of the transformation resolution), as well as the transformation of affiliated pension plans.

- It sets up the Common Digital Platform by way of digital tool for the provision of general information about the publicly sponsored occupational pension scheme (FPEPP for its acronym in Spanish) system to any person or entity, along with confidential information for investors, beneficiaries, sponsors, special control committees and monitoring committees. The security policy and technical aspects will be determined at a later point in time.

- It lists the information to be provided by monitoring and special control committees.

- It provides for the outsourcing of the administrative activities of the manager to the pension fund depository.

- It qualifies that the general limit on management and depository fees will apply jointly when the pension fund or pension plan invests in private equity firms or closed-end collective investment undertakings that belong to the same financial group as the manager. In the event they do not form part of the same group, management companies may charge a fee on those investments up to a maximum limit, in addition to the general limit, of 0.55% of the value of the capital accounts to which they are to be charged.

- It specifies which management expenses can be passed on to the pension funds and which cannot.

- Occupational pension scheme sponsors must inform the management company about which investors are earning 60,000 euros or less at the time of making their first contribution for the year and subsequently if there are any changes with respect to that limit.

- Contribution regime:

  - The legislation clarifies that contributions made by natural or legal persons that are part of sponsorship programmes or campaigns on behalf of their investor clients will be considered direct

contributions to individual plans by the investors, which will be granted title to the contributions made.

- In the event that in a given year contributions to an occupational scheme coincide with contributions by self-employed professionals to simplified occupational pension schemes, the contributions made by the self-employed professionals to the simplified scheme must be withdrawn first.

- Changes have been made to the flexible retirement, active retirement and partial retirement regime with respect to pension plan contributions.

- The legislation contemplates three-yearly reviews of defined contribution pension plans that are part of a pension fund with over 25 million euros of assets under management.

- It stipulates that an occupational pension scheme will not be discriminatory when all of the staff employed by the sponsor are included or eligible for inclusion in the scheme and that sponsors can only require one month's employment for eligibility (down from the previous two years). Individual pension plans sponsored exclusively for beneficiaries will not be considered discriminatory.

- With respect to control committees, the new legislation: (i) modifies the frequency of occupational pension scheme committee meetings (to at least twice a year); (ii) permits the sponsoring or control committee of jointly managed pension plans to designate representatives of the most important employer and union associations as members of the control committee; and, (iii) designates the pension funds to which a plan's capital account must be transferred if the FPEPP's managed assets not reach the minimum threshold.

- With respect to pension fund investments, the changes introduced affect: (i) the investments considered eligible; (ii) the diversification, dispersion and consistency criteria; (iii) the contents of the investment policy principles statement, the rules for any changes and their communication to the depositary; (iv) investor diversification and dispersion limits in relation to the investing fund's assets and in the private equity investment; and, (v) sustainability factors.

- Other changes:

  - For occupational pension scheme purposes, board directors and administrators that contribute to the social security under the ordinary regime are considered employees.

  - Co-proprietors in pensions schemes sponsored by a community of property and partners in civil society organisations included in the social security's self-employed contribution regime are also deemed investors.

  - The minimum term of employment required for joining an occupational pension scheme has been reduced from two years to one month with entitlement for employment of less than one month or as soon as employment at the sponsor starts permitted under any occupational scheme.

This Royal Decree took effect the day after its publication except for the obligation regarding the frequency of pension plan control committee meetings, which will take effect in the following year.

Royal Decree 609/2023 creating the Central Beneficial Owners Register (published in the *Official State Journal* on 12 July 2023)

This Royal Decree finalises transposition of Directive (EU) 2018/843 (amending Directive (EU) 2015/849 (AMLD)) and writes into Spanish law the contents of the European Court of Justice's Judgement on the matters addressed in the Joined Cases C 37/20 and C 601/20 with respect to that Directive. It took effect on 19 September.

The purpose of this legislation is to create the so-called Central Beneficial Owner Register as a single nationwide, electronic and centralised register designed to gather and provide certain information about the beneficial owners of all Spanish legal persons and unincorporated entities or structures whose effective management headquarters or core business is located in Spain or which are administered or managed by natural or legal persons resident or established in Spain.

This new Register will centralise the beneficial ownership information available in: (i) the Registers of Foundations, Associations, Cooperatives and Agricultural Processing Companies and any others that may contain information regarding the legal persons or entities on record; (ii) the beneficial owner database managed by the General Counsel of Notaries; and (iii) the Commercial Registry managed by the Spanish Association of property and company registrars.

The foundations, associations and in general all legal persons, trusts and other legal arrangements having a structure or functions similar to a trust that have not reported their beneficial owners via one of the above registers or another equivalent register have one month at most to electronically report their beneficial ownership to the new Register and subsequently update any changes in ownership structures. An annual declaration must in any event be made every month of January and in the event there have been no changes in beneficial ownership, the entities must file a statement confirming that fact.

Registers with powers to collect beneficial ownership information must make the technological adjustments needed to have sent or otherwise provided the Central Register with its first full submission of the beneficial ownership data pertaining to them within a maximum period of nine months. After that first dispatch, additions and other changes to their databases must be updated in the Central Register daily. Until the first data upload is completed and while the access fees and their form of payment is approved, the current beneficial ownership reporting process will remain in place. The obligation to report beneficial ownership does not extend to funds but does apply to their management companies.

In short, the key characteristics of the new Register are:

- Information to be provided. A list of the data pertaining to the beneficial owners reported electronically and separately by the governing bodies of the legal person to the Register for inscription.

- Access. The information will be accessible, free of charge and with no restrictions to the competent AML/CTF authorities in Spain and other EU Member States, to notaries, to registrars and to their centralised prevention bodies. Other bound parties and persons or organisations with a legitimate interest must pay the stipulated fee to access the Register.

  Access will be electronic only and require prior identification of the applicant, certification of the capacity in which access is being applied for and proof of legitimate interest justifying access to the Register's contents.

- Safe-keeping. Register information will be updated and archived for a period of 10 years after discontinuation of beneficial ownership. If the information provided comes into conflict with other information, the most relevant data principle will apply on the basis of either its date or reliability.

- Management. The Ministry of Justice is tasked with management of the Register, controlling access to its information contents and ensuring interconnection with the central European platform.

Lastly, Royal Decree 609/2023 amends Royal Decree 304/2014 in order to introduce the obligation to identify and verify beneficial ownership using the Central Beneficial Owner Register.

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Spanish economic forecasts panel: September 2023*

Funcas Economic Trends and Statistics Department

GDP growth estimate for 2023 increased one tenth to 2.2%

According to preliminary data, GDP grew by 0.4% in the second quarter, which was one tenth more than anticipated by the panelists. Domestic demand contributed 1.8 percentage points to growth, while the foreign sector declined by 1.4 points. Along these lines, the indicators showed strong performance during the second quarter, many of which remained the same for July, but have performed more poorly in August suggesting a change in trend.

Thus, the consensus points to a growth of 0.2% in the third quarter, followed by an increase of three tenths of a percentage point in the fourth quarter (Table 2). For the year overall, the average estimate is 2.2%, one tenth of a percent higher than the previous forecast (Table 1). [1]

As for the composition of GDP growth for 2023, the contribution of domestic demand will be 1.2 percentage points (four tenths more than in the previous Panel), while that of the foreign sector will be one percentage point (three tenths less than in the previous forecast). Predictions for investment and consumption, both private and public, have been revised upwards, while those for exports and imports have been reduced by 1.4 and 0.7 percentage points, respectively (Table 1).

Forecast for 2024 remains at 1.8%

The panelists' GDP growth forecast for 2024 remains unchanged since July, at 1.8%, situated below the predictions of major national and international organizations (Table 1).

Regarding the composition of growth for 2024, the contribution of the foreign sector will be slightly negative, while domestic demand will add 1.9 percentage points – one tenth of a percentage point above the previous Panel. Both household consumption and investment are expected to grow faster than in 2023, while public consumption will grow less.

The inflation forecast for 2024 was raised by one tenth

The overall inflation rate reached a low of 1.9% in June, and then subsequently rose, as anticipated, again in July and August. Overall inflation is expected to continue to rise for the remainder of the year.

The forecast for the average annual overall inflation rate in 2023 is 3.6%, with the core rate at 5.7%, with neither forecast changing since the previous Panel. As for 2024, the forecast was revised upwards to 3% for the overall rate, while the core rate remains at 3.1%.

The expected general indices of year-on-year rates for December 2023 and December 2024 are 3.8% and 2.4%, respectively (Table 3).

Employment will continue to grow, making further inroads into unemployment

According to Social Security enrollment figures, the seasonally adjusted employment growth rate in July and August was slower than in the spring months, mostly due to a loss of momentum in the services sector.

However, given the stronger-than-expected spring, employment growth forecasts have been revised upward to 1.9% this year and 1.6% next. Meanwhile, forecasts for the unemployment rate have been revised downward, and Panelists now expect an average annual rate of 12.3% in 2023 and 12% in 2024. Together with exports and imports, these two variables have experienced the largest revisions in this Panel.

The implicit forecast for productivity and unit labor cost (ULC) growth is based on forecasts for GDP, employment and wage growth. Productivity per full-time equivalent job will grow by 0.3% this year and by 0.2% in 2024. Meanwhile, ULCs will increase by 3.6% in 2023 and 3.3% in 2024.

Historic trade surplus

The current account recorded a positive balance up to June of 18.981 million euros, 2.7% of GDP, the best figure for this period in the entire historical series. This favorable result is attributable to the historically high trade surplus that more than compensates for the deterioration of the income balance.

The Panel forecast for the current account surplus rose to 1.6% of GDP in 2023 and remains at 1.1% of GDP for 2024.

Public deficit forecast maintained

Public administrations, excluding local governments, recorded a deficit of 30.571 million euros up to June of this year, compared to 32,270 million euros in the same period of the previous year. This improvement was due to a 22.861 million euros increase in revenue, higher than the 21.162 million increase in expenditure.

The Panel foresees a reduction in the deficit of the public administrations in 2023 and 2024. Specifically, the public deficit is expected to reach 4.1% of GDP this year and 3.6% next. These figures surpass the expectations of the government, the Bank of Spain and OECD (Table 1).

Deterioration of the external environment, especially in the EU

Signs of a weakening European economy have become more entrenched since the previous Panel. The European Union's GDP stagnated in the second quarter, dragged down by the recessionary trend hitting some of the most industry-heavy economies, such as Germany, Austria, Italy and the Netherlands. The available indicators for the third quarter point to a further worsening: the eurozone PMI has moved into negative territory, while expectations for the coming months cool.

The outlook has been affected by the cycle of interest rate hikes, the downturn in international trade and the bursting of the credit bubble in China, with its global spillovers, particularly in industry. A more recent factor is the rebound in energy prices as a result of OPEC's oil supply restrictions and the labor dispute that paralyzed liquefied gas production in Australia. Brent crude has risen by 15% compared to the previous panel, and the TTF European gas market benchmark has increased by 5%. Rising energy prices and the depreciation of the euro are also hampering the disinflation process.

Nevertheless, the European Commission forecasts growth of 0.8% in 2023 for the eurozone as a whole (three tenths of a percentage point less than in the spring forecast) and 1.4% in 2024 (also three tenths of a percentage point less). In the US, the economy is holding up better, although the latest trends also point to a slowdown.

All this has led to greater pessimism in the Panel's assessments of the external environment (Table 4). Compared to the previous consensus, there is an increase in the number of opinions that consider this environment to be unfavorable, both in the EU and beyond. And virtually all analysts predict that this situation will persist or deteriorate in the coming months.

Interest rates will remain at higher levels than anticipated during the previous forecast period

At its July meeting, the ECB raised its main interest rates by 25 basis points and continued with liquidity tightening measures (TLTRO repayments and divestment of government bond holdings). While the total CPI is moderating, its underlying components continue to advance at a pace above the price stability target, motivating the process of monetary tightening. Moreover, the central bank is monitoring the impact of the euro's depreciation, the rise in energy costs and the possible emergence of second-round effects in terms of wages in the face of tight labor markets. Nevertheless, Christine Lagarde also acknowledges that the monetary cycle is having an impact on the economy. This may open the door to a pause in rate hikes, which would nevertheless remain at a high level for a prolonged period of time.

The Panelists expect rates to remain at elevated levels for longer than anticipated in July. Despite the cooling economic outlook, a significant decline in the ECB's deposit facility is not expected until the second half of next year. At the end of 2024, the deposit facility would still stand at around 3.25%, when it was below 3% in the previous Panel.

Market interest rates would follow a similar trend. At the end of 2024, the Euribor would still exceed 3.5% (two tenths more than in the July assessment) and 10-year Spanish government bonds would be trading above 3.3% (one tenth more).

Euro depreciation against the dollar

The dollar has buttressed its safe-haven status in the wake of strong turbulence in China and less resilience in Europe to interest rate hikes. The result is a depreciation of the euro against the US currency (-5% approximately compared to the July Panel). However, most panelists believe that the lost ground will be regained in the coming quarters (Table 2), so that by the end of 2024 the euro will reach levels close to values anticipated in the previous Panel.

Little change in macroeconomic policy assessments

Regarding macroeconomic policy, panelists' assessments remain practically unchanged. Most continue to consider fiscal policy to be expansionary, and all believe that this policy should be more neutral or even restrictive in relation to the economic cycle (Table 4). Opinions are also almost unanimous on the current restrictive nature of monetary policy, which is generally the appropriate stance given the persistence of the inflationary outbreak.

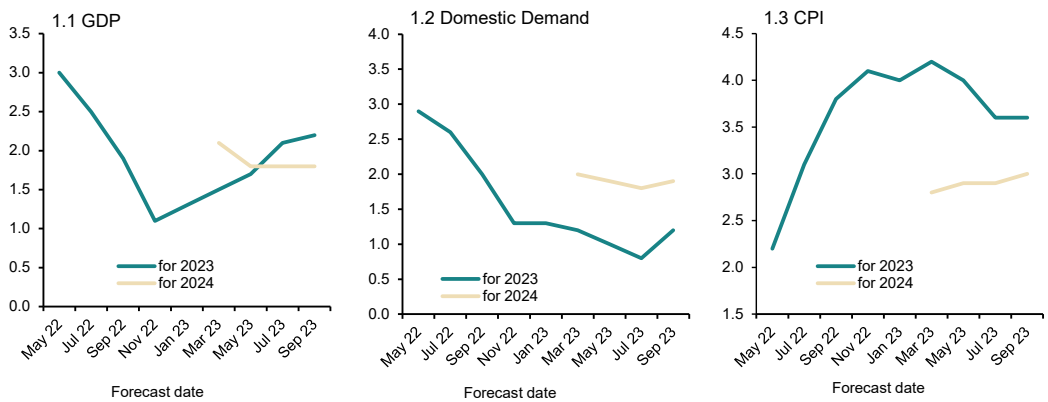
Notes

[1] It is noteworthy to highlight that this Panel was launched prior to the release of the GDP revisions from the National Statistics Institute (INE).

Exhibit 1

Change in forecasts (Consensus values)

Annual rates in %



Source: Funcas Panel of Forecasts.

** The Spanish Economic Forecasts Panel is a survey run by Funcas which consults the 19 research departments listed in Table 1. The survey, circulated since 1999, is a bi-monthly publication issued in the months of January, March, May, July, September and November. The responses to the survey are used to produce a "consensus" forecast, which is calculated as the arithmetic mean of the 19 individual contributions. The forecasts of the Spanish Government, the Bank of Spain, and the main international organizations are also included for comparison, but do not form part of the consensus forecast.*

Spanish economic forecasts panel: September 2023*

Funcas Economic Trends and Statistics Department

Table 1

Economic Forecasts for Spain – September 2023

Average year-on-year change, as a percentage, unless otherwise stated

	GDP		Household consumption		Public consumption		Gross fixed capital formation		GFCF machinery and capital goods		GFCF construction		Domestic demand[3]	
	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024
Analistas Financieros Internacionales (AFI)	2.2	1.6	0.7	2.0	2.2	2.3	3.8	4.2	0.1	4.8	6.3	3.5	1.7	2.5
BBVA Research	2.4	2.1	0.7	2.6	1.8	2.9	2.7	5.6	1.6	5.8	3.0	6.1	1.6	3.3
CaixaBank Research	2.3	1.7	0.5	2.0	1.9	1.3	3.3	3.5	-0.7	4.8	5.9	2.9	1.4	2.2
Cámara de Comercio de España	2.1	1.7	0.0	1.6	2.0	1.4	2.1	2.5	-1.2	2.0	3.5	3.0	1.1	1.7
Centro de Estudios Economía de Madrid (CEEM-URJC)	2.2	1.8	1.1	2.0	1.4	0.8	2.8	1.9	1.6	2.5	3.8	1.5	1.4	1.7
Centro de Predicción Económica (CEPREDE-UAM)	2.0	2.4	0.7	1.8	2.0	1.6	3.3	6.3	0.8	9.6	4.7	4.8	1.3	2.5
CEOE	2.0	1.4	0.0	0.8	1.3	0.9	2.0	2.5	-1.6	1.9	4.0	2.1	0.8	1.2
Equipo Económico (Ee)	2.4	1.9	0.6	0.9	1.2	0.9	3.0	4.5	1.8	4.7	3.4	4.3	1.1	1.6
EthiFinance Ratings	2.1	1.9	1.0	1.8	0.6	1.7	2.0	2.6	1.1	1.8	3.1	3.0	--	--
Funcas	2.2	1.6	0.1	1.4	0.9	0.8	1.0	2.0	2.0	2.1	1.1	1.5	0.6	1.3
Instituto Complutense de Análisis Económico (ICAE-UCM)	2.4	2.1	1.0	2.1	1.7	1.9	3.0	2.7	-1.0	2.3	5.6	2.5	1.5	1.9
Instituto de Estudios Económicos (IEE)	2.2	1.5	0.1	0.9	1.3	0.9	2.1	2.6	-1.4	2.1	4.1	2.2	0.9	1.3
Intermoney	2.2	2.1	0.3	2.5	1.0	1.2	1.8	3.6	0.9	3.5	2.7	3.8	0.7	2.3
Mapfre Economics	2.2	1.9	0.8	1.9	1.2	1.1	0.2	1.8	--	--	--	--	1.1	1.6
Oxford Economics	2.2	1.3	0.6	2.4	1.6	0.9	1.4	1.6	-3.0	1.3	4.0	0.3	1.1	1.4
Repsol	2.1	1.6	0.6	1.8	2.1	1.0	4.5	4.1	-0.3	2.1	8.0	5.7	1.3	1.6
Santander	2.2	1.3	0.6	2.0	1.9	0.8	3.3	5.4	-1.1	5.0	6.0	5.5	1.2	2.4
Universidad Loyola Andalucía	2.5	1.8	0.8	1.7	2.3	3.0	3.6	3.7	-1.0	2.1	4.6	1.1	1.8	1.5
CONSENSUS (AVERAGE)	2.2	1.8	0.6	1.8	1.6	1.4	2.5	3.4	-0.1	3.4	4.3	3.2	1.2	1.9
Maximum	2.5	2.4	1.1	2.6	2.3	3.0	4.5	6.3	2.0	9.6	8.0	6.1	1.8	3.3
Minimum	2.0	1.3	0.0	0.8	0.6	0.8	0.2	1.6	-3.0	1.3	1.1	0.3	0.6	1.2
Change on 2 months earlier[1]	0.1	0.0	0.2	0.0	0.4	0.1	0.9	0.2	-0.9	-0.2	1.9	0.1	0.4	0.1
- Rise[2]	7	2	5	5	10	8	10	9	1	3	10	6	9	6
- Drop[2]	3	8	3	6	1	4	1	2	8	6	0	4	0	5
Change on 6 months earlier[1]	0.7	-0.3	-0.4	-0.2	0.2	0.2	0.8	0.1	-1.0	-0.5	2.5	0.2	0.0	-0.1
Memorandum items:														
Government (April 2023)	2.1	2.4	2.1	3.0	1.9	0.9	0.9	5.0	--	--	--	--	1.7	2.9
Bank of Spain (June 2023)	2.3	2.2	0.2	3.3	0.6	0.8	1.7	4.1	--	--	--	--	0.6	2.8
EC (September 2023)	2.2	1.9	--	--	--	--	--	--	--	--	--	--	--	--
IMF (July 2023)	2.5	2.0	--	--	--	--	--	--	--	--	--	--	--	--
OECD (June 2023)	2.1	1.9	0.5	2.0	1.8	2.0	0.0	2.9	--	--	--	--	0.8	1.9

[1] Difference in percentage points between the current month's average and that of two months earlier (or six months earlier).

[2] Number of panellists revising their forecast upwards (or downwards) since two months earlier.

[3] Contribution to GDP growth, in percentage points.

Table 1 (Continued)

Economic Forecasts for Spain – September 2023

Average year-on-year change, as a percentage, unless otherwise stated

	Exports of goods & services		Imports of goods & services		CPI (annual av.)		Core CPI (annual av.)		Wage earnings[3]		Jobs[4]		Unempl. (% labour force)		C/A bal. of payments (% of GDP)[5]		Gen. gov. bal. (% of GDP)	
	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024
Analistas Financieros Internacionales (AFI)	2.5	0.3	1.2	2.4	3.5	3.0	6.0	3.4	4.1	4.2	2.1	1.4	12.4	12.4	2.4	0.8	-3.9	-3.7
BBVA Research	5.2	2.9	3.4	5.8	3.4	3.2	6.1	3.0	3.4	5.0	1.6	1.6	12.3	11.7	2.2	2.0	-4.2	-3.5
CaixaBank Research	3.1	0.3	0.9	1.4	3.4	3.4	6.0	3.1	3.1	3.3	1.6	1.3	12.3	11.8	1.0	0.7	-4.3	-3.5
Cámara de Comercio de España	3.1	1.2	0.5	1.1	3.8	2.8	6.3	3.4	--	--	1.8	1.2	12.7	12.5	0.7	0.3	-4.6	-3.8
Centro de Estudios Economía de Madrid (CEEM-URJC)	5.4	3.4	3.2	3.2	4.0	3.3	5.0	3.2	--	--	1.4	1.2	12.6	12.0	1.2	1.0	-4.1	-3.4
Centro de Predicción Económica (CEPREDE-UAM)	5.2	3.7	3.6	4.5	3.7	3.1	--	--	4.4	3.4	1.6	1.5	12.8	12.5	2.5	1.0	-4.2	-3.5
CEOE	6.4	3.3	3.4	3.0	3.5	2.8	6.2	3.1	4.0	2.9	1.7	1.0	12.5	12.4	1.2	0.8	-4.2	-3.8
Equipo Económico (Ee)	6.4	3.5	3.2	3.1	3.7	3.5	5.0	3.4	3.9	3.6	1.9	1.5	12.3	11.9	0.9	0.8	-3.9	-3.7
EthiFinance Ratings	6.3	3.8	0.1	4.1	3.2	3.3	4.3	2.6	--	--	--	--	12.4	12.0	1.0	1.0	-3.9	-3.8
Funcas	6.9	3.0	3.1	2.7	3.9	3.5	6.2	3.0	4.0	3.5	1.2	1.0	12.3	11.6	2.8	2.6	-4.3	-3.7
Instituto Complutense de Análisis Económico (ICAE-UCM)	4.8	4.5	2.7	4.2	3.5	2.8	5.7	3.2	--	--	1.8	1.4	12.3	11.7	0.5	0.6	-4.1	-3.5
Instituto de Estudios Económicos (IEE)	6.5	3.4	3.3	2.9	3.7	2.9	6.3	3.0	4.0	2.9	1.9	1.1	12.4	12.2	0.9	0.8	-4.3	-3.8
Intermoney	6.2	3.0	2.9	3.8	4.0	3.5	4.8	2.8	--	--	1.5	2.0	12.7	12.0	1.2	--	-4.0	-3.6
Mapfre Economics	4.5	2.0	1.7	1.9	3.4	2.5	5.8	3.5	--	--	--	--	12.2	12.5	2.4	1.7	-4.3	-3.4
Oxford Economics	4.1	2.0	1.1	2.3	3.6	2.1	6.2	2.4	--	--	--	--	12.1	11.7	2.5	1.7	-3.9	-3.7
Repsol	1.7	3.4	-0.5	3.5	3.9	3.5	6.3	3.7	4.0	3.0	2.2	2.6	12.0	11.3	0.9	0.5	-4.4	-3.5
Santander	3.4	1.1	1.6	4.1	3.4	2.7	4.3	2.7	--	--	2.7	2.8	12.0	12.1	--	--	--	--
Universidad Loyola Andalucía	3.8	1.9	1.6	1.8	3.7	2.0	6.1	4.0	--	--	2.8	2.6	12.0	11.4	2.4	1.1	-3.9	-3.7
CONSENSUS (AVERAGE)	4.7	2.6	2.0	3.1	3.6	3.0	5.7	3.1	3.9	3.5	1.9	1.6	12.3	12.0	1.6	1.1	-4.1	-3.6
Maximum	6.9	4.5	3.6	5.8	4.0	3.5	6.3	4.0	4.4	5.0	2.8	2.8	12.8	12.5	2.8	2.6	-3.9	-3.4
Minimum	1.7	0.3	-0.5	1.1	3.2	2.0	4.3	2.4	3.1	2.9	1.2	1.0	12.0	11.3	0.5	0.3	-4.6	-3.8
Change on 2 months earlier[1]	-1.4	-0.4	-0.7	-0.3	0.0	0.1	0.0	0.0	0.2	0.0	0.5	0.3	-0.3	-0.2	0.2	0.0	0.0	-0.1
- Rise[2]	2	2	0	3	4	5	5	5	4	2	8	4	1	2	4	2	0	1
- Drop[2]	9	8	11	7	3	1	4	2	0	0	1	3	11	10	3	3	6	5
Change on 6 months earlier[1]	1.5	-1.2	-0.6	-0.7	-0.6	0.2	0.2	-0.2	0.3	0.2	0.8	0.0	-0.6	-0.4	1.1	0.5	0.1	0.1
Memorandum items:																		
Government (April 2023)	1.5	2.5	0.7	3.9	--	--	--	--	--	--	2.1	2.3	12.2	10.9	--	--	-3.9	-3.0
Bank of Spain (June 2023)	7.1	2.2	3.2	4.0	3.2 [6]	3.6 [6]	4.1 [7]	2.1 [7]	--	--	1.7 [8]	1.8 [8]	12.2	11.5	--	--	-3.8	-3.4
EC (September 2023)	--	--	--	--	3.6 [6]	2.9 [6]	--	--	--	--	--	--	--	--	--	--	--	--
IMF (July 2023)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OECD (June 2023)	5.8	2.4	2.9	3.2	3.9 [6]	3.9 [6]	4.8 [6]	3.7 [6]	--	--	--	--	12.8	12.4	4.0	3.6	-3.5	-3.2

[1] *Difference in percentage points between the current month's average and that of two months earlier (or six months earlier).*

[2] *Number of panellists revising their forecast upwards (or downwards) since two months earlier.*

[3] *Average earnings per full-time equivalent job.*

[4] *In National Accounts terms: Full-time equivalent jobs.*

[5] *Current account balance, according to Bank of Spain estimates.*

[6] *Harmonized Index of Consumer Prices (HICP).*

[7] *Harmonized Index excluding energy and food.*

[8] *Hours worked.*

Table 2

Quarterly Forecasts – September 2023

	23-I Q	23-II Q	23-III Q	23-IV Q	24-I Q	24-II Q	24-III Q	24-IV Q
GDP[1]	0.5	0.4	0.2	0.3	0.5	0.5	0.6	0.6
Euribor 1 yr [2]	3.65	4.01	4.09	4.07	3.97	3.83	3.68	3.51
Government bond yield 10 yr [2]	3.43	3.40	3.53	3.55	3.47	3.42	3.37	3.34
ECB main refinancing operations interest rate [3]	3.50	4.00	4.34	4.40	4.32	4.16	3.99	3.73
ECB deposit rates [3]	3.00	3.50	3.83	3.92	3.84	3.69	3.55	3.29
Dollar / Euro exchange rate [2]	1.07	1.08	1.09	1.10	1.15	1.11	1.11	1.12

Forecasts in yellow.
[1] Qr-on-qr growth rates.
[2] End of period.
[3] Last day of the quarter.

Table 3

CPI Forecasts – September 2023

Year-on-year change (%)					
Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Dec-24
2.6	3.1	3.3	3.6	3.8	2.4

Table 4

Opinions – September 2023

Number of responses

	Currently			Trend for next six months		
	Favourable	Neutral	Unfavourable	Improving	Unchanged	Worsening
International context: EU	0	0	18	1	14	3
International context: Non-EU	0	2	16	0	15	3
	Is being			**Should be**		
	Restrictive	Neutral	Expansionary	Restrictive	Neutral	Expansionary
Fiscal policy assessment[1]	0	3	15	3	15	0
Monetary policy assessment[1]	15	2	1	13	5	0

[1] In relation to the current state of the Spanish economy.

Key Facts

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Economic Indicators

Table 1

National accounts: GDP and main expenditure components SWDA*

Forecasts in yellow

		GDP	Private consumption	Public consumption	Gross fixed capital formation			Exports	Imports	Domestic demand (a)	Net exports (a)
					Total	Construction	Equipment & others products				
		Chain-linked volumes. annual percentage changes									
2016		3.0	2.7	1.0	2.4	1.6	3.1	5.4	2.6	2.0	1.0
2017		3.0	3.0	1.0	6.8	6.7	6.9	5.5	6.8	3.1	-0.2
2018		2.3	1.7	2.3	6.3	9.5	3.4	1.7	3.9	2.9	-0.6
2019		2.0	1.1	1.9	4.5	7.2	1.8	2.2	1.3	1.6	0.4
2020		-11.2	-12.3	3.6	-9.0	-9.2	-8.8	-20.1	-15.0	-9.0	-2.2
2021		6.4	7.1	3.4	2.8	0.4	5.2	13.5	14.9	6.6	-0.2
2022		5.8	4.7	-0.2	2.4	2.6	2.2	15.2	7.0	2.9	2.9
2023		2.2	0.1	0.9	1.0	1.1	0.9	6.9	3.1	0.6	1.6
2024		1.6	1.4	0.8	2.0	1.5	2.6	3.0	2.7	1.3	0.3
2022	I	6.8	6.6	0.0	2.8	1.1	4.6	18.0	12.2	4.8	2.0
	II	7.2	4.9	-1.7	3.1	4.3	2.0	21.9	9.8	3.1	4.1
	III	5.4	5.3	-0.6	4.0	3.7	4.3	12.9	6.5	3.0	2.3
	IV	3.8	2.1	1.6	-0.4	1.2	-2.2	8.7	0.1	0.8	3.1
2023	I	4.2	2.6	1.2	0.0	3.5	-3.6	9.6	1.9	1.3	2.9
	II	2.2	2.2	4.1	2.0	4.1	-0.4	-0.8	-0.4	2.3	-0.1
		Chain-linked volumes. quarter-on-quarter percentage changes									
2022	I	0.3	-0.1	-0.2	2.7	-0.7	6.3	3.7	2.2	-0.3	0.6
	II	2.5	1.4	-1.3	0.0	3.0	-3.1	6.9	0.2	0.0	2.5
	III	0.5	2.5	1.4	0.7	-0.3	1.7	-2.6	-0.7	1.3	-0.8
	IV	0.5	-1.5	1.6	-3.6	-0.7	-6.6	0.6	-1.6	-0.3	0.8
2023	I	0.6	0.3	-0.5	3.1	1.6	4.8	4.6	4.1	0.2	0.4
	II	0.5	1.0	1.6	1.9	3.6	0.1	-3.2	-2.1	1.0	-0.5
		Current prices (EUR billions)	Percentage of GDP at current prices								
2016		1,114	58.2	19.1	18.0	8.6	9.4	33.9	29.9	96.0	4.0
2017		1,162	58.3	18.7	18.7	9.0	9.7	35.1	31.5	96.4	3.6
2018		1,204	58.1	18.7	19.4	9.7	9.7	35.1	32.4	97.3	2.7
2019		1,246	57.4	18.9	20.0	10.4	9.7	34.9	32.0	97.1	2.9
2020		1,119	56.1	22.0	20.4	10.5	9.9	30.8	29.3	98.6	1.4
2021		1,222	56.2	21.2	20.1	10.3	9.8	34.2	33.2	99.0	1.0
2022		1,346	56.9	20.4	20.1	10.5	9.5	40.9	39.7	98.8	1.2
2023		1,421	55.5	20.0	19.7	10.2	9.5	43.6	39.8	96.2	3.8
2024		1,493	55.4	19.8	19.8	10.2	9.7	44.2	40.3	96.0	4.0

**Seasonally and Working Day Adjusted.*

(a) Contribution to GDP growth.

Source: INE and Funcas (Forecasts).

Chart 1.1 - GDP

Level, 2015=100

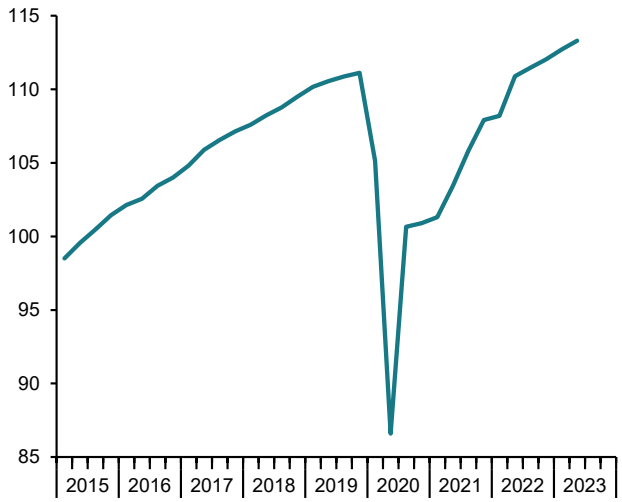


Chart 1.2 - Contribution to GDP annual growth

Percentage points

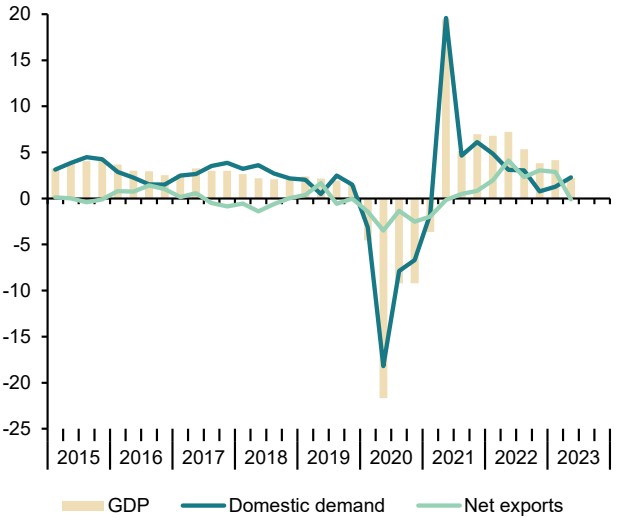


Chart 1.3 - Consumption

Level, 2015=100

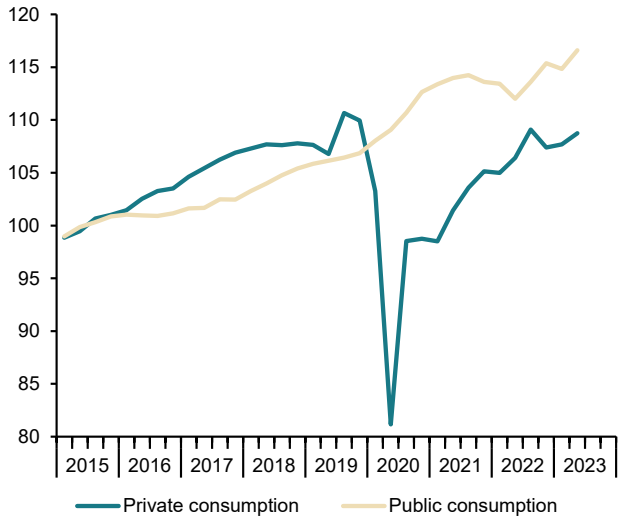


Chart 1.4 - Gross fixed capital formation

Level, 2015=100

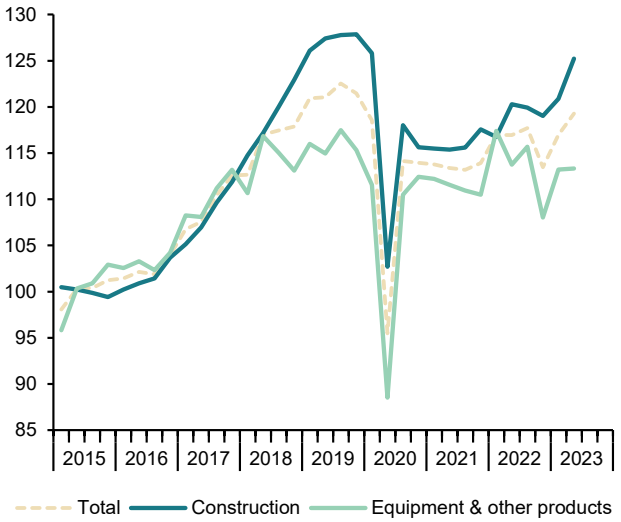


Table 2

National accounts: Gross value added by economic activity SWDA*

		Gross value added at basic prices								
				Industry			Services			
		Total	Agriculture. forestry and fishing	Total	Manufacturing	Construction	Total	Public administration. health. education	Other services	Taxes less subsidies on products
Chain-linked volumes. annual percentage changes										
2016		2.8	4.8	4.1	2.3	3.9	2.4	1.4	2.7	5.2
2017		3.1	-3.7	4.0	5.7	2.0	3.3	2.5	3.5	1.9
2018		2.3	7.5	0.0	-1.1	2.3	2.6	1.6	2.9	2.1
2019		2.1	-5.9	1.5	0.5	4.3	2.3	1.5	2.6	1.0
2020		-11.1	1.1	-11.2	-15.1	-14.6	-11.2	-1.7	-14.2	-12.1
2021		6.1	4.2	5.4	13.1	-1.0	6.8	1.2	8.9	10.0
2022		5.9	-19.8	2.6	4.4	3.2	8.0	-0.2	10.8	4.1
2023 (a)		3.5	-4.7	2.7	3.8	3.1	4.0	2.8	4.4	-0.3
2021	III	4.8	6.1	-0.5	7.6	-6.2	6.8	0.8	9.0	8.8
	IV	6.7	-2.1	0.6	6.2	-1.1	9.0	-1.7	13.0	10.2
2022	I	6.6	-12.2	1.6	6.5	0.6	9.0	-0.9	12.5	8.8
	II	7.3	-20.7	3.6	6.0	4.8	9.5	-1.7	13.5	6.1
	III	5.6	-26.9	3.2	3.1	4.7	7.6	-0.3	10.2	2.6
	IV	4.3	-19.3	1.8	2.4	2.7	5.9	2.0	7.1	-0.7
2023	I	4.6	-7.4	4.4	5.3	4.0	5.1	2.7	5.8	0.1
	II	2.5	-1.9	1.1	2.3	2.2	3.0	3.0	3.0	-0.8
Chain-linked volumes. quarter-on-quarter percentage changes										
2021	III	2.4	0.0	0.3	2.9	0.5	3.1	-0.6	4.4	1.4
	IV	2.0	-3.4	2.4	1.8	2.2	2.1	-0.1	2.9	1.8
2022	I	0.2	-10.9	-1.2	-0.6	-0.7	1.0	-2.4	2.1	0.8
	II	2.6	-7.9	2.1	1.8	2.7	3.0	1.4	3.5	1.9
	III	0.8	-7.8	-0.1	0.1	0.4	1.3	0.9	1.4	-1.9
	IV	0.7	6.6	1.0	1.1	0.3	0.5	2.2	0.0	-1.4
2023	I	0.5	2.3	1.3	2.1	0.5	0.3	-1.7	0.9	1.6
	II	0.5	-2.4	-1.2	-1.0	0.9	0.9	1.7	0.7	1.0
		Current prices EUR billions)	Percentage of value added at basic prices							
2016		1,011	3.1	16.2	12.4	5.9	74.9	18.4	56.5	10.2
2017		1,054	3.1	16.2	12.5	5.9	74.8	18.1	56.7	10.3
2018		1,089	3.0	16.0	12.2	5.9	75.0	18.1	56.9	10.5
2019		1,130	2.7	15.8	12.0	6.3	75.2	18.2	57.0	10.3
2020		1,021	3.1	16.1	12.0	6.0	74.9	20.2	54.6	9.6
2021		1,106	3.0	16.8	12.5	5.7	74.5	19.1	55.4	10.5
2022		1,226	2.6	17.4	12.5	5.4	74.6	17.8	56.8	9.9

** Seasonally and Working Day Adjusted.*

(a) Change of existing data over the same period last year.

Source: INE.

Chart 2.1 - GVA by sectors

Level, 2015=100

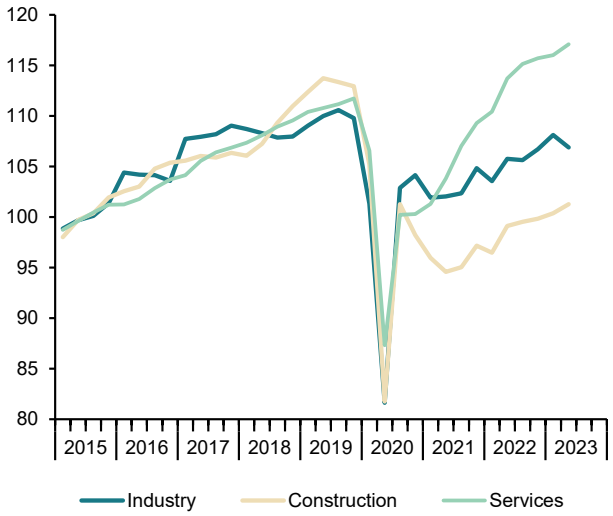


Chart 2.2 - GVA. Industry

Level, 2015=100

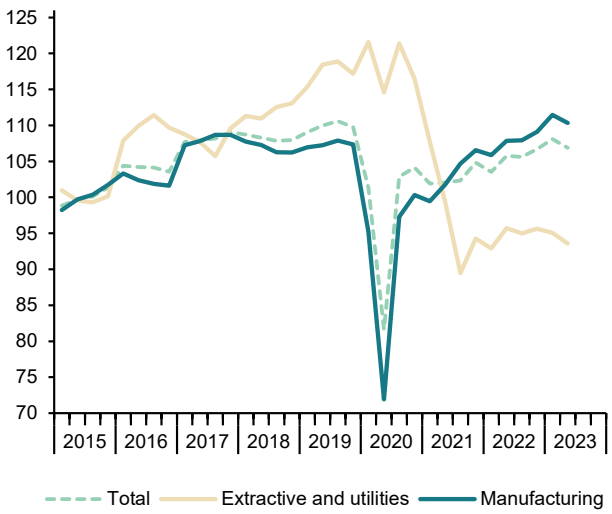


Chart 2.3 - GVA, services

Annual percentage change

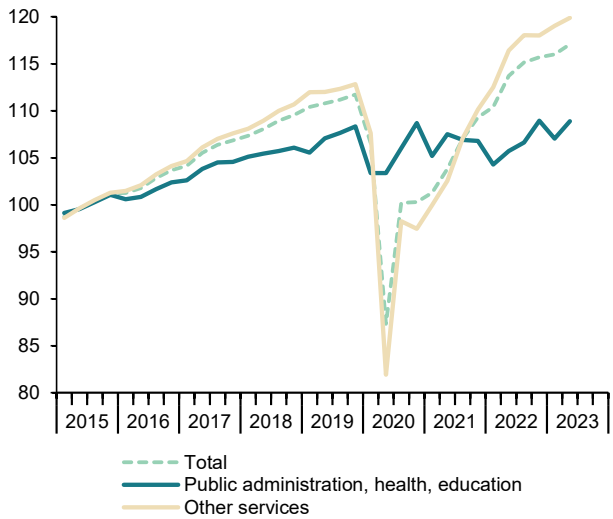


Chart 2.4 - GVA. structure by sectors

Percentage of value added at basic prices

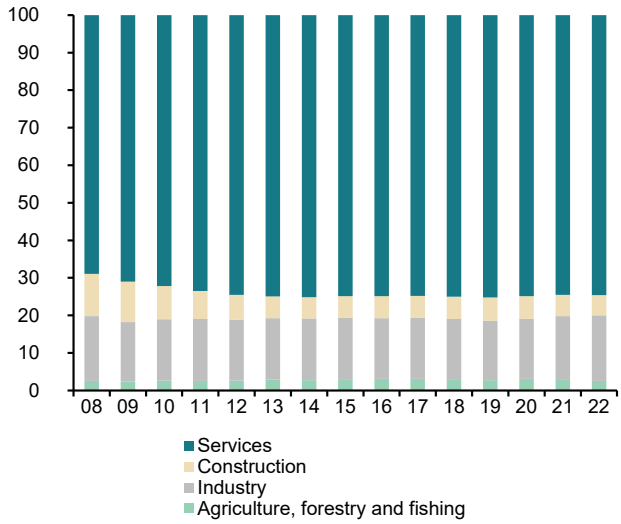


Table 3

National accounts: Productivity and labour costs

Forecasts in yellow

		Total economy						Manufacturing Industry					
		GDP. constant prices	Employment (jobs. full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)	Gross value added. constant prices	Employment (jobs. full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)
		1	2	3=1/2	4	5=4/3	6	7	8	9=7/8	10	11=10/9	12
		Indexes. 2015 = 100. SWDA											
2016		103.0	102.8	100.2	99.4	99.2	98.8	102.3	103.5	98.9	100.1	101.3	100.5
2017		106.1	105.8	100.3	100.1	99.8	98.2	108.1	106.6	101.4	101.5	100.1	100.1
2018		108.5	108.1	100.4	102.0	101.6	98.7	106.9	108.7	98.3	102.7	104.5	102.4
2019		110.7	111.7	99.1	104.5	105.5	101.0	107.4	110.6	97.1	104.3	107.4	103.3
2020		98.3	104.5	94.1	107.4	114.1	108.1	91.2	104.8	87.0	107.6	123.7	111.7
2021		104.6	111.9	93.5	107.8	115.3	106.4	103.1	108.6	95.0	108.3	114.0	103.6
2022		110.7	116.0	95.4	110.9	116.3	103.1	107.7	111.5	96.6	110.2	114.2	97.5
2023		113.1	117.4	96.3	115.4	119.7	101.3	--	--	--	--	--	--
2024		114.9	118.6	96.9	119.4	123.2	100.8	--	--	--	--	--	--
2021	III	105.8	113.9	92.9	108.3	116.7	107.9	104.7	108.2	96.8	111.3	115.0	104.6
	IV	107.9	115.0	93.8	108.5	115.6	104.2	106.5	110.7	96.2	110.0	114.3	104.1
2022	I	108.2	114.9	94.2	108.9	115.7	103.6	105.9	109.0	97.2	106.1	109.2	96.4
	II	110.9	114.8	96.6	109.5	113.3	101.6	107.8	112.5	95.9	107.4	112.0	97.4
	III	111.5	117.1	95.2	112.2	117.8	104.9	107.9	111.8	96.5	113.5	117.6	99.1
	IV	112.0	117.3	95.5	113.1	118.4	102.1	109.1	112.8	96.7	113.9	117.7	97.0
2023	I	112.7	117.7	95.8	115.5	120.6	101.4	111.5	112.6	98.9	111.4	112.6	90.0
	II	113.3	118.3	95.8	115.4	120.4	101.5	110.3	112.4	98.2	113.1	115.1	94.3
		Annual percentage changes											
2016		3.0	2.8	0.2	-0.6	-0.8	-1.2	2.3	3.5	-1.1	0.1	1.3	0.5
2017		3.0	2.9	0.1	0.7	0.6	-0.7	5.7	3.0	2.6	1.4	-1.1	-0.4
2018		2.3	2.2	0.1	1.9	1.8	0.6	-1.1	2.0	-3.1	1.1	4.3	2.3
2019		2.0	3.3	-1.3	2.5	3.8	2.4	0.5	1.7	-1.2	1.6	2.8	0.8
2020		-11.2	-6.5	-5.0	2.8	8.2	7.0	-15.1	-5.2	-10.4	3.1	15.2	8.1
2021		6.4	7.1	-0.6	0.4	1.1	-1.5	13.1	3.6	9.2	0.7	-7.8	-7.2
2022		5.8	3.7	2.0	2.9	0.9	-3.1	4.4	2.7	1.7	1.8	0.1	-5.9
2023		2.2	1.2	1.0	4.0	2.9	-1.7	--	--	--	--	--	--
2024		1.6	1.0	0.6	3.5	2.9	-0.5	--	--	--	--	--	--
2021	III	5.1	7.0	-1.8	0.8	2.6	0.0	7.6	3.3	4.1	2.1	-1.9	-0.7
	IV	7.0	6.5	0.4	1.0	0.6	-3.4	6.2	3.6	2.5	0.6	-1.9	-1.7
2022	I	6.8	5.3	1.5	1.1	-0.3	-4.1	6.5	2.0	4.4	0.8	-3.4	-5.0
	II	7.2	5.0	2.1	2.5	0.3	-3.8	6.0	3.6	2.3	0.7	-1.5	-6.6
	III	5.4	2.8	2.5	3.5	1.0	-2.7	3.1	3.3	-0.2	2.0	2.2	-5.3
	IV	3.8	2.0	1.8	4.3	2.4	-2.0	2.4	1.9	0.5	3.5	3.0	-6.8
2023	I	4.2	2.4	1.7	6.0	4.3	-2.2	5.3	3.4	1.8	5.1	3.2	-6.7
	II	2.2	3.0	-0.8	5.4	6.2	-0.2	2.3	-0.1	2.4	5.3	2.8	-3.1

(a) Nominal ULC deflated by GDP/GVA deflator.

Source: INE and Funcas (Forecasts).

Chart 3.1 - Nominal ULC, total economy

Index, 2000=100

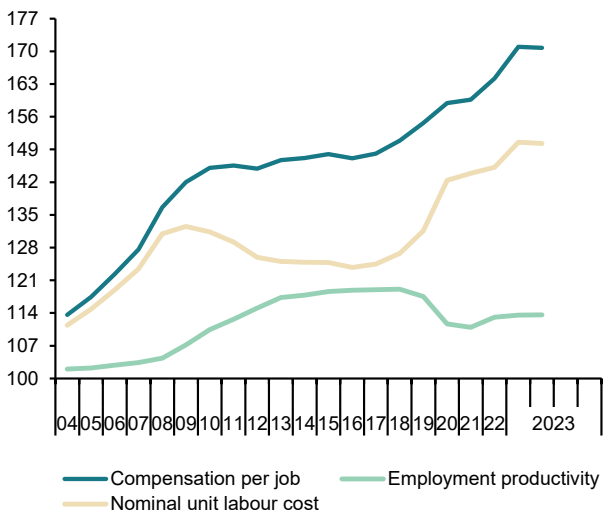
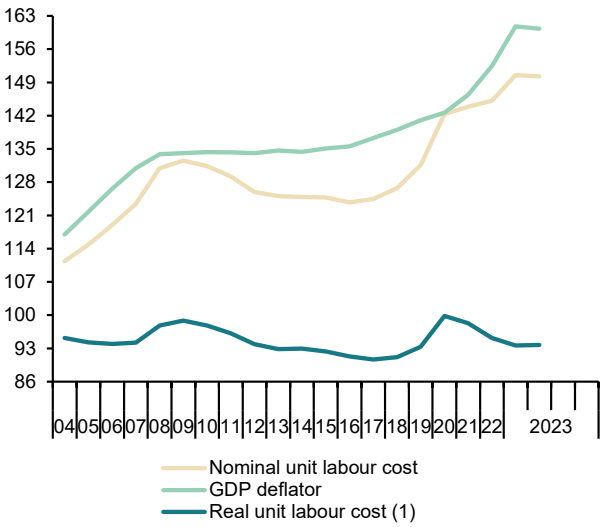


Chart 3.2 - Real ULC, total economy

Index, 2000=100



(1) Nominal ULC deflated by GDP deflator.

Chart 3.3 - Nominal ULC, manufacturing industry

Index, 2000=100

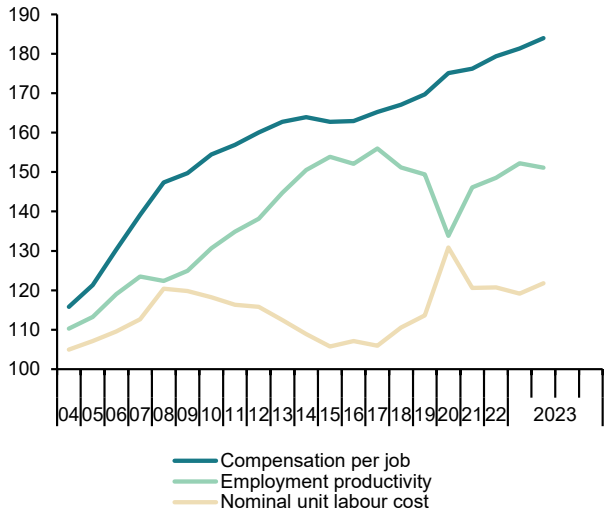
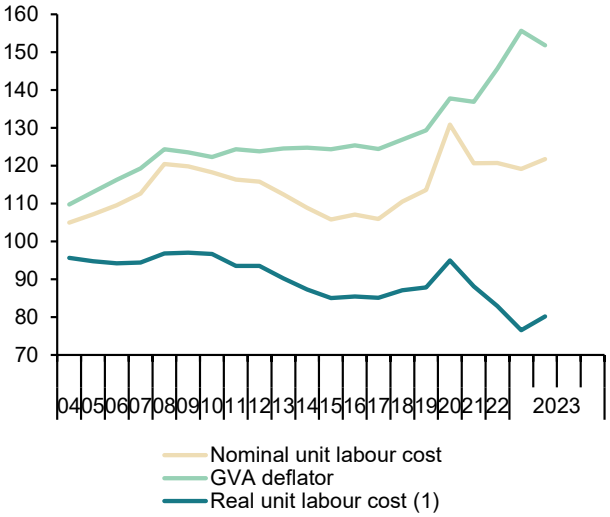


Chart 3.4 - Real ULC, manufacturing industry

Index. 2000=100



(1) Nominal ULC deflated by manufacturing GVA deflator.

Table 4

National accounts: National income. distribution and disposition

Forecasts in yellow

		Gross domestic product	Compen-sation of employees	Gross operating surplus	Gross national disposable income	Final national consum-ption	Gross national saving (a)	Gross capital formation	Compen-sation of employees	Gross operating surplus	Saving rate	Investment rate	Current account balance	Net lending or borrowing
		EUR Billions. 4-quarter cumulated transactions							Percentage of GDP					
2016		1,114.4	503.7	496.4	1,105.4	861.1	244.3	208.9	45.2	44.5	21.9	18.7	3.2	3.4
2017		1,162.5	523.7	519.0	1,152.8	895.1	257.7	225.5	45.0	44.6	22.2	19.4	2.8	3.0
2018		1,203.9	546.1	531.6	1,193.8	924.8	269.0	246.4	45.4	44.2	22.3	20.5	1.9	2.4
2019		1,245.5	580.2	537.7	1,235.1	949.5	285.7	259.4	46.6	43.2	22.9	20.8	2.1	2.4
2020		1,119.0	560.7	456.4	1,109.5	873.9	235.7	229.1	50.1	40.8	21.1	20.5	0.6	1.0
2021		1,222.3	599.4	496.5	1,215.9	946.6	269.2	263.9	49.0	40.6	22.0	21.6	0.4	1.3
2022		1,346.4	643.0	571.4	1,335.4	1,040.8	294.6	289.2	47.8	42.4	21.9	21.5	0.4	1.3
2023		1,420.9	656.1	619.0	1,407.4	1,073.0	334.5	294.6	46.2	43.6	23.5	20.7	2.8	3.4
2024		1,493.3	687.1	645.1	1,472.6	1,122.9	349.6	311.1	46.0	43.2	23.4	20.8	2.6	3.0
2021	III	1,189.3	588.7	479.4	1,181.3	925.3	256.0	250.8	49.5	40.3	21.5	21.1	0.4	1.5
	IV	1,222.3	599.4	496.5	1,215.9	946.6	269.2	263.9	49.0	40.6	22.0	21.6	0.4	1.3
2022	I	1,254.5	610.1	511.2	1,249.6	970.7	278.9	271.2	48.6	40.7	22.2	21.6	0.6	1.0
	II	1,289.9	622.4	529.5	1,282.0	995.2	286.8	279.0	48.3	41.1	22.2	21.6	0.6	1.1
	III	1,318.9	632.3	547.4	1,311.2	1,022.3	288.9	285.0	47.9	41.5	21.9	21.6	0.3	1.0
	IV	1,346.4	643.0	571.4	1,335.4	1,040.8	294.6	289.2	47.8	42.4	21.9	21.5	0.4	1.3
2023	I	1,382.3	657.0	592.9	1,368.9	1,058.3	310.6	291.5	47.5	42.9	22.5	21.1	1.4	2.4
	II	1,411.4	670.6	606.3	--	1,075.1	--	294.2	47.5	43.0	--	20.8	--	--
		Annual percentage changes							Difference from one year ago					
2016		3.4	2.2	4.9	3.6	2.4	7.8	2.0	-0.5	0.7	0.9	-0.2	1.1	0.7
2017		4.3	4.0	4.6	4.3	3.9	5.5	8.0	-0.2	0.1	0.3	0.7	-0.4	-0.4
2018		3.6	4.3	2.4	3.6	3.3	4.4	9.3	0.3	-0.5	0.2	1.1	-0.9	-0.7
2019		3.5	6.2	1.2	3.5	2.7	6.2	5.3	1.2	-1.0	0.6	0.4	0.2	0.1
2020		-10.2	-3.4	-15.1	-10.2	-8.0	-17.5	-11.7	3.5	-2.4	-1.9	-0.4	-1.5	-1.4
2021		9.2	6.9	8.8	9.6	8.3	14.3	15.2	-1.1	-0.2	1.0	1.1	-0.2	0.3
2022		10.2	7.3	15.1	9.8	10.0	9.4	9.6	-1.3	1.8	-0.1	-0.1	0.0	0.0
2023		5.5	2.0	8.3	5.4	3.1	13.5	1.8	-1.6	1.1	1.7	-0.8	2.4	2.1
2024		5.1	4.7	4.2	4.6	4.7	4.5	5.6	-0.2	-0.4	-0.1	0.1	-0.2	-0.4
2021	III	3.9	4.4	0.8	4.2	4.0	4.9	6.6	0.2	-1.3	0.2	0.5	-0.3	0.3
	IV	9.2	6.9	8.8	9.6	8.3	14.3	15.2	-1.1	-0.2	1.0	1.1	-0.2	0.3
2022	I	12.6	8.9	12.8	13.2	11.4	19.9	17.8	-1.7	0.1	1.4	1.0	0.4	0.0
	II	10.5	7.7	11.6	10.8	9.4	15.8	14.7	-1.3	0.4	1.0	0.8	0.2	0.0
	III	10.9	7.4	14.2	11.0	10.5	12.9	13.7	-1.6	1.2	0.4	0.5	-0.1	-0.4
	IV	10.2	7.3	15.1	9.8	10.0	9.4	9.6	-1.3	1.8	-0.1	-0.1	0.0	0.0
2023	I	10.2	7.7	16.0	9.5	9.0	11.4	7.5	-1.1	2.1	0.2	-0.5	0.8	1.3
	II	9.4	7.7	14.5	--	8.0	--	5.5	-0.7	1.9	--	-0.8	--	--

(a) Including change in net equity in pension funds reserves.

Source: INE and Funcas (Forecasts).

Chart 4.1 - National income, consumption and saving

EUR Billions, 4-quarter cumulated

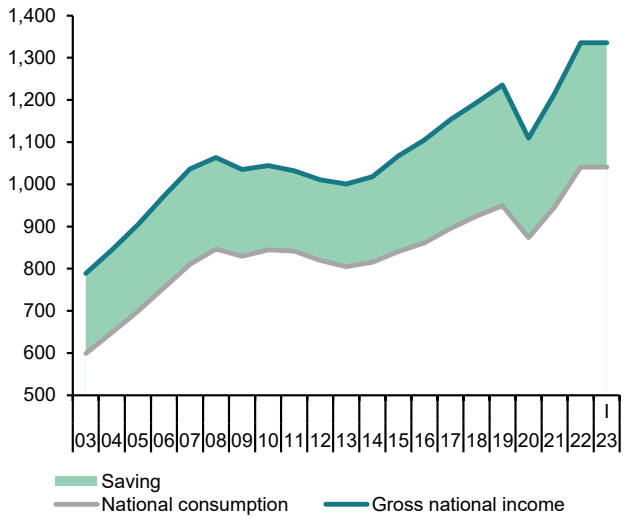


Chart 4.2 - National income, consumption and saving rate

Annual percentage change and percentage of GDP, 4-quarter moving averages

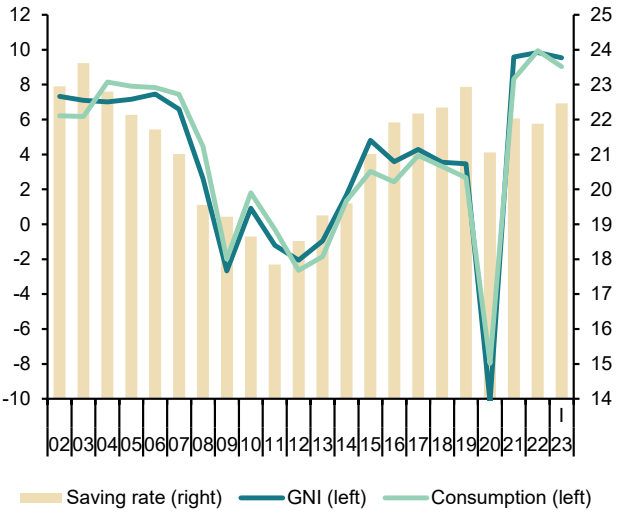


Chart 4.3 - Components of National Income

Percentage of GDP, 4-quarter moving averages

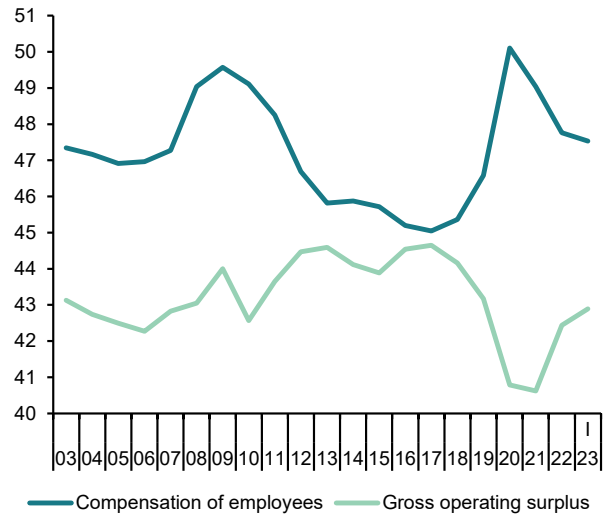


Chart 4.4 - Saving, Investment and Current Account Balance

Percentage of GDP, 4-quarter moving averages

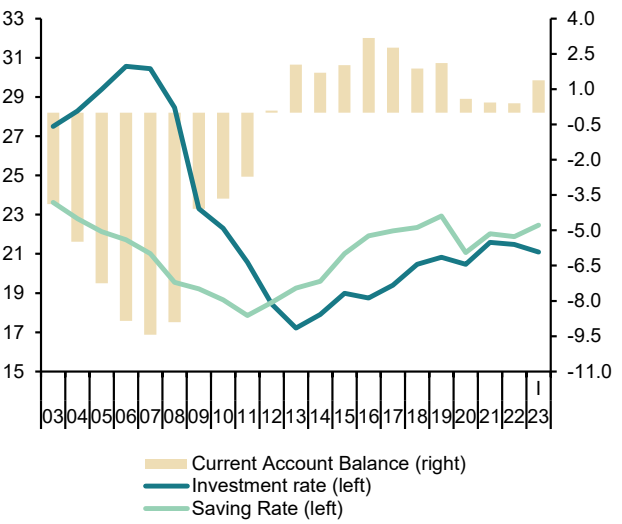


Table 5

National accounts: Household and non-financial corporations accounts

Forecasts in yellow

		Households							Non-financial corporations					
		Gross disposable income (GDI)	Final consumption expenditure	Gross saving	Gross capital formation	Saving rate	Gross capital formation	Net lending or borrowing	Gross operating surplus	Gross saving	Gross capital formation	Saving rate	Gross capital formation	Net lending or borrowing
		EUR Billions. 4-quarter cumulated operations				Percentage of GDI	Percentage of GDP		EUR Billions. 4-quarter cumulated operations			Percentage of GDP		
2016		700.6	648.3	49.2	31.8	7.0	2.9	1.4	255.0	195.8	149.0	17.6	13.4	4.4
2017		723.0	678.1	41.8	36.8	5.8	3.2	0.2	267.0	200.4	160.4	17.2	13.8	3.7
2018		743.6	699.5	41.2	40.7	5.5	3.4	-0.1	271.1	199.7	176.7	16.6	14.7	2.2
2019		780.9	714.5	63.6	43.4	8.1	3.5	1.5	275.7	202.8	186.2	16.3	15.0	1.6
2020		765.7	627.3	134.5	40.8	17.6	3.6	8.4	214.2	148.6	150.1	13.3	13.4	0.2
2021		789.3	678.8	108.3	52.2	13.7	4.3	4.8	236.6	163.1	161.2	13.5	13.4	0.8
2022		817.5	756.9	58.5	59.3	7.2	4.5	-0.1	294.1	209.1	171.4	15.8	12.9	3.4
2023		852.4	788.5	61.7	54.5	7.2	3.8	0.5	321.6	212.0	186.8	14.9	13.1	2.0
2024		891.6	827.0	62.4	48.0	7.0	3.2	1.0	339.8	230.8	208.1	15.5	13.9	1.7
2021	II	776.6	650.6	122.0	44.4	15.7	3.8	6.6	223.1	152.8	156.4	13.2	13.5	0.1
	III	779.7	659.6	117.5	45.6	15.1	3.9	6.2	224.0	155.7	155.5	13.2	13.2	0.5
	IV	789.3	678.8	108.3	52.2	13.7	4.3	4.8	236.6	163.1	161.2	13.5	13.4	0.8
2022	I	794.5	704.3	87.7	57.4	11.0	4.6	2.6	248.8	174.5	160.3	14.1	12.9	1.8
	II	805.5	725.6	77.8	63.9	9.7	5.0	1.2	261.2	178.4	160.3	14.0	12.6	2.1
	III	808.6	746.2	60.1	63.9	7.4	4.9	-0.2	277.1	192.7	168.1	14.8	12.9	2.5
	IV	817.5	756.9	58.5	59.3	7.2	4.5	-0.1	294.1	209.1	171.4	15.8	12.9	3.4
2023	I	836.1	770.6	63.1	56.7	7.5	4.2	0.4	307.3	218.4	174.4	16.1	12.8	3.8
		Annual percentage changes				Difference from one year ago			Annual percentage changes			Difference from one year ago		
2016		2.7	2.9	0.5	4.2	-0.2	0.0	-0.3	5.6	5.6	6.1	0.4	0.3	-0.1
2017		3.2	4.6	-15.2	15.7	-1.2	0.3	-1.2	4.7	2.4	7.6	-0.3	0.4	-0.7
2018		2.8	3.2	-1.3	10.6	-0.2	0.2	-0.3	1.5	-0.3	10.2	-0.7	0.9	-1.5
2019		5.0	2.2	54.2	6.8	2.6	0.1	1.7	1.7	1.5	5.4	-0.3	0.3	-0.6
2020		-2.0	-12.2	111.5	-6.1	9.4	0.2	6.9	-22.3	-26.7	-19.4	-3.0	-1.5	-1.3
2021		3.1	8.2	-19.5	28.0	-3.8	0.7	-3.6	10.5	9.8	7.4	0.2	-0.1	0.6
2022		3.6	11.5	-46.0	13.7	-6.6	0.1	-4.9	24.3	28.2	6.3	2.2	-0.4	2.6
2023		4.3	4.2	5.6	-8.0	0.1	-0.6	0.6	9.4	1.4	9.0	-0.8	0.2	-1.4
2024		4.6	4.9	1.0	-12.0	-0.2	-0.6	0.5	5.7	8.9	11.4	0.5	0.8	-0.3
2021	II	1.2	-1.8	19.2	5.2	2.4	0.2	1.6	-6.8	-14.7	-5.2	-2.1	-0.6	-1.2
	III	1.2	1.8	-1.2	6.2	-0.4	0.1	-0.4	-1.7	-3.5	-0.8	-0.8	-0.5	-0.1
	IV	3.1	8.2	-19.5	28.0	-3.8	0.7	-3.6	10.5	9.8	7.4	0.2	-0.1	0.6
2022	I	4.0	14.3	-39.2	33.6	-7.8	0.8	-6.6	18.0	19.3	7.3	0.9	-0.5	1.6
	II	3.7	11.5	-36.2	44.0	-6.1	1.2	-5.4	17.1	16.8	2.5	0.8	-0.9	2.0
	III	3.7	13.1	-48.9	40.2	-7.6	1.0	-6.4	23.7	23.8	8.1	1.6	-0.3	2.0
	IV	3.6	11.5	-46.0	13.7	-6.6	0.1	-4.9	24.3	28.2	6.3	2.2	-0.4	2.6
2023	I	5.2	9.4	-28.0	-1.3	-3.5	-0.5	-2.1	23.5	25.2	8.8	2.0	-0.1	2.1

Source: INE and Funcas (Forecasts).

Chart 5.1 - Households: Net lending or borrowing

Percentage of GDP, 4-quarter moving averages

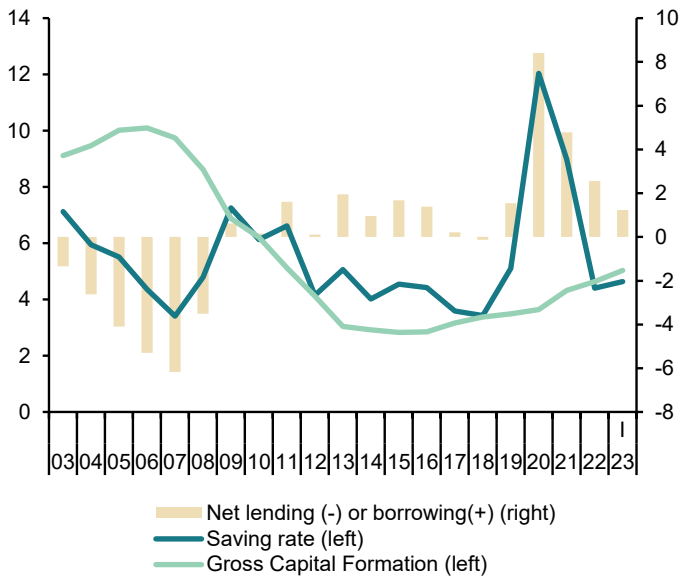


Chart 5.2 - Non-financial corporations: Net lending or borrowing

Percentage of GDP, 4-quarter moving averages

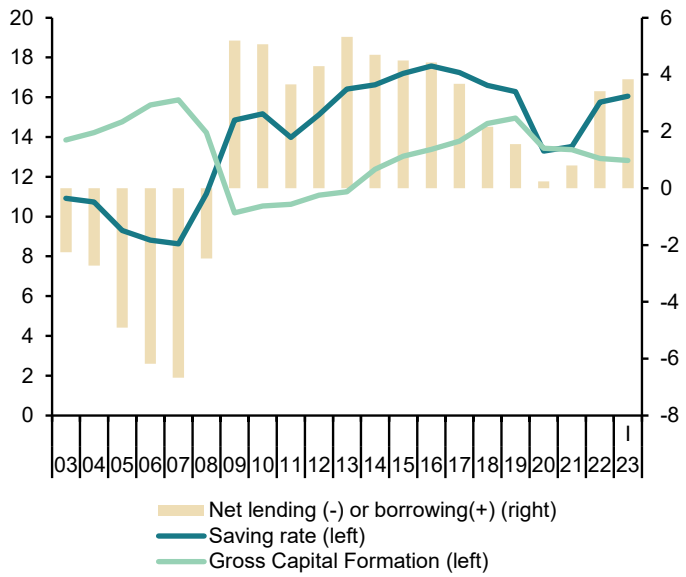


Table 6

National accounts: Public revenue. expenditure and deficit

Forecasts in yellow

		Non financial revenue					Non financial expenditures							Net lending(+)/ net borrowing(-)
		Taxes on production and imports	Taxes on income and wealth	Social contribu-tions	Capital and other revenue	Total	Compen-sation of employees	Interme-diate con-sumption	Interests	Social benefits and social transfers in kind	Gross capital formation and other capital expenditure	Other expendi-ture	Total	
		1	2	3	4	5=1+2+3+4	6	7	8	9	10	11	12=6+7+8 +9+10+11	13=5-12
		EUR Billions. 4-quarter cumulated operations												
2016		128.9	110.0	135.6	50.9	425.3	121.5	59.2	30.7	203.0	30.3	28.4	473.2	-47.9
2017		135.1	116.9	142.4	49.6	444.0	123.5	60.5	29.3	207.4	31.5	28.1	480.3	-36.2
2018		141.2	127.3	149.5	54.2	472.1	127.7	62.6	29.3	216.6	37.4	29.8	503.4	-31.2
2019		143.0	129.1	160.7	55.7	488.5	134.8	65.2	28.4	229.6	37.2	31.6	526.7	-38.1
2020		126.7	125.3	162.2	53.3	467.6	140.6	67.0	25.1	262.2	44.3	41.5	580.8	-113.2
2021		146.7	143.4	171.7	66.2	527.9	147.6	71.8	26.1	263.6	59.9	42.0	610.9	-82.9
2022		160.2	164.6	180.0	65.8	570.5	153.8	78.7	31.6	266.9	52.6	50.7	634.3	-63.8
2023		169.2	179.0	188.6	63.6	600.4	160.7	83.3	36.6	284.0	53.2	43.0	660.8	-60.4
2024		179.4	183.1	197.8	62.8	623.1	165.6	89.1	40.4	292.5	54.5	35.7	677.7	-54.6
2021	II	136.7	132.2	166.4	56.1	491.5	144.9	69.5	25.4	260.8	47.2	40.0	587.8	-96.3
	III	142.2	133.7	169.6	61.3	506.8	146.5	70.6	25.3	261.5	53.2	40.5	597.5	-90.7
	IV	146.7	143.4	171.7	66.2	527.9	147.6	71.8	26.1	263.6	59.9	42.0	610.9	-82.9
2022	I	153.2	147.2	173.3	66.4	540.0	148.8	73.4	26.3	262.9	55.6	40.9	608.1	-68.0
	II	158.1	151.9	175.7	68.2	553.9	149.7	74.7	28.0	263.4	57.3	42.6	615.7	-61.8
	III	161.4	160.4	177.5	67.8	567.1	151.1	76.8	29.4	265.3	53.0	45.6	621.0	-53.9
	IV	160.2	164.6	180.0	65.8	570.5	153.8	78.7	31.6	266.9	52.6	50.7	634.3	-63.8
2023	I	162.1	167.9	183.2	69.4	582.6	155.7	80.2	31.6	271.5	53.2	50.4	642.5	-59.9
		Percentage of GDP. 4-quarter cumulated operations												
2016		11.6	9.9	12.2	4.6	38.2	10.9	5.3	2.8	18.2	2.7	2.6	42.5	-4.3
2017		11.6	10.1	12.3	4.3	38.2	10.6	5.2	2.5	17.8	2.7	2.4	41.3	-3.1
2018		11.7	10.6	12.4	4.5	39.2	10.6	5.2	2.4	18.0	3.1	2.5	41.8	-2.6
2019		11.5	10.4	12.9	4.5	39.2	10.8	5.2	2.3	18.4	3.0	2.5	42.3	-3.1
2020		11.3	11.2	14.5	4.8	41.8	12.6	6.0	2.2	23.4	4.0	3.7	51.9	-10.1
2021		12.0	11.7	14.0	5.4	43.2	12.1	5.9	2.1	21.6	4.9	3.4	50.0	-6.8
2022		11.9	12.2	13.4	4.9	42.4	11.4	5.8	2.3	19.8	3.9	3.8	47.1	-4.7
2023		11.9	12.6	13.3	4.5	42.3	11.3	5.9	2.6	20.0	3.7	3.0	46.5	-4.3
2024		12.0	12.3	13.2	4.2	41.7	11.1	6.0	2.7	19.6	3.6	2.4	45.4	-3.7
2021	II	11.7	11.3	14.3	4.8	42.1	12.4	6.0	2.2	22.3	4.0	3.4	50.4	-8.3
	III	12.0	11.2	14.3	5.2	42.6	12.3	5.9	2.1	22.0	4.5	3.4	50.2	-7.6
	IV	12.0	11.7	14.0	5.4	43.2	12.1	5.9	2.1	21.6	4.9	3.4	50.0	-6.8
2022	I	12.2	11.7	13.8	5.3	43.0	11.9	5.9	2.1	21.0	4.4	3.3	48.5	-5.4
	II	12.3	11.8	13.6	5.3	42.9	11.6	5.8	2.2	20.4	4.4	3.3	47.7	-4.8
	III	12.2	12.2	13.5	5.1	43.0	11.5	5.8	2.2	20.1	4.0	3.5	47.1	-4.1
	IV	11.9	12.2	13.4	4.9	42.4	11.4	5.8	2.3	19.8	3.9	3.8	47.1	-4.7
2023	I	11.7	12.1	13.3	5.0	42.1	11.3	5.8	2.3	19.6	3.8	3.6	46.5	-4.3

Source: IGAE and Funcas (Forecasts).

Chart 6.1 - Public sector: Revenue. expenditure and deficit

Percentage of GDP, 4-quarter moving averages

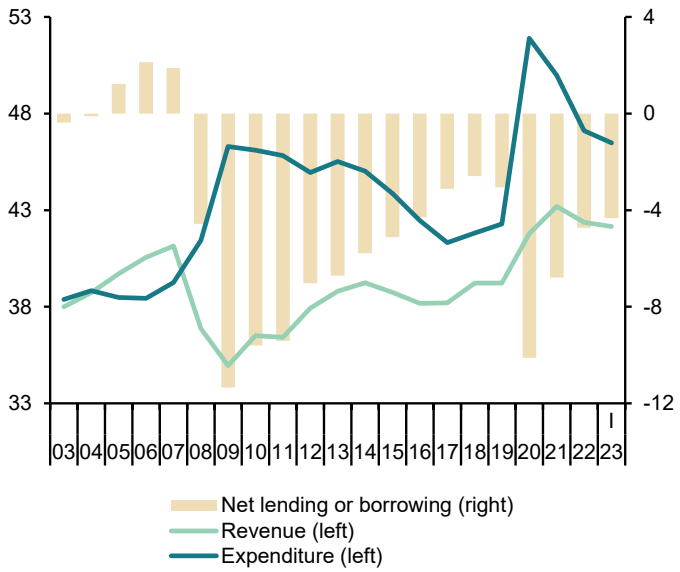


Chart 6.2 - Public sector: Main expenditures

Percentage of GDP, 4-quarter moving averages

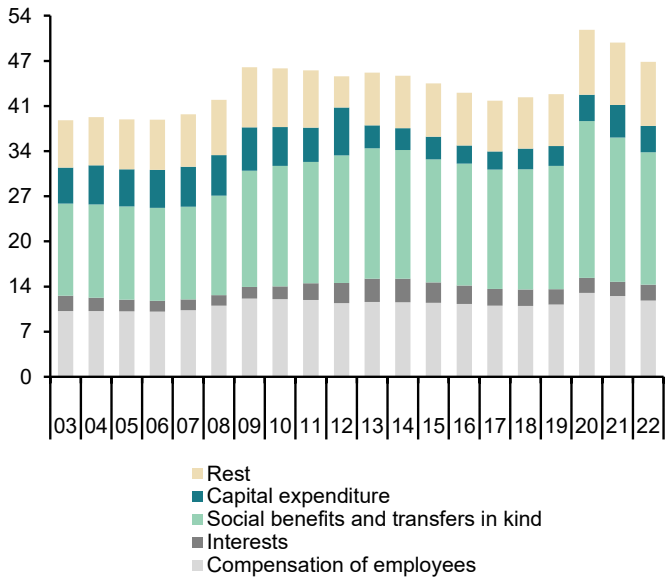


Table 7

Public sector balances by level of Government

Forecasts in yellow

		Net lending (+)/ net borrowing (-)					Debt				
		Central Government	Regional Governments	Local Governments	Social Security	TOTAL Government	Central Government	Regional Governments	Local Governments	Social Security	Total Government (consolidated)
		EUR Billions. 4-quarter cumulated operations					EUR Billions. end of period				
2016		-28.0	-9.5	7.0	-17.4	-47.9	1,008.9	277.0	32.2	17.2	1,145.1
2017		-22.0	-4.2	6.7	-16.8	-36.2	1,049.8	288.1	29.0	27.4	1,183.4
2018		-17.0	-3.3	6.3	-17.3	-31.2	1,082.8	293.4	25.8	41.2	1,208.9
2019		-18.8	-7.3	3.8	-15.9	-38.1	1,095.8	295.1	23.2	55.0	1,223.4
2020		-85.7	-2.0	2.8	-28.3	-113.2	1,206.6	304.0	22.0	85.4	1,345.8
2021		-73.7	-0.6	3.5	-12.0	-82.9	1,280.0	312.6	22.1	97.2	1,427.2
2022		-41.1	-15.1	-1.6	-6.0	-63.8	1,358.8	316.9	23.0	106.2	1,502.5
2023		--	--	--	--	-60.4	--	--	--	--	1,563.4
2024		--	--	--	--	-54.6	--	--	--	--	1,618.5
2021	II	-74.8	-3.1	3.8	-22.1	-96.3	1,273.4	312.0	22.7	91.9	1,424.7
	III	-85.4	4.7	3.6	-13.6	-90.7	1,281.4	312.3	22.3	91.9	1,432.3
	IV	-73.7	-0.6	3.5	-12.0	-82.9	1,280.0	312.6	22.1	97.2	1,427.2
2022	I	-63.0	3.3	2.9	-11.2	-68.0	1,306.6	309.7	22.4	99.2	1,453.8
	II	-59.9	-0.2	2.3	-4.1	-61.8	1,325.7	316.7	22.8	99.2	1,475.0
	III	-32.5	-14.5	-1.5	-5.4	-53.9	1,359.0	314.8	22.3	99.2	1,503.8
	IV	-41.1	-15.1	-1.6	-6.0	-63.8	1,358.8	316.9	23.0	106.2	1,502.5
2023	I	-35.6	-17.6	-0.5	-6.2	-59.9	1,387.8	322.2	23.0	106.2	1,535.3
		Percentage of GDP, 4-quarter cumulated operations					Percentage of GDP				
2016		-2.5	-0.9	0.6	-1.6	-4.3	90.5	24.9	2.9	1.5	102.7
2017		-1.9	-0.4	0.6	-1.4	-3.1	90.3	24.8	2.5	2.4	101.8
2018		-1.4	-0.3	0.5	-1.4	-2.6	89.9	24.4	2.1	3.4	100.4
2019		-1.5	-0.6	0.3	-1.3	-3.1	88.0	23.7	1.9	4.4	98.2
2020		-7.7	-0.2	0.2	-2.5	-10.1	107.8	27.2	2.0	7.6	120.3
2021		-6.0	-0.1	0.3	-1.0	-6.8	104.7	25.6	1.8	8.0	116.8
2022		-3.0	-1.1	-0.1	-0.4	-4.7	100.9	23.5	1.7	7.9	111.6
2023		--	--	--	--	-4.3	--	--	--	--	110.0
2024		--	--	--	--	-3.7	--	--	--	--	108.4
2021	II	-6.4	-0.3	0.3	-1.9	-8.3	109.1	26.7	1.9	7.9	122.1
	III	-7.2	0.4	0.3	-1.1	-7.6	107.7	26.3	1.9	7.7	120.4
	IV	-6.0	-0.1	0.3	-1.0	-6.8	104.7	25.6	1.8	8.0	116.8
2022	I	-5.0	0.3	0.2	-0.9	-5.4	104.2	24.7	1.8	7.9	115.9
	II	-4.6	0.0	0.2	-0.3	-4.8	102.8	24.5	1.8	7.7	114.4
	III	-2.5	-1.1	-0.1	-0.4	-4.1	103.0	23.9	1.7	7.5	114.0
	IV	-3.0	-1.1	-0.1	-0.4	-4.7	100.9	23.5	1.7	7.9	111.6
2023	I	-2.6	-1.3	0.0	-0.4	-4.3	100.4	23.3	1.7	7.7	111.1

Sources: National Statistics Institute. Bank of Spain (Financial Accounts of the Spanish Economy) and Funcas (Forecasts).

Chart 7.1 - Government deficit

Percent of GDP, 4-quarter cumulated operations

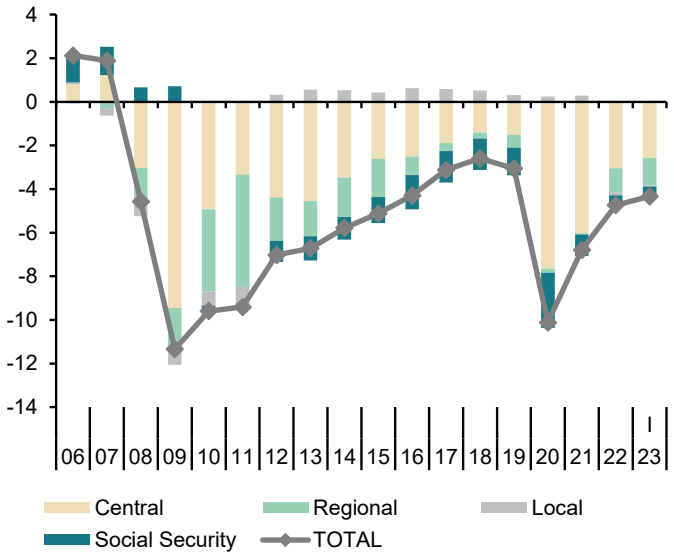


Chart 7.2 - Government debt

Percent of GDP

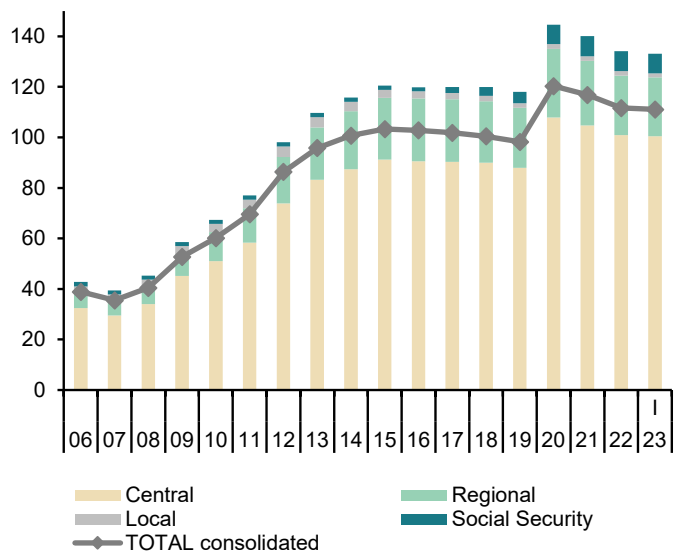


Table 8

General activity and industrial sector indicators (a)

	General activity indicators				Industrial sector indicators					
	Economic Sentiment Index	Composite PMI index	Social Security Affiliates (f)	Electricity consumption (temperature adjusted)	Industrial production index	Social Security Affiliates in industry	Manufacturing PMI index	Industrial confidence index	Manufacturing turnover index deflated (g)	Industrial orders
	Index	Index	Thousands	1,000 GWH, monthly average	2015=100	Thousands	Index	Balance of responses	2015=100 (smoothed)	Balance of responses
2015	107.8	56.7	16,641.8	20.9	100.0	2,067.3	53.6	-0.6	100.0	-5.4
2016	106.0	54.9	17,157.5	21.0	101.8	2,124.7	53.1	-2.1	102.7	-5.4
2017	109.2	56.2	17,789.6	21.4	105.1	2,191.0	54.8	1.4	107.0	2.2
2018	108.0	54.6	18,364.5	21.5	105.3	2,250.9	53.3	-0.5	108.4	-0.2
2019	104.7	52.7	18,844.1	20.9	106.1	2,283.2	49.1	-3.6	109.0	-5.1
2020	89.8	41.5	18,440.5	19.9	95.9	2,239.3	47.5	-13.6	98.2	-30.0
2021	105.1	55.3	18,910.0	20.4	102.9	2,270.4	57.0	0.6	104.3	-1.8
2022	101.3	51.8	19,663.0	19.6	105.9	2,324.3	51.0	-0.9	107.0	1.6
2023 (b)	101.1	53.7	20,115.7	19.2	107.6	2,356.3	48.8	-5.7	107.5	-9.6
2021 IV	109.6	56.6	19,254.5	20.4	104.9	2,294.0	56.9	5.1	105.7	7.0
2022 I	108.5	52.5	19,465.0	19.9	104.8	2,310.8	55.8	6.7	104.2	11.5
II	101.8	55.0	19,647.3	19.9	106.8	2,320.8	53.2	0.3	109.0	7.2
III	97.0	50.5	19,727.8	19.5	106.5	2,330.4	49.2	-5.1	107.7	-4.1
IV	98.0	49.1	19,815.5	19.0	105.7	2,335.8	45.6	-5.3	106.7	-8.0
2023 I	100.5	55.2	19,971.9	19.3	106.2	2,347.7	50.1	-4.4	106.3	-8.7
II	101.3	54.7	20,182.9	18.9	105.0	2,360.4	48.5	-5.3	105.6	-7.6
III (b)	101.7	50.2	20,250.3	19.1	104.6	2,368.9	47.2	-8.1	106.4	-14.0
2023 Jun	99.7	52.6	20,206.2	18.7	104.4	2,362.8	48.0	-8.7	105.4	-10.1
Jul	100.9	51.7	20,235.1	19.1	104.6	2,366.2	47.8	-9.6	106.4	-13.4
Aug	102.4	48.6	20,265.5	19.0	--	2,371.7	46.5	-6.5	--	-14.5
					Percentage changes (c)					
2015	--	--	3.3	1.7	3.4	2.2	--	--	4.2	--
2016	--	--	3.1	0.3	1.8	2.8	--	--	2.7	--
2017	--	--	3.7	1.7	3.2	3.1	--	--	4.2	--
2018	--	--	3.2	0.6	0.2	2.7	--	--	1.4	--
2019	--	--	2.6	-2.6	0.7	1.4	--	--	0.5	--
2020	--	--	-2.1	-4.8	-9.6	-1.9	--	--	-9.9	--
2021	--	--	2.5	2.2	7.3	1.4	--	--	6.2	--
2022	--	--	4.0	-3.8	2.9	2.4	--	--	2.6	--
2023 (d)	--	--	2.7	-3.6	-0.5	1.7	--	--	-0.9	--
2021 IV	--	--	1.2	1.3	3.2	0.7	--	--	1.6	--
2022 I	--	--	1.1	-2.3	-0.1	0.7	--	--	-1.4	--
II	--	--	0.9	0.2	1.9	0.4	--	--	4.6	--
III	--	--	0.4	-2.3	-0.3	0.4	--	--	-1.1	--
IV	--	--	0.4	-2.4	-0.7	0.2	--	--	-1.0	--
2023 I	--	--	0.8	1.5	0.5	0.5	--	--	-0.4	--
II	--	--	1.1	-2.2	-1.2	0.5	--	--	-0.6	--
III (e)	--	--	0.3	1.1	-0.4	0.4	--	--	0.7	--
2023 Jun	--	--	0.1	-1.1	-1.0	0.1	--	--	-1.1	--
Jul	--	--	0.1	1.9	0.2	0.1	--	--	1.0	--
Aug	--	--	0.2	-0.4	--	0.2	--	--	--	--

(a) Seasonally adjusted, except for annual data. (b) Period with available data. (c) Percent change from the previous quarter for quarterly data, from the previous month for monthly data, unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Growth of the average of available months over the monthly average of the previous quarter. (f) Excluding domestic service workers and non-professional caregivers. (g) Deflated by Funcas.

Sources: European Commision, S&P Global, M. of Labour, M. of Industry, National Statistics Institute, REE and Funcas.

Chart 8.1 - General activity indicators (I)

Level, 2009=100

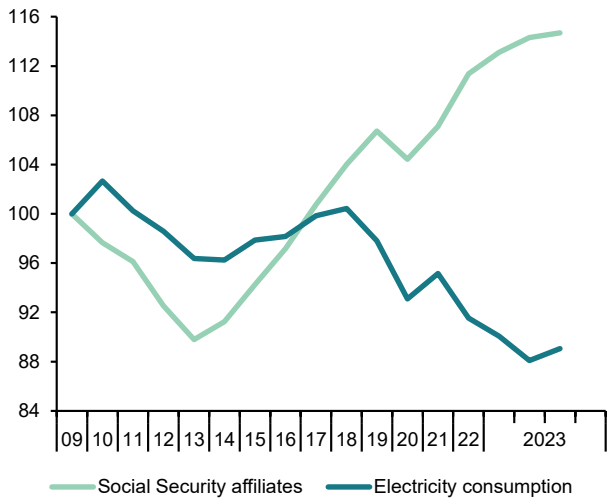


Chart 8.2 - General activity indicators (II)

Index

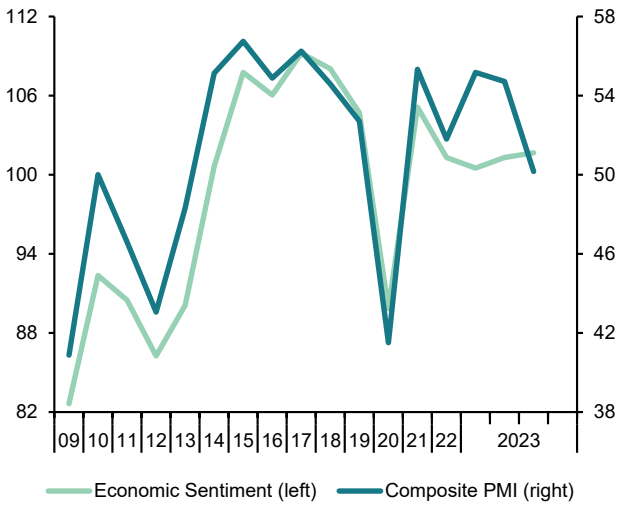


Chart 8.3 - Industrial sector indicators (I)

Level, 2009=100

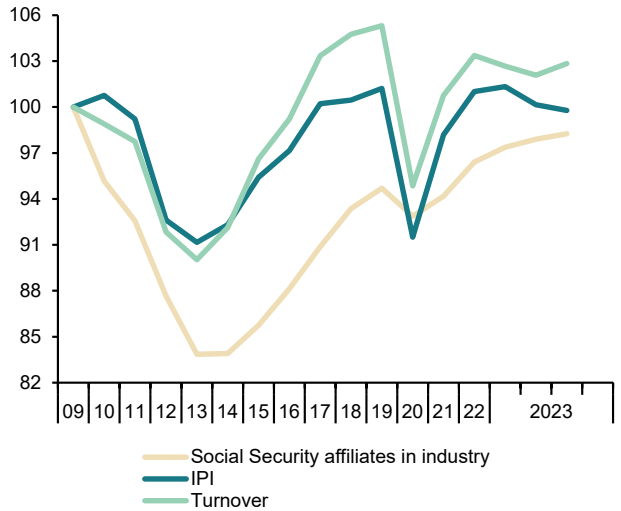


Chart 8.4 - Industrial sector indicators (II)

Index

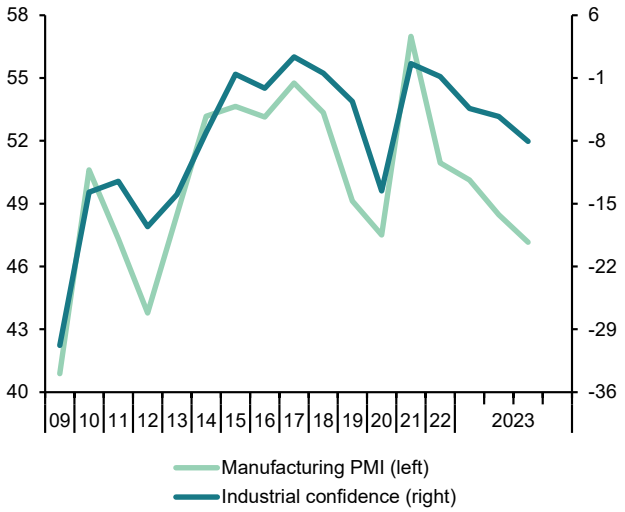


Table 9

Construction and services sector indicators (a)

	Construction indicators					Service sector indicators					
	Social Security Affiliates in construction	Industrial production index construction materials	Construction confidence index	Official tenders (f)	Housing permits (f)	Social Security Affiliates in services (g)	Turnover index deflated (h)	Services PMI index	Hotel overnight stays	Passenger air transport	Services confidence index
	Thousands	2015=100 (smoothed)	Balance of responses	EUR Billions, monthly average	Million m^2, monthly average	Thousands	2015=100 (smoothed)	Index	Million, monthly average	Million, monthly average)	Balance of responses
2015	1,026.7	100.0	-26.6	0.8	0.8	12,432.3	103.5	57.3	25.7	17.2	18.9
2016	1,053.9	102.6	-39.1	0.8	1.1	12,851.6	109.2	55.0	27.6	19.1	18.2
2017	1,118.8	111.5	-25.1	1.1	1.3	13,338.2	114.5	56.4	28.4	20.7	22.9
2018	1,194.1	114.2	-6.0	1.4	1.6	13,781.3	119.2	54.8	28.3	21.9	21.2
2019	1,254.9	124.8	-7.7	1.5	1.7	14,169.1	122.8	53.9	28.6	23.1	13.9
2020	1,233.1	110.6	-17.4	1.1	1.3	13,849.2	102.7	40.3	7.7	6.3	-25.6
2021	1,288.6	124.3	-1.9	1.8	1.6	14,235.1	111.4	55.0	14.4	9.9	8.4
2022	1,333.8	126.1	8.9	2.4	1.7	14,926.3	119.9	52.5	26.7	20.2	12.4
2023 (b)	1,381.9	126.1	7.9	2.4	1.7	15,319.1	119.4	54.9	29.9	23.6	13.5
2021 IV	1,309.1	125.3	1.2	2.2	1.7	14,546.6	116.1	57.4	23.0	16.8	22.1
2022 I	1,323.6	126.4	4.8	1.8	1.8	14,737.5	117.8	52.2	23.3	17.5	17.6
II	1,321.4	130.1	9.8	2.3	1.5	14,920.9	120.5	55.9	26.5	20.1	15.8
III	1,335.2	122.9	5.9	2.4	1.5	14,987.4	120.0	51.0	28.3	21.2	10.1
IV	1,355.5	125.3	14.8	3.1	1.8	15,062.2	121.4	50.8	28.0	22.1	6.0
2023 I	1,379.3	125.3	3.1	2.1	1.7	15,188.6	121.2	56.3	28.2	22.7	11.8
II	1,381.7	120.1	13.2	2.8	1.6	15,383.7	120.6	56.0	28.6	23.1	14.0
III (b)	1,381.6	120.8	7.2	--	--	15,443.1	121.9	51.0	29.0	23.8	15.3
2023 Jun	1,378.1	118.6	13.5	3.0	--	15,413.5	121.0	53.4	29.0	23.1	14.3
Jul	1,378.6	120.8	13.5	--	--	15,433.6	121.9	52.8	29.0	23.7	15.2
Aug	1,384.6	--	0.9	--	--	15,452.6	--	49.3	28.9	23.9	15.4
Percentage changes (c)											
2015	4.7	7.8	--	-28.2	42.6	3.6	6.9	--	4.4	6.0	--
2016	2.6	2.6	--	-1.7	29.0	3.4	5.5	--	7.4	11.0	--
2017	6.2	8.7	--	37.1	24.8	3.8	4.9	--	2.8	8.3	--
2018	6.7	2.4	--	30.8	24.5	3.3	4.1	--	-0.2	5.8	--
2019	5.1	9.2	--	5.5	1.3	2.8	3.0	--	0.9	5.3	--
2020	-1.7	-11.3	--	-25.2	-19.8	-2.3	-16.3	--	-73.1	-72.7	--
2021	4.5	12.3	--	69.7	22.7	2.8	8.5	--	87.4	57.8	--
2022	3.5	1.5	--	29.8	1.2	4.9	7.6	--	85.4	103.4	--
2023 (d)	4.3	-4.1	--	18.3	3.6	3.1	1.7	--	8.8	18.7	--
2021 IV	1.0	0.6	--	49.9	23.8	1.4	3.4	--	37.9	48.4	--
2022 I	1.1	0.9	--	35.7	20.1	1.3	1.4	--	1.2	4.1	--
II	-0.2	2.9	--	22.5	-10.9	1.2	2.4	--	13.8	15.1	--
III	1.0	-5.6	--	20.7	-9.7	0.4	-0.5	--	6.7	5.2	--
IV	1.5	2.0	--	41.1	7.2	0.5	1.2	--	-1.0	4.2	--
2023 I	1.8	0.0	--	16.2	-3.7	0.8	-0.2	--	0.8	2.9	--
II	0.2	-4.1	--	20.0	18.0	1.3	-0.5	--	1.5	1.9	--
III (e)	0.0	0.5	--	--	--	0.4	1.1	--	1.2	2.8	--
2023 Jun	-0.3	-3.8	--	11.6	--	0.2	0.9	--	1.9	-0.9	--
Jul	0.0	1.8	--	--	--	0.1	0.8	--	0.2	2.3	--
Aug	0.4	--	--	--	--	0.1	--	--	-0.5	1.0	--

(a) Seasonally adjusted, except for annual data and (f). (b) Period with available data. (c) Percent change from the previous quarter for quarterly data, from the previous month for monthly data, unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Growth of the average of available months over the monthly average of the previous quarter. (f) Percent changes are over the same period of the previous year. (g) Excluding domestic service workers and non-professional caregivers. (h) Deflated by Funcas.

Sources: European Commision, S&P Global, M. of Labour, M. of Public Works, National Statistics Institute, AENA, OFICEMEN, SEOPAN and Funcas.

Chart 9.1 - Construction indicators (I)

Level, 2009=100 and index

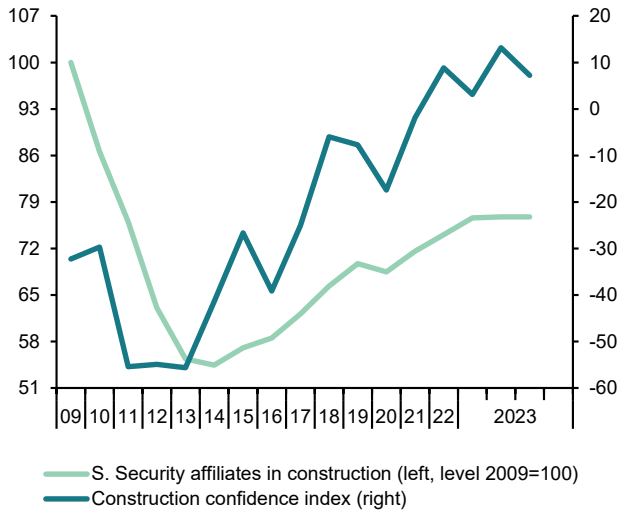


Chart 9.2 - Construction indicators (II)

Level, 2009=100

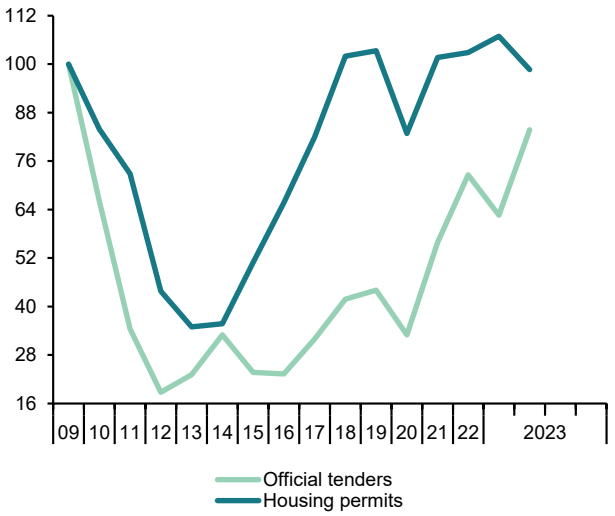


Chart 9.3 - Services indicators (I)

Level, 2009=100

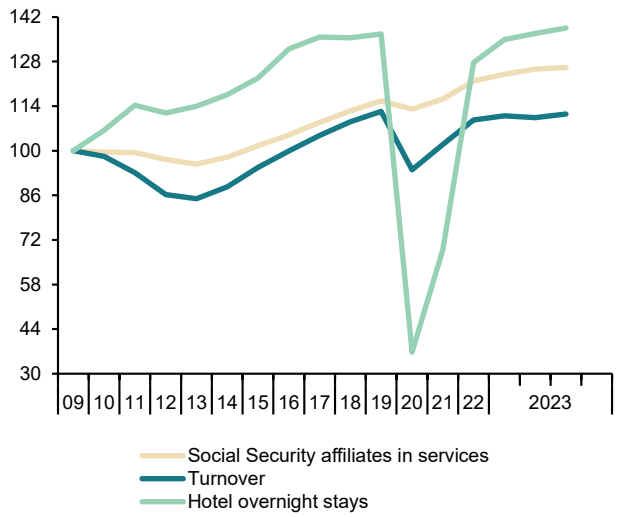


Chart 9.4 - Services indicators (II)

Index

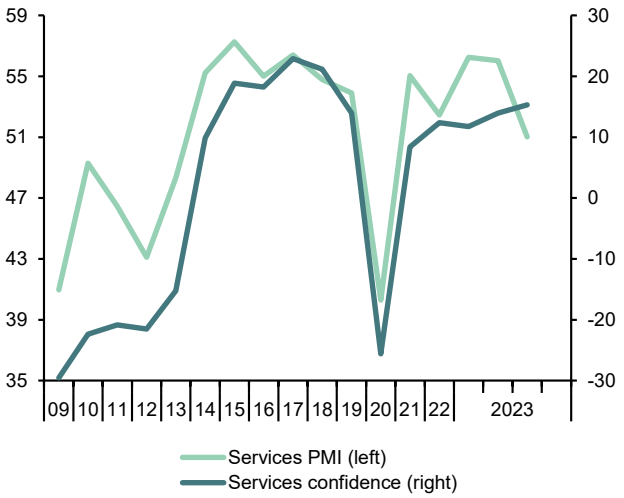


Table 10

Consumption and investment indicators (a)

	Consumption indicators						Investment in equipment indicators			
	Retail sales deflated	Car registrations	Consumer confidence index	Hotel overnight stays by residents in Spain	Industrial orders for consumer goods	Large company sales (consumer goods and services)	Cargo vehicles registrations	Industrial orders for investment goods	Imports of capital goods (volume)	Large company sales (capital goods)
	2015=100	Thousands, monthly average	Balance of responses	Million, monthly average	Balance of responses	2015=100	Thousands, monthly average	Balance of responses	2015=100	2015=100
2015	100.0	91.2	-4.9	9.2	-3.1	100.0	15.0	0.2	100.0	100.0
2016	103.9	102.5	-6.1	9.5	-1.4	107.3	15.9	-0.2	104.1	104.0
2017	104.7	111.8	-2.9	9.7	2.2	110.3	17.3	4.9	110.7	107.7
2018	105.4	118.7	-4.4	9.7	-5.6	113.1	19.2	12.4	112.9	112.5
2019	107.8	114.6	-6.4	10.0	-2.9	116.0	18.4	8.8	113.1	117.7
2020	100.4	78.3	-22.5	4.3	-25.5	106.3	14.2	-22.7	107.1	110.0
2021	104.0	79.5	-12.9	7.6	-11.1	111.4	15.6	4.7	118.1	115.4
2022	104.9	76.2	-26.5	10.0	-2.8	118.7	13.9	28.2	133.5	124.6
2023 (b)	108.6	87.9	-18.9	10.7	-6.2	118.5	16.7	21.7	139.7	146.5
2021 IV	105.6	85.5	-12.4	9.6	-1.5	116.6	14.4	14.7	123.5	119.0
2022 I	102.4	62.9	-18.0	9.5	0.9	118.3	12.7	33.8	129.4	118.9
II	104.8	76.6	-26.9	10.0	2.6	118.8	13.3	29.8	134.2	121.8
III	104.8	85.2	-32.9	10.3	-8.6	118.9	14.3	21.7	136.6	126.8
IV	107.5	85.3	-28.1	10.3	-6.1	120.5	15.5	27.5	139.0	132.8
2023 I	109.2	85.4	-22.7	10.3	-5.9	120.8	16.8	25.8	141.8	147.5
II	111.2	82.9	-18.9	10.1	-6.1	121.6	16.0	24.6	143.2	145.9
III (b)	111.9	83.8	-13.2	10.0	-6.8	122.5	17.3	11.1	143.6	143.8
2023 Jun	111.6	87.9	-16.2	10.1	-9.6	122.5	17.2	27.7	143.5	147.2
Jul	111.9	76.7	-11.6	10.1	-9.5	122.5	15.9	16.5	143.6	143.8
Aug	--	90.9	-14.8	9.8	-4.1	--	18.7	5.7	--	--
					Percentage changes (c)					
2015	4.2	22.9	--	5.3	--	7.6	31.1	--	14.4	7.1
2016	3.9	12.4	--	3.6	--	7.3	6.1	--	4.1	4.0
2017	0.8	9.1	--	1.4	--	2.7	8.5	--	6.4	3.6
2018	0.7	6.1	--	0.6	--	2.6	10.8	--	2.0	4.4
2019	2.3	-3.4	--	2.7	--	2.6	-4.0	--	0.2	4.6
2020	-6.9	-31.7	--	-57.2	--	-8.4	-22.6	--	-5.3	-6.5
2021	3.5	1.6	--	77.3	--	4.9	9.4	--	10.3	4.9
2022	0.9	-4.1	--	32.3	--	6.5	-10.8	--	13.0	8.0
2023 (d)	6.7	16.8	--	2.1	--	3.4	26.1	--	7.4	21.4
2021 IV	0.9	5.0	--	-7.5	--	30.0	-1.2	--	13.2	22.7
2022 I	-3.0	-26.5	--	-1.6	--	5.7	-11.2	--	20.5	-0.6
II	2.3	21.9	--	5.5	--	1.8	4.6	--	15.7	10.2
III	0.0	11.2	--	2.5	--	0.2	7.5	--	7.3	17.5
IV	2.6	0.1	--	0.3	--	5.5	8.0	--	7.2	20.5
2023 I	1.5	0.1	--	0.2	--	1.1	8.3	--	8.5	52.3
II	1.9	-3.0	--	-2.2	--	2.9	-4.9	--	3.8	-4.5
III (e)	0.6	1.1	--	-0.9	--	2.9	8.5	--	1.2	-5.4
2023 Jun	0.3	2.7	--	1.2	--	1.5	5.9	--	0.2	-0.9
Jul	0.2	-12.8	--	0.8	--	0.0	-7.6	--	0.1	-2.3
Aug	--	18.6	--	-3.3	--	--	17.9	--	--	--

(a) Seasonally adjusted. except for annual data. (b) Period with available data. (c) Percent change from the previous quarter for quarterly data. from the previous month for monthly data. unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Growth of the average of available months over the monthly average of the previous quarter.

Sources: European Commision. M. of Economy. M. of Industry. National Statistics Institute. DGT. ANFAC and Funcas.

Chart 10.1 - Consumption indicators

Level, 2009=100 and balance of responses

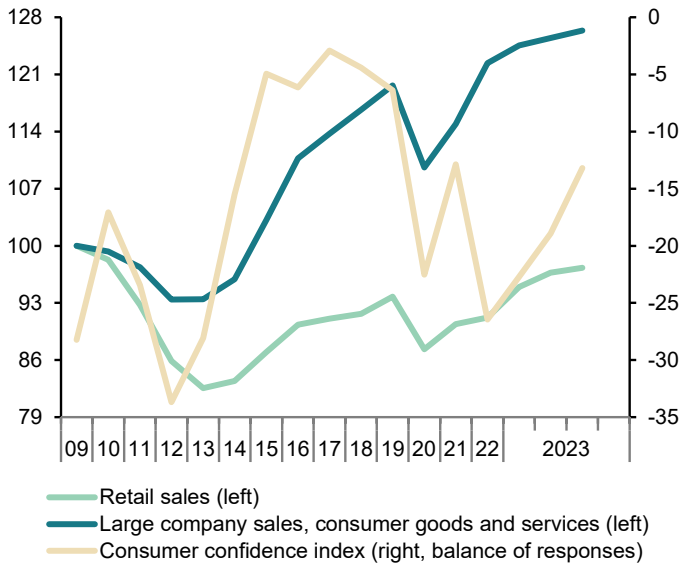


Chart 10.2 - Investment indicators

Level, 2009=100 and balance of responses

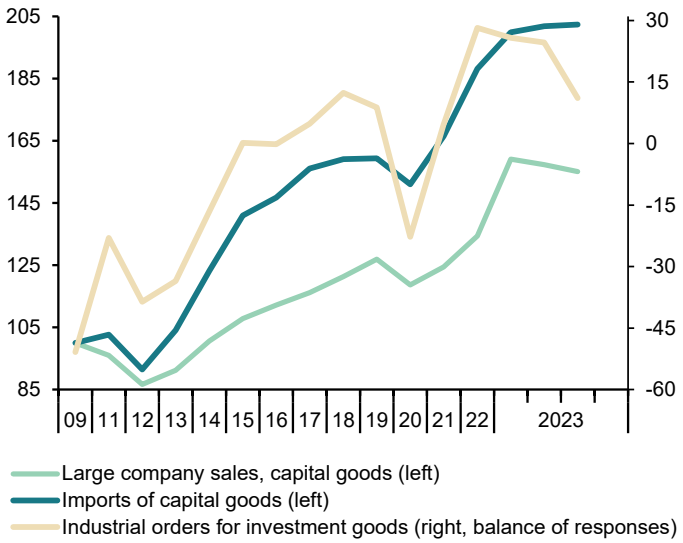


Table 11a

Labour market (I)

Forecasts in yellow

		Population aged 16 or more	Labour force		Employment		Unemployment		Participation rate aged 16 or more (a)	Employment rate aged 16 or more (b)	Unemployment rate (c)			
											Total	Aged 16-24	Spanish	Foreign
			Original	Seasonally adjusted	Original	Seasonally adjusted	Original	Seasonally adjusted	Seasonally adjusted				Original	
		1	2=4+6	3=5+7	4	5	6	7	8	9	10=7/3	11	12	13
		Million							Percentage					
2016		38.5	22.8	--	18.3	--	4.5	--	59.2	47.6	19.6	44.4	18.7	26.6
2017		38.7	22.7	--	18.8	--	3.9	--	58.8	48.7	17.2	38.6	16.3	23.8
2018		38.9	22.8	--	19.3	--	3.5	--	58.6	49.7	15.2	34.3	14.3	21.9
2019		39.3	23.0	--	19.8	--	3.2	--	58.6	50.4	14.1	32.5	13.2	20.1
2020		39.6	22.7	--	19.2	--	3.5	--	57.4	48.5	15.5	38.3	14.1	24.6
2021		39.7	23.2	--	19.8	--	3.4	--	58.5	49.9	14.8	34.9	13.5	23.1
2022		39.9	23.4	--	20.4	--	3.0	--	58.6	51.1	12.9	29.7	11.9	19.3
2023		40.1	23.5	--	20.6	--	2.9	--	58.6	51.4	12.3	--	--	--
2024		40.2	23.6	--	20.8	--	2.8	--	58.6	51.7	11.9	--	--	--
2021	III	39.6	23.4	23.3	20.0	19.9	3.4	3.4	58.8	50.2	14.7	31.8	13.5	21.7
	IV	39.7	23.3	23.3	20.2	20.2	3.1	3.1	58.6	50.8	13.4	30.8	12.2	20.9
2022	I	39.8	23.3	23.4	20.1	20.3	3.2	3.1	58.8	51.1	13.2	29.4	12.5	21.3
	II	39.8	23.4	23.4	20.5	20.4	2.9	3.0	58.7	51.2	12.7	29.1	11.5	18.9
	III	40.0	23.5	23.4	20.5	20.4	3.0	3.0	58.6	51.1	12.8	31.0	11.8	18.4
	IV	40.1	23.5	23.5	20.5	20.4	3.0	3.0	58.5	50.9	13.0	29.3	11.9	18.6
2023	I	40.3	23.6	23.7	20.5	20.7	3.1	3.0	58.9	51.4	12.7	29.2	12.1	19.9
	II	40.4	23.8	23.8	21.1	21.0	2.8	2.8	58.9	52.0	11.8	28.6	10.6	17.2
		Percentage changes (d)							Difference from one year ago					
2016		0.1	-0.4	--	2.7	--	-11.4	--	-0.3	1.2	-2.4	-3.9	-2.2	-3.8
2017		0.3	-0.4	--	2.6	--	-12.6	--	-0.4	1.1	-2.4	-5.9	-2.4	-2.8
2018		0.6	0.3	--	2.7	--	-11.2	--	-0.2	1.0	-2.0	-4.2	-2.0	-2.0
2019		1.0	1.0	--	2.3	--	-6.7	--	0.0	0.7	-1.2	-1.8	-1.1	-1.8
2020		-1.9	-0.9	--	-7.3	--	38.0	--	0.6	-2.8	5.5	11.9	5.5	6.5
2021		2.9	1.7	--	7.8	--	-23.4	--	-0.7	2.3	-4.8	-9.5	-5.2	-3.5
2022		0.7	0.9	--	3.1	--	-11.8	--	0.1	1.2	-1.9	--	--	--
2023		0.4	0.3	--	1.0	--	-4.6	--	0.0	0.3	-0.6	--	--	--
2024		0.4	0.4	--	1.0	--	-2.9	--	0.0	0.3	-0.4	--	--	--
2021	III	0.1	2.4	2.4	4.5	4.5	-8.2	-8.3	1.3	2.1	-1.7	-9.1	-1.3	-3.9
	IV	0.2	1.0	1.0	4.3	4.4	-16.6	-16.4	0.5	2.0	-2.8	-9.8	-2.3	-5.7
2022	I	0.3	1.7	1.7	4.6	4.5	-13.1	-13.8	0.8	2.1	-2.4	-8.7	-2.0	-4.9
	II	0.5	0.7	0.7	4.0	4.0	-17.6	-17.0	0.1	1.7	-2.7	-9.7	-2.5	-4.8
	III	0.8	0.3	0.4	2.6	2.6	-12.8	-12.5	-0.3	0.9	-1.9	-0.8	-1.7	-3.3
	IV	1.1	0.9	0.9	1.4	1.5	-2.6	-2.7	-0.1	0.2	-0.5	-1.4	-0.2	-2.2
2023	I	1.3	1.4	1.3	1.8	1.9	-1.5	-2.1	0.0	0.3	-0.5	-0.2	-0.3	-1.4
	II	1.4	1.8	1.8	2.9	2.9	-5.4	-5.1	0.3	0.7	-0.9	-0.5	-0.8	-1.7

(a) Labour force aged 16 or more over population aged 16 or more. (b) Employed aged 16 or more over population aged 16 or more. (c) Unemployed in each group over labour force in that group. (d) Annual percentage changes for original data; quarterly percentage changes for S.A. data.

*Source: INE (*Labour Force Survey*) and Funcas.*

Chart 11a.1 - Labour force, employment and unemployment, SA

Thousands and percentage of active population

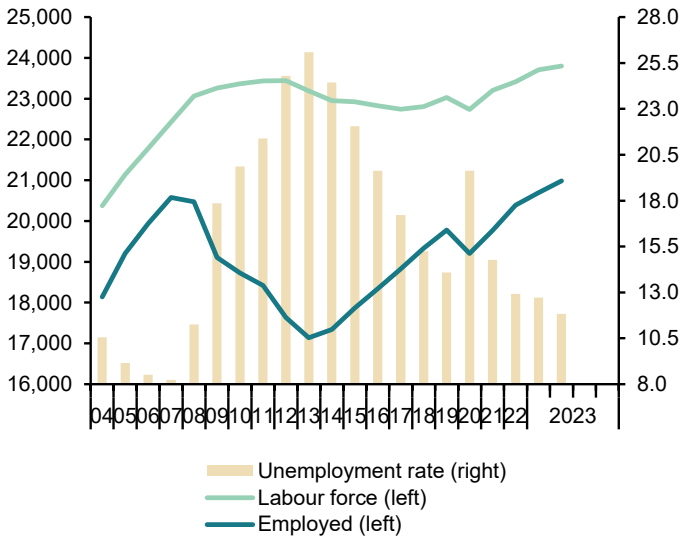


Chart 11a.2 - Unemployment rates

Percentage

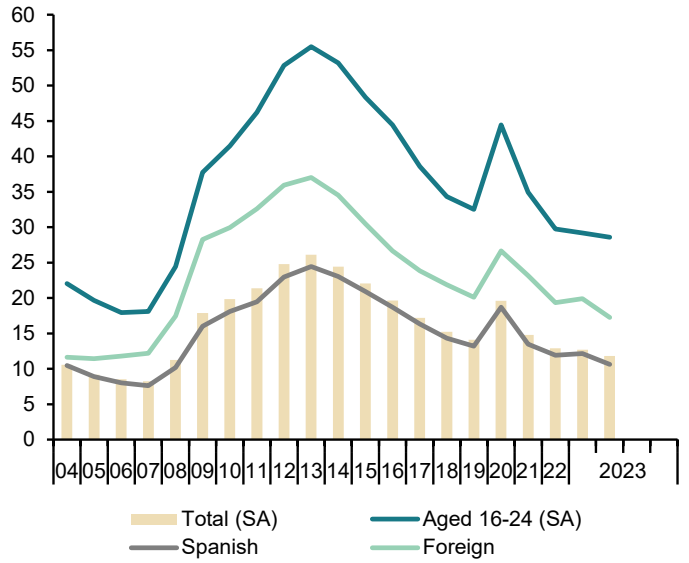


Table 11b

Labour market (II)

		Employed by sector				Employed by professional situation					Employed by duration of the working-day		
						Employees							
							By type of contract						
		Agriculture	Industry	Construction	Services	Total	Tempo-rary	Indefinite	Temporary employment rate (a)	Self employed	Full-time	Part-time	Part-time employment rate (b)
		1	2	3	4	5=6+7	6	7	8=6/5	9	10	11	12
		Million (original data)											
2016		0.77	2.52	1.07	13.97	15.23	3.97	11.26	26.1	3.11	15.55	2.79	15.21
2017		0.82	2.65	1.13	14.23	15.72	4.19	11.52	26.7	3.11	16.01	2.82	14.97
2018		0.81	2.71	1.22	14.59	16.23	4.35	11.88	26.8	3.09	16.56	2.76	14.31
2019		0.80	2.76	1.28	14.94	16.67	4.38	12.29	26.3	3.11	16.95	2.83	14.30
2020		0.77	2.70	1.24	14.49	16.11	3.88	12.23	24.1	3.09	16.51	2.70	14.05
2021		0.80	2.70	1.29	14.98	16.63	4.17	12.46	25.1	3.15	17.03	2.74	13.87
2022		0.77	2.77	1.32	15.52	17.25	3.65	13.61	21.1	3.14	17.63	2.76	13.52
2023 (c)		0.75	2.76	1.33	15.92	17.60	3.05	14.56	17.3	3.15	17.93	2.83	13.62
2021	III	0.76	2.73	1.29	15.25	16.92	4.40	12.52	26.0	3.11	17.33	2.70	13.46
	IV	0.84	2.77	1.29	15.29	16.97	4.31	12.67	25.4	3.21	17.45	2.74	13.56
2022	I	0.83	2.70	1.32	15.24	16.93	4.10	12.83	24.2	3.16	17.28	2.81	13.99
	II	0.79	2.78	1.34	15.56	17.30	3.86	13.45	22.3	3.16	17.65	2.82	13.77
	III	0.73	2.81	1.33	15.68	17.40	3.51	13.89	20.2	3.14	17.92	2.62	12.76
	IV	0.75	2.80	1.30	15.61	17.37	3.11	14.26	17.9	3.09	17.68	2.78	13.59
2023	I	0.75	2.79	1.30	15.62	17.35	3.00	14.35	17.3	3.10	17.65	2.81	13.72
	II	0.75	2.73	1.36	16.22	17.85	3.09	14.76	17.3	3.20	18.21	2.85	13.52
		Annual percentage changes							Difference from one year ago	Annual percentage changes			Difference from one year ago
2016		5.1	1.6	0.0	2.9	3.1	6.8	1.8	0.9	0.7	3.3	-0.8	-0.5
2017		5.8	5.0	5.1	1.9	3.2	5.6	2.3	0.6	-0.1	2.9	1.0	-0.2
2018		-0.8	2.3	8.3	2.5	3.3	3.8	3.1	0.1	-0.5	3.5	-1.9	-0.7
2019		-1.9	2.0	4.6	2.4	2.7	0.6	3.5	-0.6	0.5	2.3	2.3	0.0
2020		-4.0	-2.3	-2.6	-3.0	-3.4	-11.4	-0.5	-2.2	-0.5	-2.6	-4.6	-0.3
2021		4.9	0.1	3.8	3.3	3.2	7.6	1.8	1.0	1.8	3.2	1.7	-0.2
2022		-3.5	2.6	2.3	3.6	3.8	-12.6	9.2	-3.9	-0.3	3.5	0.6	-0.3
2023 (d)		-7.4	0.8	0.1	3.3	2.8	-23.4	10.8	-5.9	-0.2	2.7	0.5	-0.3
2021	III	4.2	1.5	3.5	5.1	5.0	13.0	2.5	1.8	1.5	4.9	1.6	-0.4
	IV	7.4	2.7	0.4	4.8	4.5	7.7	3.5	0.8	3.5	5.5	-2.2	-0.9
2022	I	3.7	2.1	4.3	5.1	5.1	7.0	4.5	0.4	1.7	4.6	4.2	0.0
	II	-2.7	4.2	1.0	4.7	4.8	-6.8	8.7	-2.8	0.0	4.8	-0.6	-0.6
	III	-4.3	3.0	2.7	2.8	2.9	-20.2	11.0	-5.8	0.9	3.4	-2.8	-0.7
	IV	-10.3	1.3	1.2	2.1	2.3	-27.7	12.6	-7.5	-3.7	1.3	1.6	0.0
2023	I	-9.6	3.5	-1.4	2.4	2.5	-26.9	11.9	-6.9	-1.6	2.2	-0.1	-0.3
	II	-5.0	-1.8	1.6	4.2	3.2	-19.8	9.8	-5.0	1.2	3.2	1.0	-0.2

(a) Percentage of employees with temporary contract over total employees. (b) Percentage of part-time employed over total employed. (c) Average of available data. (d) Change of existing data over the same period last year.

*Source: INE (*Labour Force Survey*).*

Chart 11b.1 - Employment by sector

Level, 2003=100

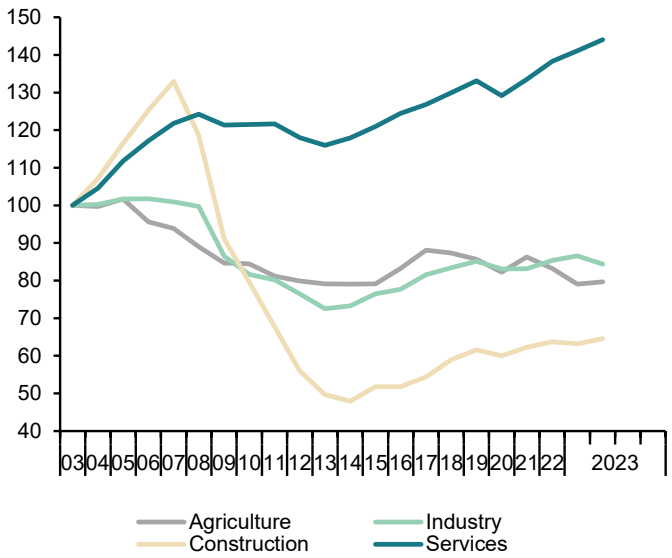


Chart 11b.2 - Temporary employment rate

Percentage over total employees

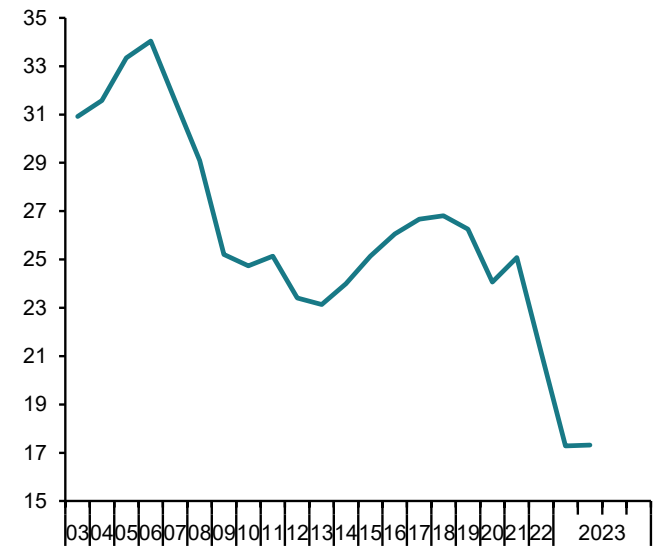


Table 12

Index of Consumer Prices

Forecasts in yellow

		Total	Total excluding food and energy	Excluding unprocessed food and energy				Unprocessed food	Energy	Food
				Total	Non-energy industrial goods	Services	Processed food			
% of total in 2022		100.00	66.69	83.52	21.06	45.63	16.82	6.76	9.72	23.59
Indexes. 2021 = 100										
2017		95.0	97.0	96.8	98.9	95.9	96.0	89.6	87.1	93.8
2018		96.6	97.9	97.7	98.9	97.3	96.9	92.4	92.4	95.5
2019		97.3	98.9	98.5	99.2	98.7	97.5	94.2	91.3	96.3
2020		97.0	99.4	99.2	99.4	99.4	98.7	97.7	82.5	98.4
2021		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2022		108.4	103.7	105.2	104.2	103.3	110.6	110.9	127.9	110.7
2023		112.6	108.5	111.7	108.8	107.9	124.0	121.2	109.2	123.0
2024		116.5	111.6	115.0	110.2	111.9	128.3	127.2	117.0	127.8
Annual percentage changes										
2017		2.0	1.1	1.1	0.2	1.6	0.7	2.6	8.0	1.3
2018		1.7	0.9	0.9	0.0	1.5	1.0	3.1	6.1	1.8
2019		0.7	1.0	0.9	0.3	1.4	0.5	1.9	-1.2	0.9
2020		-0.3	0.6	0.7	0.2	0.8	1.3	3.7	-9.6	2.1
2021		3.1	0.6	0.8	0.6	0.6	1.3	2.4	21.2	1.7
2022		8.4	3.7	5.2	4.2	3.3	10.6	10.9	27.9	10.7
2023		3.9	4.6	6.2	4.4	4.4	12.1	9.3	-14.6	11.2
2024		3.5	2.9	3.0	1.3	3.6	3.5	4.9	7.1	3.9
2023	Jan	5.9	5.1	7.5	6.5	4.1	16.5	10.7	-8.3	14.6
	Feb	6.0	5.2	7.6	6.5	4.2	16.8	13.4	-8.9	15.7
	Mar	3.3	5.1	7.5	5.9	4.4	16.5	13.6	-25.6	15.5
	Apr	4.1	4.6	6.6	4.8	4.3	14.2	8.8	-15.6	12.4
	May	3.2	4.3	6.1	4.2	4.2	12.9	8.9	-19.6	11.6
	Jun	1.9	4.3	5.9	4.0	4.3	12.0	6.3	-24.9	10.0
	Jul	2.3	4.8	6.2	4.3	4.6	11.3	8.9	-24.3	10.4
	Aug	2.6	4.8	6.1	4.3	4.5	10.9	8.5	-21.5	10.1
	Sep	3.6	4.6	5.9	3.9	4.6	10.7	8.4	-14.2	10.0
	Oct	4.1	4.3	5.5	3.2	4.7	10.1	8.4	-7.4	9.3
	Nov	4.6	4.1	5.1	2.8	4.8	8.7	8.3	-1.5	8.5
	Dec	4.9	4.1	4.6	2.6	4.8	6.6	8.3	5.4	7.1
2024	Jan	4.8	3.7	4.2	1.9	4.6	6.0	9.5	6.7	7.0
	Feb	4.0	3.5	3.7	1.6	4.4	4.4	7.5	4.5	5.3
	Mar	4.0	3.3	3.4	1.6	4.1	3.9	5.0	8.4	4.2
	Apr	4.2	3.3	3.3	1.5	4.1	3.5	5.3	10.8	4.1
	May	4.4	3.2	3.3	1.6	4.0	3.6	5.8	14.2	4.2
	Jun	4.2	3.0	3.2	1.4	3.8	3.6	6.0	12.4	4.3
	Jul	3.7	2.8	2.9	1.4	3.5	3.4	3.5	11.1	3.4
	Aug	3.3	2.7	2.8	1.3	3.4	3.2	3.5	7.3	3.3
	Sep	3.0	2.6	2.6	1.1	3.2	2.9	3.6	5.3	3.1
	Oct	2.6	2.4	2.4	1.0	3.0	2.7	2.8	3.8	2.7
	Nov	2.3	2.2	2.2	0.9	2.8	2.4	3.8	2.1	2.8
	Dec	2.0	2.1	2.1	0.8	2.7	2.1	3.0	0.7	2.4

Source: INE and Funcas (Forecasts).

Chart 12.1 - Inflation rate (I)

Annual percentage changes

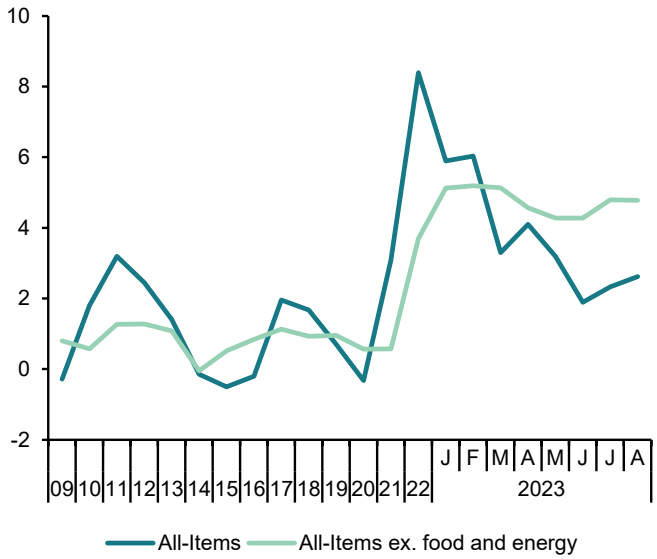


Chart 12.2 - Inflation rate (II)

Annual percentage changes

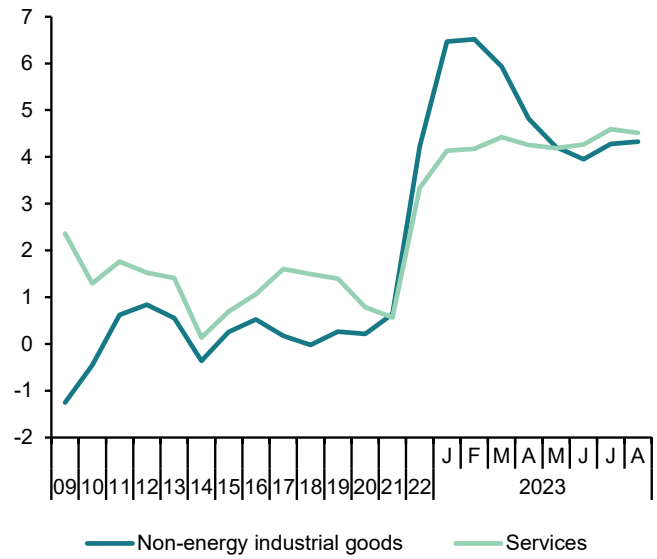


Table 13

Other prices and costs indicators

		GDP deflator (a)	Industrial producer prices		Housing prices		Urban land prices (M. Public Works)	Labour Costs Survey				Wage increase agreed in collective bargaining
			Total	Excluding energy	Housing Price Index (INE)	m^2 average price (M. Public Works)		Total labour costs per worker	Wage costs per worker	Other cost per worker	Total labour costs per hour worked	
		2015=100	2015=100		2007=100			2000=100				
2015		100.0	100.0	100.0	66.8	71.7	54.9	144.2	142.5	149.6	156.5	--
2016		100.3	96.9	99.6	70.0	73.1	57.8	143.6	142.1	148.4	156.2	--
2017		101.6	101.1	101.9	74.3	74.8	58.2	144.0	142.3	149.1	156.2	--
2018		102.9	104.1	103.0	79.3	77.4	57.3	145.4	143.8	150.6	158.5	--
2019		104.4	103.6	103.2	83.3	79.8	57.7	148.7	146.4	155.7	162.7	--
2020		105.6	99.2	103.1	85.0	78.9	52.3	145.4	142.6	154.1	173.3	--
2021		108.4	116.4	110.4	88.2	80.6	54.3	153.9	151.5	161.5	172.2	--
2022		112.9	157.7	125.4	94.7	84.7	57.0	160.4	158.4	166.5	175.6	--
2023 (b)		118.8	150.9	130.2	97.0	87.1	54.3	167.7	164.4	178.0	177.7	--
2021	IV	110.9	132.9	114.4	90.4	82.4	57.5	162.5	162.2	163.3	179.6	--
2022	I	111.6	147.1	119.6	92.7	84.3	58.3	154.2	150.3	166.2	165.2	--
	II	111.5	158.7	126.4	94.5	84.6	58.4	162.3	161.3	165.3	172.8	--
	III	112.3	165.4	127.4	96.2	84.6	53.9	155.7	152.2	166.5	178.3	--
	IV	115.9	159.6	128.3	95.4	85.1	57.4	169.4	169.9	167.9	186.2	--
2023	I	119.0	154.0	130.4	96.0	87.0	53.2	163.7	159.3	177.4	172.8	--
	II	118.7	148.6	130.2	98.0	87.2	55.5	171.7	169.5	178.6	182.6	--
	III (b)	--	148.9	129.5	--	--	--	--	--	--	--	--
2023	May	--	147.4	130.3	--	--	--	--	--	--	--	--
	Jun	--	148.7	129.8	--	--	--	--	--	--	--	--
	Jul	--	148.9	129.5	--	--	--	--	--	--	--	--
						Annual percent changes (c)						
2015		0.5	-2.1	0.3	3.6	1.1	4.3	0.6	1.1	-0.7	0.6	0.7
2016		0.3	-3.1	-0.4	4.7	1.9	5.3	-0.4	-0.3	-0.8	-0.2	1.0
2017		1.3	4.4	2.3	6.2	2.4	0.8	0.2	0.1	0.5	0.0	1.4
2018		1.2	3.0	1.1	6.7	3.4	-1.6	1.0	1.0	1.0	1.5	1.8
2019		1.4	-0.4	0.1	5.1	3.2	0.7	2.2	1.9	3.4	2.6	2.3
2020		1.1	-4.3	0.0	2.1	-1.1	-9.4	-2.2	-2.6	-1.0	6.5	1.9
2021		2.7	17.3	7.0	3.7	2.1	3.7	5.9	6.3	4.8	-0.6	1.5
2022		4.1	35.5	13.6	7.4	5.0	5.0	4.2	4.6	3.1	2.0	2.8
2023 (d)		6.5	-2.2	5.4	3.6	3.1	-6.9	6.0	5.5	7.4	5.1	3.4
2021	IV	4.2	33.1	10.4	6.4	4.4	12.7	4.5	5.1	2.7	-0.5	1.5
2022	I	3.9	41.5	12.7	8.5	6.7	19.1	4.7	5.2	3.4	1.2	2.4
	II	4.3	43.9	15.4	8.0	5.5	0.2	3.8	4.3	2.2	1.1	2.5
	III	3.9	40.0	14.3	7.6	4.7	2.9	4.0	4.1	3.9	1.8	2.6
	IV	4.5	20.0	12.2	5.5	3.3	-0.1	4.2	4.7	2.8	3.7	2.8
2023	I	6.6	4.7	9.0	3.5	3.1	-8.8	6.2	6.0	6.7	4.5	3.1
	II	6.4	-6.4	3.0	3.6	3.0	-5.1	5.8	5.1	8.0	5.7	3.3
	III (e)	--	-10.0	1.7	--	--	--	--	--	--	--	3.4
2023	Jun	--	-8.0	2.1	--	--	--	--	--	--	--	3.3
	Jul	--	-8.4	1.9	--	--	--	--	--	--	--	3.3
	Aug	--	--	--	--	--	--	--	--	--	--	3.4

(a) Seasonally adjusted. (b) Period with available data. (c) Percent change from the previous quarter for quarterly data. from the previous month for monthly data. unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Growth of the average of available months over the monthly average of the previous quarter.

Sources: M. of Public Works. M. of Labour and INE (National Statistics Institute).

Chart 13.1 - Housing and urban land prices

Level, 2007=100

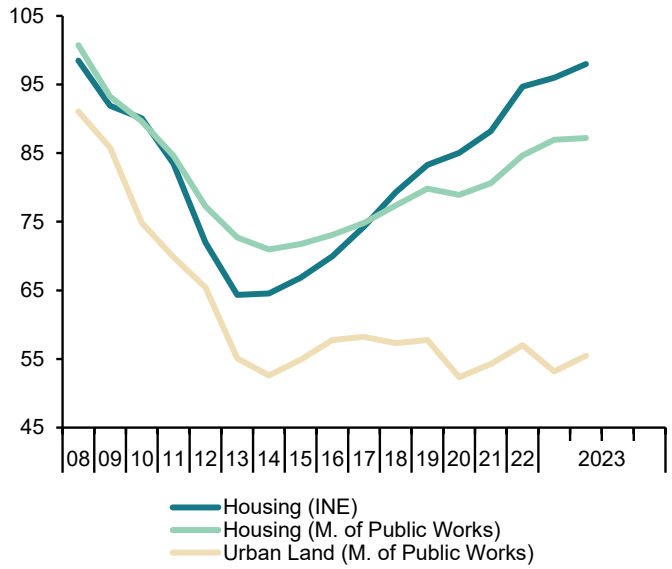


Chart 13.2 - Wage costs

Annual percent change

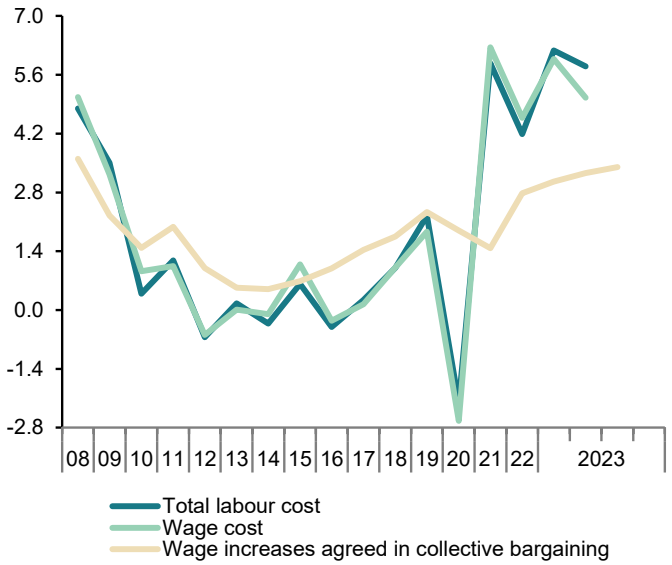


Table 14

External trade (a)

		Exports of goods			Imports of goods			Exports to EU countries (monthly average)	Exports to non-EU countries (monthly average)	Total Balance of goods (monthly average)	Balance of goods excluding energy (monthly average)	Balance of goods with EU countries (monthly average)
		Nominal	Prices	Real	Nominal	Prices	Real					
		2005=100			2005=100			EUR Billions				
2015		161.2	110.1	146.5	118.0	104.6	112.9	12.0	8.9	-2.1	0.2	0.2
2016		165.4	108.2	153.0	117.5	101.3	116.1	12.5	8.8	-1.4	0.3	0.4
2017		178.2	108.9	163.7	129.8	106.1	122.4	13.6	9.5	-2.2	0.0	0.6
2018		184.0	112.1	164.2	137.2	110.9	123.8	14.1	9.7	-2.9	-0.3	0.7
2019		187.7	112.9	166.3	138.4	110.8	125.0	14.3	9.9	-2.6	-0.3	0.8
2020		170.1	112.1	151.8	118.9	107.4	110.8	13.3	8.6	-1.1	0.3	1.3
2021		203.1	121.7	166.9	148.6	120.2	123.7	16.1	10.1	-2.6	-0.2	1.7
2022		251.1	144.0	174.4	196.3	149.3	131.6	20.4	12.1	-5.7	-1.0	3.3
2023(b)		255.8	152.1	168.2	187.9	148.2	126.8	20.8	12.2	-3.0	0.0	3.0
2021	III	210.6	122.4	172.0	150.4	119.6	125.8	16.7	10.3	-2.1	0.3	2.4
	IV	215.6	126.2	170.9	164.4	124.1	132.4	17.1	10.6	-4.1	-0.9	2.2
2022	I	232.9	136.7	170.4	181.0	140.5	128.8	19.1	10.8	-5.1	-1.2	3.1
	II	262.1	144.6	181.2	207.3	146.8	141.2	20.4	13.2	-6.5	-1.2	2.8
	III	262.9	145.3	180.9	208.2	155.3	134.1	21.1	12.6	-6.5	-1.4	3.4
	IV	254.9	148.4	171.8	193.4	155.1	124.7	20.9	11.8	-4.7	-0.2	3.9
2023	I	266.6	154.0	173.1	188.3	152.8	123.2	22.1	12.1	-2.2	0.9	4.5
	II	251.5	150.6	167.0	188.7	143.6	131.4	20.0	12.3	-4.2	-1.1	1.8
2023	May	263.6	151.2	174.4	199.7	143.6	139.0	21.0	12.8	-4.8	-1.5	2.3
	Jun	253.6	148.0	171.4	185.8	144.0	129.0	19.8	12.7	-3.4	-0.9	1.1
	Jul	236.3	150.3	157.3	184.3	149.3	123.5	18.9	11.4	-5.3	-2.4	0.8
		Percentage changes (c)								Percentage of GDP		
2015		3.8	0.6	3.2	3.5	-2.5	6.1	5.3	1.8	-2.3	0.2	0.2
2016		2.6	-1.7	4.4	-0.4	-3.1	2.8	4.7	-0.1	-1.6	0.3	0.4
2017		7.7	0.7	7.0	10.5	4.7	5.5	8.3	6.9	-2.3	0.0	0.7
2018		3.3	3.0	0.3	5.7	4.5	1.2	3.9	2.5	-2.9	-0.3	0.7
2019		2.0	0.7	1.3	0.9	-0.1	0.9	1.8	2.2	-2.5	-0.3	0.8
2020		-9.4	-0.7	-8.8	-14.1	-3.1	-11.4	-7.0	-12.9	-1.2	0.3	1.4
2021		19.4	8.6	10.0	25.0	12.0	11.7	20.9	17.2	-2.6	-0.2	1.7
2022		23.6	18.3	4.5	32.1	24.2	6.3	26.2	19.4	-5.1	-0.9	3.0
2023(d)		3.3	5.9	-2.5	-3.7	1.5	-5.2	4.8	1.0	--	--	--
2021	III	0.9	2.6	-1.6	3.2	3.2	-0.1	1.6	-0.2	-2.0	0.2	2.3
	IV	2.4	3.0	-0.7	9.3	3.8	5.3	2.2	2.5	-3.8	-0.8	2.0
2022	I	8.0	8.4	-0.3	10.1	13.2	-2.8	11.8	1.8	-4.7	-1.1	2.9
	II	12.5	5.8	6.4	14.6	4.5	9.7	6.8	22.8	-5.8	-1.0	2.5
	III	0.3	0.5	-0.2	0.4	5.8	-5.1	3.3	-4.3	-5.8	-1.3	3.0
	IV	-3.0	2.1	-5.1	-7.1	-0.1	-7.0	-1.0	-6.4	-4.0	-0.2	3.3
2023	I	4.6	3.8	0.8	-2.6	-1.5	-1.2	5.7	2.6	-1.8	0.7	3.7
	II	-5.7	-2.2	-3.5	0.2	-6.0	6.6	-9.5	1.3	-3.5	-0.9	1.5
2023	May	11.1	-1.1	12.4	10.4	0.3	10.2	10.2	12.7	--	--	--
	Jun	-3.8	-2.1	-1.7	-7.0	0.3	-7.2	-5.5	-1.1	--	--	--
	Jul	-6.8	1.6	-8.2	-0.8	3.6	-4.3	-4.9	-9.8	--	--	--

(a) Seasonally adjusted. except for annual data. (b) Period with available data. (c) Percent change from the previous quarter for quarterly data. from the previous month for monthly data. (d) Growth of available period over the same period of the previous year.

Source: Ministry of Economy.

Chart 14.1 - External trade (real)

Level, 2005=100

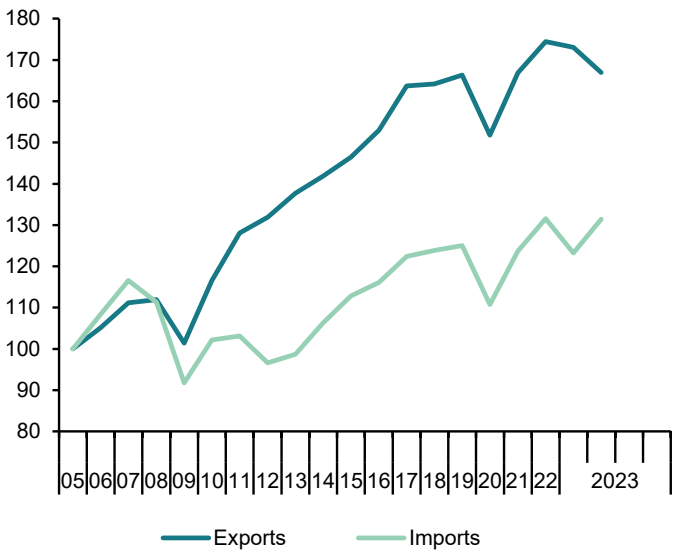


Chart 14.2 - Trade balance

EUR Billions, moving sum of 12 months

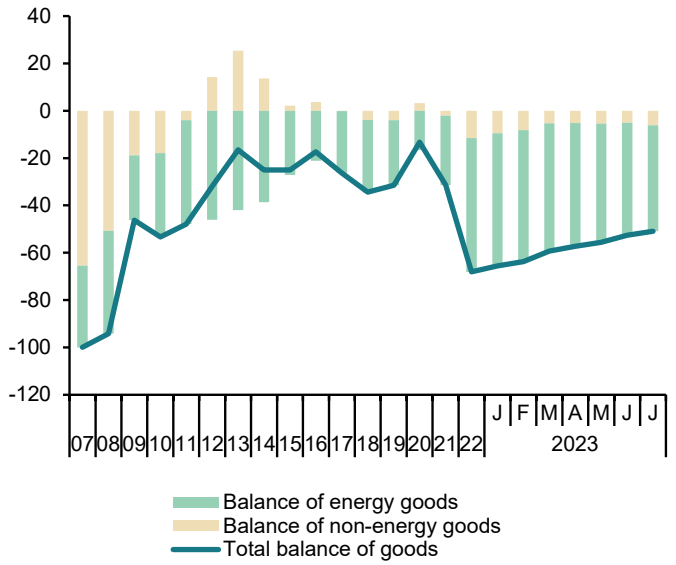


Table 15

Balance of Payments (according to IMF manual)

(Net transactions)

		Current account					Capital account	Current and capital accounts	Financial account						Errors and omissions
		Total	Goods	Services	Primary Income	Secondary Income			Financial account. excluding Bank of Spain					Bank of Spain	
									Total	Direct investment	Porfolio investment	Other investment	Financial derivatives		
		1=2+3+4+5	2	3	4	5	6	7=1+6	8=9+10+11+12	9	10	11	12	13	14
EUR billions															
2015		21.83	-20.68	53.44	-0.24	-10.69	6.98	28.80	69.47	30.07	-5.16	40.75	3.81	-40.79	-0.12
2016		35.37	-14.28	58.70	2.75	-11.80	2.43	37.80	89.49	11.19	46.65	29.09	2.57	-54.02	-2.34
2017		32.21	-22.04	63.93	0.44	-10.13	2.84	35.05	68.01	12.46	25.08	22.74	7.72	-32.63	0.33
2018		22.61	-29.31	62.00	1.73	-11.81	5.81	28.42	46.64	-16.87	15.13	49.43	-1.05	-14.25	3.98
2019		26.24	-26.63	63.24	2.20	-12.58	4.22	30.45	10.07	7.95	-49.96	59.17	-7.09	15.76	-4.63
2020		6.92	-8.67	24.77	2.87	-12.05	5.15	12.06	89.47	15.88	51.16	29.00	-6.58	-81.83	-4.42
2021		9.30	-23.80	35.56	9.50	-11.95	10.83	20.13	7.43	-17.02	2.53	20.06	1.85	16.12	3.42
2022		8.24	-59.19	75.50	6.40	-14.47	12.51	20.75	-4.15	-0.70	33.78	-39.47	2.24	30.27	5.38
2023 (a)		19.16	-12.34	42.38	-5.32	-5.56	5.08	24.24	57.87	6.96	0.23	58.22	-7.53	-55.56	-21.92
2021	III	4.61	-7.48	13.45	1.18	-2.54	2.98	7.59	7.05	-2.24	2.20	6.41	0.68	6.88	6.34
	IV	3.14	-12.64	13.35	4.67	-2.23	5.04	8.18	13.38	6.14	-6.16	16.97	-3.57	-3.72	1.48
2022	I	-3.63	-14.36	11.71	2.23	-3.21	1.15	-2.48	-2.06	-2.01	-24.60	24.33	0.22	2.66	3.09
	II	2.26	-14.74	20.49	0.73	-4.22	2.47	4.73	22.09	9.93	-10.68	23.46	-0.62	-3.87	13.49
	III	3.33	-18.90	25.13	1.24	-4.14	3.05	6.38	-21.30	2.12	-20.59	1.99	-4.82	23.49	-4.19
	IV	6.28	-11.19	18.18	2.20	-2.91	5.83	12.12	11.33	-2.09	5.90	9.39	-1.87	-6.52	-7.31
2023	I	10.25	-4.26	16.93	-0.58	-1.83	2.80	13.05	11.06	5.61	-13.32	24.70	-5.93	-12.84	-14.83
	II	8.91	-8.08	25.45	-4.74	-3.73	2.28	11.19	46.82	1.35	13.55	33.52	-1.60	-42.72	-7.10
			Goods and Services		Primary and Secondary Income										
2023	Abr	1.72	4.16		-2.44		0.47	2.20	0.94	3.03	5.37	-7.25	-0.21	7.61	6.36
	May	4.19	6.84		-2.66		0.55	4.73	-11.59	-0.02	-7.56	-3.38	-0.63	17.50	1.18
	Jun	3.00	6.37		-3.37		1.26	4.26	-7.16	-14.74	-11.87	19.96	-0.51	8.78	-2.65
Percentage of GDP															
2015		2.0	-1.9	5.0	0.0	-1.0	0.6	2.7	6.4	2.8	-0.5	3.8	0.4	-3.8	0.0
2016		3.2	-1.3	5.3	0.2	-1.1	0.2	3.4	8.0	1.0	4.2	2.6	0.2	-4.8	-0.2
2017		2.8	-1.9	5.5	0.0	-0.9	0.2	3.0	5.9	1.1	2.2	2.0	0.7	-2.8	0.0
2018		1.9	-2.4	5.2	0.1	-1.0	0.5	2.4	3.9	-1.4	1.3	4.1	-0.1	-1.2	0.3
2019		2.1	-2.1	5.1	0.2	-1.0	0.3	2.4	0.8	0.6	-4.0	4.8	-0.6	1.3	-0.4
2020		0.6	-0.8	2.2	0.3	-1.1	0.5	1.1	8.0	1.4	4.6	2.6	-0.6	-7.3	-0.4
2021		0.8	-1.9	2.9	0.8	-1.0	0.9	1.6	0.6	-1.4	0.2	1.6	0.2	1.3	0.3
2022		0.6	-4.4	5.6	0.5	-1.1	0.9	1.5	-0.3	-0.1	2.5	-2.9	0.2	2.2	0.4
2023 (a)		2.7	-1.7	5.9	-0.7	-0.8	0.7	3.4	8.1	1.0	0.0	8.1	-1.1	-7.8	-3.1
2021	III	1.5	-2.5	4.4	0.4	-0.8	1.0	2.5	2.3	-0.7	0.7	2.1	0.2	2.3	2.1
	IV	0.9	-3.8	4.0	1.4	-0.7	1.5	2.5	4.0	1.8	-1.8	5.1	-1.1	-1.1	0.4
2022	I	-1.2	-4.6	3.7	0.7	-1.0	0.4	-0.8	-0.7	-0.6	-7.8	7.7	0.1	0.8	1.0
	II	0.7	-4.4	6.1	0.2	-1.3	0.7	1.4	6.6	2.9	-3.2	7.0	-0.2	-1.1	4.0
	III	1.0	-5.7	7.5	0.4	-1.2	0.9	1.9	-6.4	0.6	-6.2	0.6	-1.4	7.0	-1.3
	IV	1.7	-3.1	5.1	0.6	-0.8	1.6	3.4	3.1	-0.6	1.6	2.6	-0.5	-1.8	-2.0
2023	I	2.9	-1.2	4.8	-0.2	-0.5	0.8	3.7	3.2	1.6	-3.8	7.1	-1.7	-3.7	-4.2
	II	2.4	-2.2	6.9	-1.3	-1.0	0.6	3.1	12.8	0.4	3.7	9.2	-0.4	-11.7	-1.9

(a) Period with available data.

Source: Bank of Spain.

Chart 15.1 - Balance of payments: Current and capital accounts

EUR Billions, 12-month cumulated

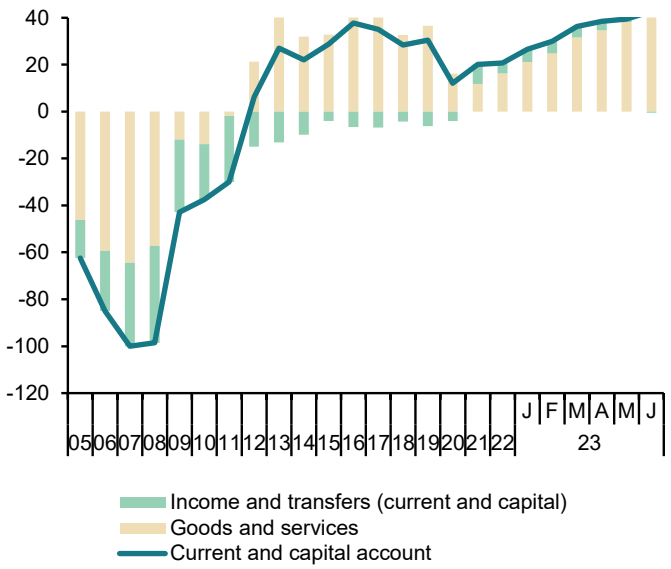


Chart 15.2 - Balance of payments: Financial account

EUR Billions, 12-month cumulated

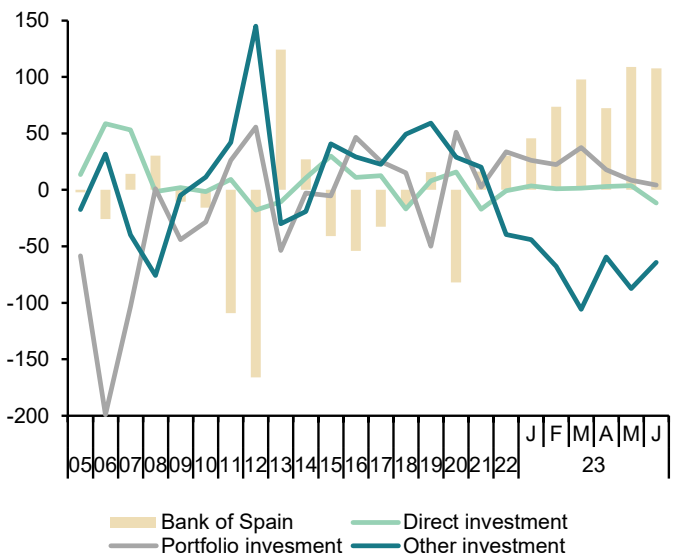


Table 16

Competitiveness indicators in relation to EMU

		Relative Unit Labour Costs in manufacturing (Spain/Rest of EMU) (a)			Harmonized Consumer Prices			Producer prices			Real Effective Exchange Rate in relation to developed countries
		Relative hourly wages	Relative hourly productivity	Relative ULC	Spain	EMU	Spain/EMU	Spain	EMU	Spain/EMU	
		1998=100			2015=100			2015=100			1999 I =100
2016		98.1	96.8	101.3	99.7	100.3	99.4	96.9	97.9	98.9	108.0
2017		97.7	96.5	101.3	101.7	101.8	99.9	101.2	100.7	100.5	109.7
2018		97.3	93.5	104.1	103.5	103.6	99.9	103.8	103.3	100.4	110.5
2019		95.8	91.9	104.2	104.3	104.8	99.5	103.4	103.7	99.8	109.0
2020		97.1	84.0	115.6	103.9	105.1	98.9	99.8	101.2	98.6	108.4
2021		99.1	88.7	111.7	107.0	107.8	99.3	114.6	111.0	106.2	108.9
2022		97.5	90.3	108.0	115.9	116.8	99.3	148.5	140.7	105.6	108.0
2023 (b)		--	--	--	119.2	122.6	97.2	144.3	139.2	103.7	106.8
2022	III	--	--	--	106.9	108.0	99.0	116.3	112.2	103.7	108.3
	IV	--	--	--	110.2	109.9	100.3	128.3	120.4	106.6	109.4
2022	I	--	--	--	112.3	112.3	100.0	139.8	130.5	107.2	108.9
	II	--	--	--	116.5	116.1	100.4	149.7	138.1	108.4	109.2
	III	--	--	--	117.6	118.1	99.6	154.5	147.7	104.6	107.8
	IV	--	--	--	117.4	120.8	97.1	150.1	146.4	102.5	105.9
2023	I	--	--	--	117.9	121.3	97.2	146.4	142.9	102.5	106.7
	II	--	--	--	119.7	123.3	97.1	142.7	136.8	104.3	106.8
2023	Jun	--	--	--	120.1	123.5	97.3	142.7	135.9	105.0	106.9
	Jul	--	--	--	120.0	123.4	97.3	142.6	135.2	105.5	107.0
	Aug	--	--	--	120.7	124.0	97.3	--	--	--	106.9
		Annual percentage changes					Differential	Annual percentage changes		Differential	Annual percentage changes
2016		-1.3	-3.2	2.0	-0.3	0.3	-0.6	-3.1	-2.1	-1.0	0.2
2017		-0.4	-0.3	0.0	2.0	1.5	0.5	4.5	2.8	1.7	1.5
2018		-0.4	-3.1	2.8	1.7	1.7	0.0	2.5	2.6	-0.1	0.8
2019		-1.6	-1.7	0.1	0.8	1.2	-0.4	-0.3	0.4	-0.6	-1.3
2020		1.4	-8.6	11.0	-0.3	0.3	-0.6	-3.6	-2.5	-0.8	-0.6
2021		2.0	5.6	-3.4	3.0	2.6	0.4	14.8	9.7	5.1	0.4
2022		--	--	--	8.3	8.4	-0.1	29.7	26.8	2.9	-0.8
2023 (c)		--	--	--	3.4	6.6	-3.2	-1.1	2.6	-3.7	-0.8
2022	III	--	--	--	3.4	2.8	0.6	16.6	11.5	5.1	0.1
	IV	--	--	--	5.8	4.6	1.2	27.8	18.8	9.0	0.1
2022	I	--	--	--	7.9	6.1	1.8	34.3	25.4	8.9	0.7
	II	--	--	--	8.9	8.0	0.9	36.7	28.9	7.8	-0.3
	III	--	--	--	10.0	9.3	0.7	32.9	31.6	1.3	-0.5
	IV	--	--	--	6.5	10.0	-3.5	17.0	21.6	-4.6	-3.2
2023	I	--	--	--	5.0	8.0	-3.0	4.7	9.5	-4.8	-2.0
	II	--	--	--	2.8	6.2	-3.4	-4.7	-0.9	-3.8	-2.2
2023	Jun	--	--	--	1.6	5.5	-3.9	-6.1	-2.7	-3.4	-3.0
	Jul	--	--	--	2.1	5.3	-3.2	-6.4	-5.9	-0.5	-1.5
	Aug	--	--	--	2.4	5.2	-2.8	--	--	--	-0.9

(a) EMU excluding Ireland and Spain. (b) Period with available data. (c) Growth of available period over the same period of the previous year.

Sources: Eurostat. Bank of Spain and Funcas.

Chart 16.1 - Relative Unit Labour Costs in manufacturing (Spain/Rest of EMU)

1998=100

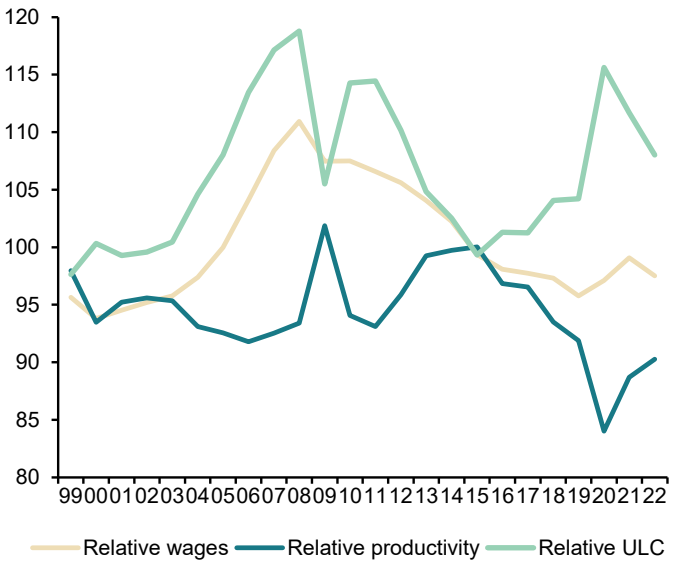


Chart 16.2 - Harmonized Consumer Prices

Annual growth in % and percentage points

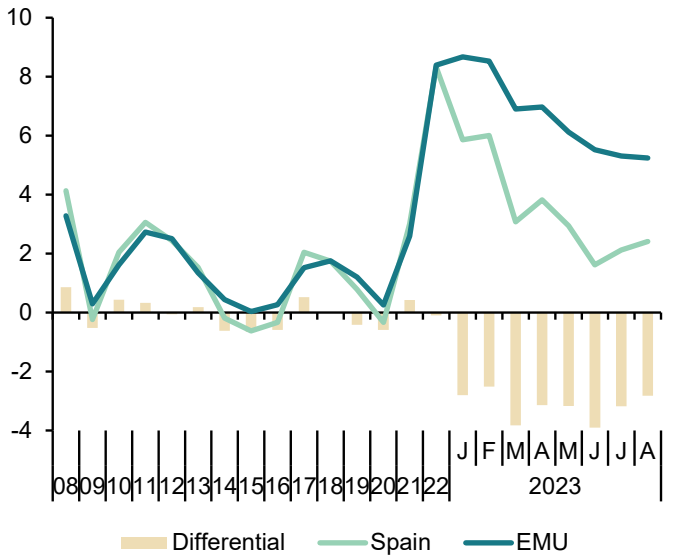


Table 17a

Imbalances: International comparison (I)

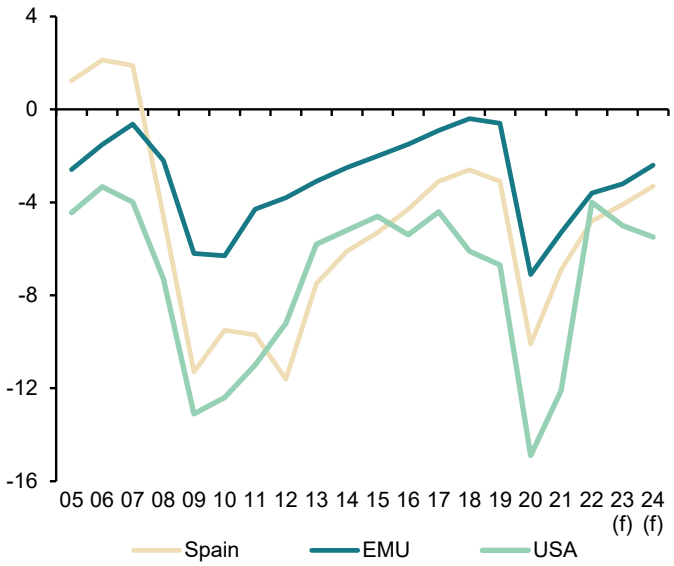
(In yellow: European Commission Forecasts)

	Government net lending (+) or borrowing (-)			Government consolidated gross debt			Current Account Balance of Payments (National Accounts)		
	Spain	EMU	USA	Spain	EMU	USA	Spain	EMU	USA
				Billions of national currency					
2009	-120.6	-582.0	-1,896.6	569.5	7,471.6	12,311.3	-43.7	44.4	-383.1
2010	-102.2	-601.7	-1,863.1	649.2	8,221.0	14,025.2	-39.2	51.0	-439.8
2011	-103.6	-419.5	-1,709.1	743.0	8,684.3	15,222.9	-29.0	76.8	-460.3
2012	-119.1	-376.5	-1,493.3	927.8	9,181.1	16,432.7	0.9	211.0	-423.9
2013	-76.8	-307.6	-977.3	1,025.7	9,511.0	17,352.0	20.8	271.2	-352.1
2014	-63.1	-255.3	-910.4	1,084.8	9,755.4	18,141.4	17.5	315.3	-376.2
2015	-57.2	-210.6	-837.2	1,113.7	9,876.4	18,922.2	21.8	353.1	-424.7
2016	-47.9	-159.5	-1,010.1	1,145.1	10,052.0	19,976.8	35.4	385.0	-403.7
2017	-36.2	-104.7	-861.5	1,183.4	10,158.2	20,492.7	32.2	402.2	-371.4
2018	-31.2	-49.8	-1,251.1	1,208.9	10,259.6	21,974.1	22.6	409.1	-441.2
2019	-38.1	-76.9	-1,423.5	1,223.4	10,348.2	23,201.4	26.2	330.4	-452.6
2020	-113.2	-813.6	-3,129.6	1,345.8	11,415.4	27,747.8	6.8	279.5	-592.5
2021	-82.9	-658.8	-2,812.8	1,427.2	12,038.7	29,617.2	11.5	428.2	-861.4
2022	-63.8	-483.9	-1,020.0	1,502.5	12,480.0	31,419.7	7.8	76.7	-994.7
2023	-57.8	-454.9	-1,336.8	1,562.4	13,000.2	32,622.5	23.2	307.7	-875.2
2024	-49.2	-365.6	-1,511.0	1,617.4	13,430.4	34,036.3	22.4	360.3	-836.1
				Percentage of GDP					
2009	-11.3	-6.2	-13.1	53.3	80.1	85.0	-4.1	0.5	-2.6
2010	-9.5	-6.3	-12.4	60.5	85.8	93.2	-3.7	0.5	-2.9
2011	-9.7	-4.3	-11.0	69.9	88.2	97.6	-2.7	0.8	-3.0
2012	-11.6	-3.8	-9.2	90.0	92.9	101.1	0.1	2.1	-2.6
2013	-7.5	-3.1	-5.8	100.5	95.3	103.0	2.0	2.7	-2.1
2014	-6.1	-2.5	-5.2	105.1	95.5	103.4	1.7	3.1	-2.1
2015	-5.3	-2.0	-4.6	103.3	93.5	103.9	2.0	3.3	-2.3
2016	-4.3	-1.5	-5.4	102.7	92.5	106.9	3.2	3.5	-2.2
2017	-3.1	-0.9	-4.4	101.8	90.1	105.2	2.8	3.6	-1.9
2018	-2.6	-0.4	-6.1	100.4	88.1	107.0	1.9	3.5	-2.1
2019	-3.1	-0.6	-6.7	98.2	85.9	108.5	2.1	2.7	-2.1
2020	-10.1	-7.1	-14.9	120.4	99.1	131.8	0.6	2.4	-2.8
2021	-6.9	-5.3	-12.1	118.3	97.2	127.0	1.0	3.5	-3.7
2022	-4.8	-3.6	-4.0	113.2	93.1	123.4	0.6	0.6	-3.9
2023	-4.1	-3.2	-5.0	110.6	90.8	121.8	1.6	2.1	-3.3
2024	-3.3	-2.4	-5.5	109.1	89.9	122.8	1.5	2.4	-3.0

Source: European Commission Forecasts, Spring 2023.

Chart 17a.1 - Government deficit

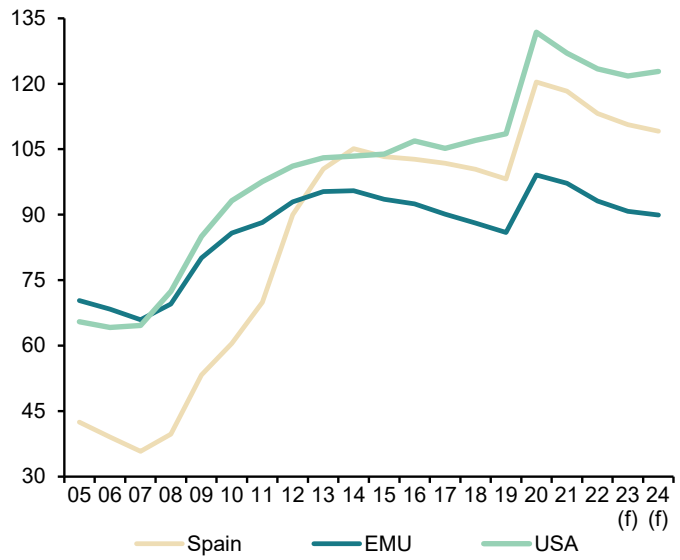
Percentage of GDP



(f) European Commission forecast.

Chart 17a.2 - Government gross debt

Percentage of GDP



(f) European Commission forecast.

Table 17b

Imbalances: International comparison (II)

	Household debt (a)			Non-financial corporations debt (a)		
	Spain	EMU	USA	Spain	EMU	USA
	Billions of national currency					
2005	656.2	4,771.1	12,115.6	954.1	7,223.7	8,187.2
2006	783.5	5,192.8	13,420.8	1,171.9	7,814.9	9,007.5
2007	879.3	5,560.9	14,350.6	1,371.6	8,718.6	10,141.9
2008	916.7	5,773.7	14,218.8	1,460.0	9,277.1	10,715.3
2009	908.9	5,880.4	14,056.7	1,473.5	9,305.3	10,197.4
2010	905.2	6,021.2	13,865.2	1,498.0	9,590.4	10,066.0
2011	877.9	6,104.2	13,734.6	1,458.3	10,035.5	10,303.2
2012	840.7	6,096.5	13,666.9	1,340.4	10,140.7	10,849.8
2013	793.4	6,057.5	13,899.2	1,268.5	10,119.6	11,363.5
2014	757.5	6,064.0	14,017.7	1,202.1	10,612.6	12,133.0
2015	733.1	6,127.4	14,190.2	1,183.8	11,352.5	12,945.7
2016	718.3	6,232.4	14,600.6	1,166.6	11,696.8	13,599.3
2017	710.8	6,394.5	15,145.5	1,147.0	11,853.7	14,562.7
2018	709.4	6,582.4	15,602.5	1,144.6	12,150.3	15,546.5
2019	707.5	6,811.0	16,094.8	1,160.9	12,573.0	16,306.1
2020	700.4	7,000.8	16,711.1	1,205.2	13,064.8	17,805.4
2021	704.2	7,294.1	17,939.7	1,261.6	13,693.9	18,673.5
2022	702.8	–	18,955.4	1,240.1	–	19,876.8
	Percentage of GDP					
2005	70.8	56.5	92.9	102.9	85.6	62.8
2006	78.0	58.4	97.1	116.7	87.9	65.2
2007	81.8	59.2	99.1	127.5	92.9	70.1
2008	82.6	60.0	96.3	131.6	96.5	72.5
2009	85.0	63.4	97.1	137.8	100.4	70.4
2010	84.4	63.2	92.1	139.6	100.6	66.9
2011	82.5	62.3	88.0	137.1	102.4	66.0
2012	81.5	62.0	84.1	130.0	103.1	66.8
2013	77.7	61.0	82.5	124.3	101.8	67.5
2014	73.4	59.6	79.9	116.4	104.3	69.1
2015	68.0	58.2	77.9	109.8	107.9	71.1
2016	64.5	57.6	78.1	104.7	108.2	72.7
2017	61.1	57.0	77.8	98.7	105.6	74.8
2018	58.9	56.7	76.0	95.1	104.7	75.7
2019	56.8	56.8	75.3	93.2	104.9	76.3
2020	62.6	61.1	79.3	107.8	114.0	84.5
2021	58.4	59.2	76.9	104.5	111.2	80.1
2022	53.0	–	74.4	93.4	–	78.1

(a) Loans and debt securities.

Sources: Eurostat and Federal Reserve.

Chart 17b.1 - Household debt

Percentage of GDP

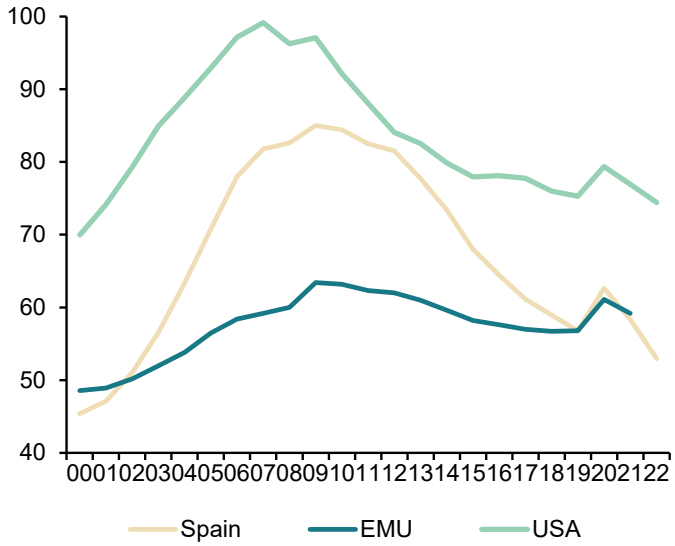
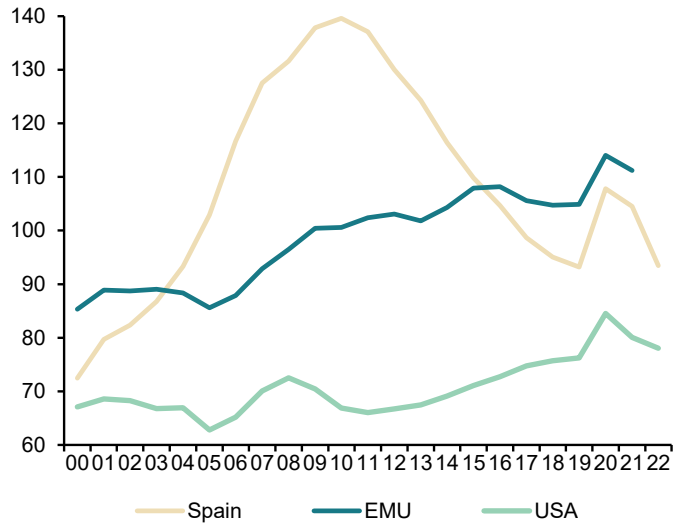


Chart 17b.2 - Non-financial corporations debt

Percentage of GDP



50 Financial System Indicators

Updated: September 15th, 2023

Highlights

Indicator	Last value available	Corresponding to:
Bank lending to other resident sectors (monthly average % var.)	1.1	June 2023
Other resident sectors' deposits in credit institutions (monthly average % var.)	1.1	June 2023
Doubtful loans (monthly % var.)	-1.3	June 2023
Recourse to the Eurosystem L/T (Eurozone financial institutions, million euros)	600,496	August 2023
Recourse to the Eurosystem L/T (Spanish financial institutions, million euros)	38,554	August 2023
Recourse to the Eurosystem (Spanish financial institutions million euros) - Main refinancing operations	554	August 2023
"Operating expenses/gross operating income" ratio (%)	42.16	March 2023
"Customer deposits/employees" ratio (thousand euros)	12,993.97	March 2023
"Customer deposits/branches" ratio (thousand euros)	117,090.73	March 2023
"Branches/institutions" ratio	93.45	March 2023

A. Money and Interest Rates

Indicator	Source	Average 2001-2020	2021	2022	2023 August	2023 September 15	Definition and calculation
1. Monetary Supply (% chg.)	ECB	5.5	6.9	4.1	-	-	M3 aggregate change (non-stationary)
2. Three-month interbank interest rate	Bank of Spain	1.3	-0.570	2.162	3.780	3.816	Daily data average
3. One-year Euribor interest rate (from 1994)	Bank of Spain	1.6	-0.505	0.992	4.073	4.084	End-of-month data
4. Ten-year Treasury bonds interest rate (from 1998)	Bank of Spain	3.2	0.5	3.2	3.5	3.7	Market interest rate (not exclusively between account holders)
5. Corporate bonds average interest rate	Bank of Spain	3.6	-	-	-	-	End-of-month straight bonds average interest rate (> 2 years) in the AIAF market

Comment on "Money and Interest Rates": In a situation still marked by uncertainty in the fight against inflation, the ECB has continued to raise interest rates in September (by a quarter of a point) and insists on the need to monitor macroeconomic developments and make decisions on a contingent basis, paying close attention to the current situation and how its monetary decisions are being anchored in the expectations of the private sector. In the first half of September, the 12-month Euribor (main reference for mortgages) has gone from 4.073% in August to 4.084%, while the 3-month reference has risen from 3.780% to 3.816% in the same period. The yield on the 10-year government bond has gone from 3.5% in August to 3.7% by mid-September.

B. Financial Markets

Indicator	Source	Average 2001-2020	2021	2022	2023 June	2023 July	Definition and calculation
6. Outright spot treasury bills transactions trade ratio	Bank of Spain	35.7	27.9	27.8	28.86	28.85	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
7. Outright spot government bonds transactions trade ratio	Bank of Spain	23.1	14.1	12.4	12.79	11.59	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
8. Outright forward treasury bills transactions trade ratio	Bank of Spain	0.39	0.04	0.26	0.17	0.37	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
9. Outright forward government bonds transactions trade ratio	Bank of Spain	0.6	0.52	0.44	0.24	0.12	(Traded amount/outstanding balance) in the market (not exclusively between account holders)
10. Three-month maturity treasury bills interest rate	Bank of Spain	0.35	-0.62	0.02	3.2	3.5	Outright transactions in the market (not exclusively between account holders)
11. Ten-year maturity treasury bonds interest rate	BE	3.28	0.39	2.17	3.5	3.5	Average rate in 10-year bond auctions
12. Madrid Stock Exchange Capitalization (monthly average % chg.)	Bank of Spain and Madrid Stock Exchange	0.06	1.3	-1.3	2.3	0.7	Change in the total number of resident companies
13. Stock market trading volume. Stock trading volume (monthly average % var.)	Bank of Spain and Madrid Stock Exchange	2.5	0.5	1.8	10.4	-11.1	Stock market trading volume. Stock trading volume: change in total trading volume
14. Madrid Stock Exchange general index (Dec 1985=100)	Bank of Spain and Madrid Stock Exchange	986.4	861.3	824.2	949.51	946.83 (a)	Base 1985=100
15. IBEX-35 (Dec 1989=3000)	Bank of Spain and Madrid Stock Exchange	9,541.2	8,771.5	8,851,0	9,593.0	9,424.1 (a)	Base dec1989=3000
16. Nasdaq Index	Nasdaq	3,924.5	15,644.9	10,466.4	13,787.92	13,926.05 (a)	Nadaq composite index
17. Madrid Stock Exchange PER ratio (share value/profitability)	Bank of Spain and Madrid Stock Exchange	15.4	21.1	16.1	28.1	29.6 (a)	Madrid Stock Exchange Ratio "share value/ capital profitability"

B. Financial Markets (continued)

Indicator	Source	Average 2001-2020	2021	2022	2023 June	2023 July	Definition and calculation
18. Short-term private debt. Outstanding amounts (% chg.)	BE	0.79	2.4	8.01	-16.6	27.8	Change in the outstanding short-term debt of non-financial firms
19. Short-term private debt. Outstanding amounts	BE	1.0	0.9	-5.72	-0.21	0.4	Change in the outstanding long-term debt of non-financial firms
20. IBEX-35 financial futures concluded transactions (% chg.)	Bank of Spain	0.3	2.10	-1.21	12.6	-11.9	IBEX-35 shares concluded transactions
21. IBEX-35 financial options concluded transactions (% chg.)	Bank of Spain	14.8	21.1	35.8	50	0	IBEX-35 shares concluded transactions

(a) Last data published: September 15th, 2023.

Comment on "Financial Markets": In the first half of September, Spanish stock indices have slightly fallen. The IBEX-35 stands at 9,424.1 points. The General Index of the Madrid Stock Exchange is at 946.83 points. Meanwhile, in July (latest available data), there was a slight decline in the ratio of spot simple operations with Treasury bills (down to 28.85%) and government bonds (down to 11.59%). Transactions with IBEX-35 stock futures decreased by 11.9%, while financial options on the same index remained unchanged compared to the previous month.

C. Financial Saving and Debt

Indicator	Source	Average 2008-2019	2020	2021	2022 Q4	2023 Q1	Definition and calculation
22. Net Financial Savings/GDP (National Economy)	Bank of Spain	-1.1	1.2	1.9	1.5	2.6	Difference between financial assets and financial liabilities flows over GDP
23. Net Financial Savings/GDP (Households and non-profit institutions)	Bank of Spain	1.7	7.2	4.4	0.9	1.0	Difference between financial assets and financial liabilities flows over GDP
24. Debt in securities (other than shares) and loans/GDP (National Economy)	Bank of Spain	271.1	335.3	319.9	278.1	272.8	Public debt. non-financial companies debt and households and non-profit institutions debt over GDP
25. Debt in securities (other than shares) and loans/GDP (Households and non-profit institutions)	Bank of Spain	63.1	62.5	58.4	53.0	51.1	Households and non-profit institutions debt over GDP
26. Households and non-profit institutions balance: financial assets (quarterly average % chg.)	Bank of Spain	0.9	1.8	2.7	2.8	1.1	Total assets percentage change (financial balance)
27. Households and non-profit institutions balance: financial liabilities (quarterly average % chg.)	Bank of Spain	-1.1	0.3	0.8	0.4	-1.5	Total liabilities percentage change (financial balance)

Comment on "Financial Savings and Debt": In the first quarter of 2023, financial savings in the economy increased to 2.6% of GDP. In the household sector, the financial savings rate was 1% of GDP. It is also observed that the financial debt of domestic economies has decreased to 51.1% of GDP.

D. Credit institutions. Business Development

Indicator	Source	Average 2001-2020	2021	2022	2023 May	2023 June	Definition and calculation
28. Bank lending to other resident sectors (monthly average % var.)	Bank of Spain	4.9	0.2	-0.04	-0.7	1.1	Lending to the private sector percentage change for the sum of banks, savings banks and credit unions.
29. Other resident sectors' deposits in credit institutions (monthly average % var.)	Bank of Spain	6.0	0.3	0.01	0.1	1.1	Deposits percentage change for the sum of banks, savings banks and credit unions.
30. Debt securities (monthly average % var.)	Bank of Spain	8.4	-0.7	1.2	-0.4	0.4	Asset-side debt securities percentage change for the sum of banks, savings banks and credit unions.
31. Shares and equity (monthly average % var.)	Bank of Spain	7.5	0.1	-0.1	0.7	0.05	Asset-side equity and shares percentage change for the sum of banks, savings banks and credit unions.
32. Credit institutions. Net position (difference between assets from credit institutions and liabilities with credit institutions) (% of total assets)	Bank of Spain	-2.0	0.5	2.5	5.5	6.0	Difference between the asset-side and liability-side "Credit System" item as a proxy of the net position in the interbank market (month-end).
33. Doubtful loans (monthly average % var.)	Bank of Spain	-0.4	-0.4	-1.5	0.6	-1.3	Doubtful loans. Percentage change for the sum of banks, savings banks and credit unions.
34. Assets sold under repurchase (monthly average % var.)	Bank of Spain	2.1	0.6	-2.4	-0.4	-1.1	Liability-side assets sold under repurchase. Percentage change for the sum of banks, savings banks and credit unions.
35. Equity capital (monthly average % var.)	Bank of Spain	6.4	-0.1	0.1	0.3	1.5	Equity percentage change for the sum of banks, savings banks and credit unions.

Comment on "Credit institutions. Business Development": In June, the latest available data, there was an increase in credit to the private sector of 1.1%. Deposits also rose by 1.1%. Fixed-income securities increased their weight in the balance sheet of households by 0.4%, while shares and participations did so by 0.05%. Additionally, there was a decrease in the volume of non-performing loans by 1.3% compared to the previous month.

E. Credit institutions. Market Structure and Eurosystem Refinancing

Indicator	Source	Average 2000-2019	2020	2021	2022 December	2023 March	Definition and calculation
36. Number of Spanish credit institutions	Bank of Spain	176	113	110	110	110	Total number of banks, savings banks and credit unions operating in Spanish territory
37. Number of foreign credit institutions operating in Spain	Bank of Spain	76	78	84	80	78	Total number of foreign credit institutions operating in Spanish territory
38. Number of employees	Bank of Spain	229,219	175,185	164,101	164,101	158,317 (a)	Total number of employees in the banking sector
39. Number of branches	Bank of Spain	36,919	22,589	19,015	17,648	17,569	Total number of branches in the banking sector
40. Recourse to the Eurosystem: long term (total Eurozone financial institutions) (Euro millions)	Bank of Spain	385,079	1,774,798	2,206,332	1,638,831	600,496 (b)	Open market operations and ECB standing facilities. Eurozone total
41. Recourse to the Eurosystem: long term (total Spanish financial institutions) (Euro millions)	Bank of Spain	82,081	260,971	289,545	192,970	38,554 (b)	Open market operations and ECB standing facilities. Spain total
42. Recourse to the Eurosystem (total Spanish financial institutions): main refinancing operations (Euro millions)	Bank of Spain	24,751	3	16	5	554 (b)	Open market operations: main long term refinancing operations. Spain total

(a) Last data published: December 2022.

(b) Last data published: August 31st, 2023.

Comment on "Credit institutions. Market Structure and Eurosystem Refinancing": In August 2023, the net appeal to the Eurosystem by Spanish financial institutions was 38,554 million euros.

MEMO ITEM: Since January 2015, the European Central Bank has also been reporting the amount of various asset purchase programs. In August 2023, its value in Spain was 616,463 million euros, and 4.8 trillion euros in the Eurozone as a whole.

F. Credit institutions. Efficiency and Productivity, Risk and Profitability

Indicator	Source	Average 2000-2019	2020	2021	2022 Q4	2023 Q1	Definition and calculation
43. "Operating expenses/gross operating income" ratio	Bank of Spain	46.86	54.90	54.18	46.99	42.16	Operational efficiency indicator. Numerator and denominator are obtained directly from credit institutions´ P&L accounts
44. "Customer deposits/ employees" ratio (Euro thousands)	Bank of Spain	4,276.15	11,173.92	12,137.18	12,610.21	12,993.97	Productivity indicator (business by employee)
45. "Customer deposits/ branches" ratio (Euro thousands)	Bank of Spain	28,156.84	89,952.10	111,819.77	117,256.85	117,090.73	Productivity indicator (business by branch)

F. Credit institutions. Efficiency and Productivity, Risk and Profitability (continued)

Indicator	Source	Average 2000-2019	2020	2021	2022 Q4	2023 Q1	Definition and calculation
46. "Branches/institutions" ratio	Bank of Spain	181.61	116.74	98.01	92.88	93.45	Network expansion indicator
47. "Employees/branches" ratio	Bank of Spain	6.01	8.1	9.2	9.3	9.5	Branch size indicator
48. "Equity capital" (monthly average % var.)	Bank of Spain	0.04	-2.4	0.6	1.3	0.1	Credit institutions equity capital variation indicator
49. ROA	Bank of Spain	0.41	0.4	0.5	0.7	0.8	Profitability indicator, defined as the "pre-tax profit/average total assets"
50. ROE	Bank of Spain	5.55	-0.7	6.9	9.8	11.3	Profitability indicator, defined as the "pre-tax profit/equity capital"

Comment on "Credit institutions. Efficiency and Productivity, Risk and Profitability": During 2023Q1, there was a relative increase in the profitability of Spanish banks

Social Indicators

Table 1

Population

	Population									
	Total population	Average age	65 and older (%)	Life expectancy at birth (men)	Life expectancy at birth (women)	Dependency rate	Dependency rate (older than 64)	Foreign-born population (%)	New entries (foreign-born)	New exits (born in Spain)
2008	46,157,822	40.8	16.5	78.2	84.3	47.5	24.5	13.1	701,997	33,053
2010	47,021,031	41.1	16.9	79.1	85.1	48.6	25.0	14.0	441,051	39,211
2012	47,265,321	41.6	17.4	79.4	85.1	50.4	26.1	14.3	344,992	51,666
2014	46,771,341	42.1	18.1	80.1	85.7	51.6	27.4	13.4	368,170	66,803
2015	46,624,382	42.4	18.4	79.9	85.4	52.4	28.0	13.2	417,655	74,873
2016	46,557,008	42.7	18.6	80.3	85.8	52.9	28.4	13.2	492,600	71,508
2017	46,572,132	42.9	18.8	80.4	85.7	53.2	28.8	13.3	592,604	63,754
2018	46,722,980	43.1	19.1	80.5	85.9	53.6	29.3	13.7	715,255	56,745
2019	47,026,208	43.3	19.3	80.9	86.2	53.7	29.6	14.4	827,052	61,338
2020	47,450,795	43.6	19.4	79.6	85.1	53.5	29.8	15.2	523,618	41,708
2021	47,385,107	43.8	19.6	80.2	85.8	53.4	30.1	15.5	621,216	56,098
2022	47,475,420	44.1	20.0			53.5	30.7	15.9		
Sources	EPC	EPC	EPC	ID INE	ID INE	EPC	EPC	EPC	EVR	EVR

ID INE: Indicadores Demográficos INE.

EPC: Estadística del Padrón Continuo.

EVR: Estadística de Variaciones Residenciales.

Dependency rate: (15 or less years old population + 65 or more years old population)/ 16-64 years old population, as a percentage.

Dependency rate (older than 64): 65 or more years old population/ 16-64 years old population, as a percentage.

Table 2

Households and families

	Households				Nuptiality					
	Households (thousands)	Average household size	Households with one person younger than 65 (%)	Households with one person older than 65 (%)	Marriage rate (Spanish)	Marriage rate (foreign population)	Divorce rate	Mean age at first marriage, men	Mean age at first marriage, women	Same sex marriages (%)
2008	16,742	2.71	12.0	10.2	8.5	8.4	2.39	32.4	30.2	1.6
2010	17,174	2.67	12.8	9.9	7.2	7.9	2.21	33.2	31.0	1.9
2012	17,434	2.63	13.7	9.9	7.2	6.7	2.23	33.8	31.7	2.0
2014	18,329	2.51	14.2	10.6	6.9	6.5	2.17	34.4	32.3	2.1
2015	18,376	2.54	14.6	10.7	7.3	6.5	2.08	34.8	32.7	2.3
2016	18,444	2.52	14.6	10.9	7.5	6.8	2.08	35.0	32.9	2.5
2017	18,512	2.52	14.2	11.4	7.4	7.0	2.11	35.3	33.2	2.7
2018	18,581	2.51	14.3	11.5	7.1	6.6	2.04	35.6	33.4	2.9
2019	18,697	2.52	14.9	11.2	7.1	6.7	1.95	36.0	33.9	3.1
2020	18,794	2.52	15.0	11.4	3.8	4.1	1.63	37.1	34.9	3.5
2021	18,919	2.50	15.6	11.0	6.3	5.6	1.83	36.8	34.6	3.4
2022	19,113	2.48	15.4	11.7						
2023●	19,318									
Sources	LFS	LFS	EPF	EPF	ID INE	ID INE	ID INE	ID INE	ID INE	MNP

Table 2 (Continued)

Households and families

	Fertility					
	Median age at first child, women	Total fertility rate (Spanish women)	Total fertility rate (Foreign women)	Births to single mothers (%)	Abortion rate	Abortion by Spanish-born women (%)
2008	29.3	1.36	1.83	33.2	11.8	55.6
2010	29.8	1.30	1.68	35.5	11.5	58.3
2012	30.3	1.27	1.56	39.0	12.0	61.5
2014	30.6	1.27	1.62	42.5	10.5	63.3
2015	30.7	1.28	1.66	44.4	10.4	65.3
2016	30.8	1.27	1.72	45.8	10.4	65.8
2017	30.9	1.25	1.71	46.8	10.5	66.1
2018	31.0	1.20	1.65	47.3	11.1	65.3
2019	31.1	1.17	1.59	48.4	11.5	64.1
2020	31.2	1.13	1.47	47.6	10.3	65.8
2021	31.6	1.16	1.38	49.3	10.7	67.2
Sources	ID INE	ID INE	ID INE	ID INE	MSAN	MSAN

LFS: Labour Force Survey. EPF: Encuesta de Presupuestos Familiares. ID INE: Indicadores Demográficos INE. MNP: Movimiento Natural de la Población. MSAN: Ministerio de Sanidad, Servicios Sociales e Igualdad.

Marriage rate: Number of marriages per thousand population.

Total fertility rate: The average number of children that would be born per woman living in Spain if all women lived to the end of their childbearing years and bore children according to a given fertility rate at each age.

Divorce rate: Number of divorces per thousand population.

Abortion rate: Number of abortions per thousand women (15-44 years).

● *Data refers to January-June.*

Table 3

Education

	Educational attainment				Students involved in non-compulsory education					Education expenditure	
	Population 16 years and older with primary education (%)	Population 30-34 with primary education (%)	Population 16 years and older with with tertiary education (%)	Population 30-34 with tertiary education (%)	Pre-primary education	Secondary education	Vocational training	Under-graduate students	Post-graduate studies (except doctorate)	Public expenditure (millions of €)	Public expenditure (% GDP)
2008	32.1	9.2	16.1	26.9	1,763,019	629,247	472,604	1,377,228	50,421	51,716	4.6
2010	30.6	8.6	17.0	27.7	1,872,829	672,213	555,580	1,445,392	104,844	53,099	4.9
2012	28.5	7.5	17.8	26.6	1,912,324	692,098	617,686	1,450,036	113,805	46,476	4.5
2014	24.4	6.1	27.2	42.3	1,840,008	690,738	652,846	1,364,023	142,156	44,846	4.3
2015	23.3	6.6	27.5	40.9	1,808,322	695,557	641,741	1,321,698	171,043	46,598	4.3
2016	22.4	6.6	28.1	40.7	1,780,377	687,595	652,471	1.303.252	190,143	47,579	4.3
2017	21.4	6.6	28.5	41.2	1,767,179	676,311	667,984	1,287,791	209,754	49,458	4.2
2018	20.5	6.4	29.2	42.4	1,750,579	667,287	675,971	1,290,455	217,840	50,807	4.2
2019	19.3	6.3	30.3	44.7	1,749,597	673,740	706,533	1,296,379	237,118	53,053	4.3
2020	17.7	6.1	31.3	44.8	1,622,098	687,084	772,417	1,336,009	247,251	55,184	4.9
2021	16.4	5.8	32.3	46.7	1,628,472	690,481	773,689	1,333,567	266,902	59,657	4.6●
2022	16.1	5.8	32.6	49.2	1,617,412●	687,511●	803,611●	1,353,347●	276,518●		
2023■	16.2	6.2	32.6	49.9							
Sources	LFS	LFS	LFS	LFS	MECD	MECD	MECD	MECD	MECD	MECD	MECD

LFS: Labor Force Survey.

MECD: Ministerio de Educación, Cultura y Deporte.

● *Provisional data.*

■ *Data refers to January-June.*

Table 4

Social protection: Benefits

	Contributory benefits*							Non-contributory benefits			
		Retirement		Permanent disability		Widowhood			Social Security		
	Unemployment total	Total	Average amount (€)	Total	Average amount (€)	Total	Average amount (€)	Unemployment	Retirement	Disability	Other
2008	1,100,879	4,936,839	814	906,835	801	2,249,904	529	646,186	265,314	199,410	63,626
2010	1,471,826	5,140,554	884	933,730	850	2,290,090	572	1,445,228	257,136	196,159	49,535
2012	1,381,261	5,330,195	946	943,296	887	2,322,938	602	1,327,027	251,549	194,876	36,310
2014	1,059,799	5,558,964	1000	929,484	916	2,348,388	624	1,221,390	252,328	197,303	26,842
2015	838,392	5,641,908	1,021	931,668	923	2,353,257	631	1,102,529	253,838	198,891	23,643
2016	763,697	5,731,952	1,043	938,344	930	2,364,388	638	997,192	254,741	199,762	21,350
2017	726,575	5,826,123	1,063	947,130	936	2,360,395	646	902,193	256,187	199,120	19,019
2018	751,172	5,929,471	1,091	951,838	946	2,359,931	664	853,437	256,842	196,375	16,472
2019	807,614	6,038,326	1,138	957,500	975	2,361,620	712	912,384	259,570	193,122	14,997
2020	1,828,489	6,094,447	1,162	952,704	985	2,352,680	725	1,017,429	261,325	188,670	13,373
2021	922,856	6,165,349	1,190	949,765	994	2,353,987	740	969,412	262,177	184,378	11,892
2022	773,227	6,253,797	1,254	951,067	1,035	2,351,703	778	882,585	265,830	179,967	10,633
2023	789,990●	6,347,772■	1,373■	946,260■	1,120■	2,350,835■	851■	881,479●	270,217●	176,802●	9,766●
Sources	INEM	INSS	INSS	INSS	INSS	INSS	INSS	INEM	IMSERSO	IMSERSO	IMSERSO

INEM: Instituto Nacional de Empleo.

INSS: Instituto Nacional de la Seguridad Social.

IMSERSO: Instituto de Mayores y Servicios Sociales.

** Benefits for orphans and dependent family members of deceased Social Security affiliates are excluded.*

● Data refer to January-July.

■ Data refer to January-August.

Table 5

Social protection: Health care

	Expenditure		Resources				Satisfaction*		Time on waiting list (days)	
	Public expenditure (% GDP)	Public expenditure (millions of €)	Medical specialists per 1,000 inhabitants	Primary care doctors per 1,000 people asigned	Specialist nurses per 1,000 inhabitants	Primary care nurses per 1,000 people asigned	With the working of the health system	With medical history and tracing by family doctor or pediatrician	Non-urgent surgical procedures	First specialist consultations per 1,000 inhabitants
2008	6.1	67,344	1.8	0.8	3.0	0.6	6.4	7.0	71	59
2010	6.6	71,136	1.8	0.8	3.2	0.6	6.6	7.3	65	53
2012	6.3	64,734	1.8	0.8	3.1	0.6	6.6	7.5	76	53
2014	6.2	63,507	1.8	0.8	3.1	0.7	6.3	7.5	87	65
2015	6.2	66,489	1.9	0.8	3.2	0.7	6.4	7.5	89	58
2016	6.1	67,724	1.9	0.8	3.3	0.6	6.6	7.6	115	72
2017	6.0	69,312	1.9	0.8	3.4	0.6	6.7	7.5	106	66
2018	6.0	72,157	2.0	0.8	3.5	0.7	6.6	7.5	129	96
2019	6.1	75,929	2.0	0.8	3.5	0.7	6.7	7.6	115	81
2020	7.6	85,503	2.0	0.8	3.7	0.7			148	99
2021	7.3	88,625●	2.1	0.8	3.9	0.7			121	75
2022							6.3		120	95
Sources	EUROSTAT	EUROSTAT	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS

INCLASNS: Indicadores clave del Sistema Nacional del Salud.

** Average of population satisfaction measured on a scale of 1 to 10, where 1 means "totally unsatisfactory" and 10 "totally satisfactory".*

● Provisional data.

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Notes

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