

**The outbreak of the war in Ukraine marked the start of a period of great uncertainty that, three and a half months later, is yet to dissipate.** In addition, inflationary pressures have intensified and global supply chain disruptions have continued in recent months, partly as a result of the war. These factors are constraining global activity and clouding the economic outlook. The intensity of the price strains is speeding up the timetables for the withdrawal of monetary stimulus, in a complex setting which is forcing central banks to carefully weigh up highly uncertain matters (e.g. the effects of the war on economic activity and even the impact of monetary policy normalisation itself on inflation, given that the surge in this variable is largely due to supply-side factors).

**The pandemic has become significantly less important as a determinant of global economic activity.** However, fresh outbreaks in some geographical areas have required the reintroduction of containment measures. China is the most striking example in this regard. The fresh restrictions in this country have fuelled the global production chain bottlenecks. By contrast, in the advanced economies, where vaccination campaigns have generally been more successful, the incidence of COVID-19 has waned significantly, allowing containment measures to be lifted almost entirely.

**The end of the restrictions is having a positive impact on economic activity.** The impetus is proving particularly strong in the contact-intensive sectors. Since these sectors account for a relatively high share of the Spanish productive system, economic activity in Spain has become somewhat more buoyant in the spring, after the sluggish momentum witnessed in Q1.

**Persistently high energy prices are still one of the main determinants of economic developments in Spain.** Spain imports the gas and oil it consumes. As a result, prices rising as they have since early 2021 has a marked adverse impact on the purchasing power of incomes and, therefore, on private agents' spending. Leaving aside the surge in energy and food prices, there have also been upward surprises in underlying inflation in the first months of 2022. Indeed, the persistence of the rising costs of inputs has meant that the increases in inflation have been increasingly – and to a greater extent than expected – passed through to the non-energy industrial goods and services in the harmonised index of consumer prices (HICP). However, at present there are hardly any signs that the increase in consumer prices is feeding into wage demands. To ensure that inflation in the euro area returns to the 2% target over the medium term, on 9 June the ECB Governing Council took further steps towards the normalisation of its monetary policy. These included the early announcement of its intention to raise key ECB interest rates in July (by 25 basis

Table 1

**MAIN SPANISH MACROECONOMIC AGGREGATES (a)**

	2021	2020		2021				2022	
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
National Accounts									
Quarter-on-quarter rate of change, unless otherwise indicated									
GDP	5.1	16.8	0.2	-0.5	1.1	2.6	2.2	0.3	0.4
Contribution of domestic demand (b)	4.7	15.4	-0.1	-0.7	2.5	0.8	1.2	-1.2	1.2
Contribution of net external demand (b)	0.5	1.4	0.3	0.2	-1.4	1.8	1.0	1.5	-0.8
Year-on-year rate of change									
Employment: hours worked	7.0	-6.3	-6.1	-2.7	29.7	3.3	2.7	7.5	3.5
Price indicators									
HICP	3.0	-0.6	-0.8	0.5	2.3	3.4	5.8	7.9	7.8
HICP excluding energy and food	0.6	0.1	-0.1	0.1	-0.2	0.7	1.6	2.6	3.4

**SOURCES:** INE and Banco de España.

**a** Information available to 24 May 2022. The shaded figures are Banco de España projections.

**b** Contribution to the quarter-on-quarter rate of change of GDP, in percentage points.

points (bp)) and September (by an amount that will depend on the updated medium-term inflation outlook).

**Job creation remained vigorous in April and May.** In aggregate terms, growth in employment has only been slightly slower than in the same months in pre-pandemic years. However, developments have been particularly uneven across sectors. Specifically, employment has been highly buoyant in the activities boosted the most by the lifting of the pandemic restrictions, while it has slowed markedly in some of the sectors, like health and education, where it grew the most during the health crisis and in those most affected by the bottlenecks, such as manufacturing and construction.

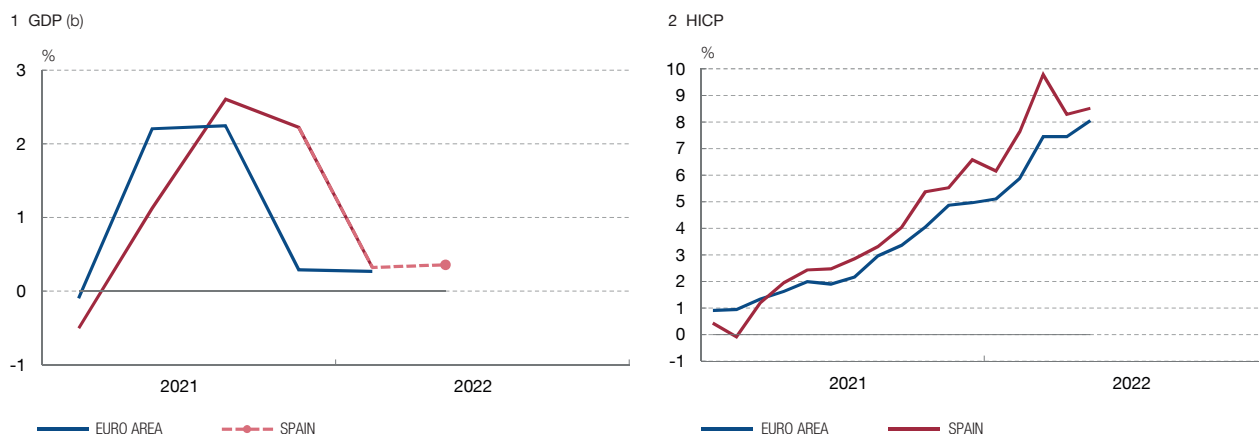
**Under the baseline scenario in the Banco de España's latest projections, the Spanish economy will grow by 4.1% in 2022. Relatively strong GDP growth of 2.8% in 2023 and 2.6% in 2024 is also projected.**<sup>1</sup> This outlook rests on a set of assumptions surrounded by a high degree of uncertainty. Specifically, it is assumed that: (i) energy and food prices will moderate in line with the paths signalled by the futures markets; (ii) bottlenecks will progressively dissipate over the course of 2022; (iii) the consequences of the war will gradually ease; and (iv) the higher prices will only be modestly passed through to final prices and wage demands. Under these assumptions, the overall HICP rate will be 7.2% on average in 2022, easing considerably in 2023 (to 2.6%) and 2024 (to 1.8%).

<sup>1</sup> See Box 1, "Macroeconomic projections for the Spanish economy (2022-2024)", of this report.

Chart 1

**ACTIVITY HAS PERFORMED SOMEWHAT MORE FAVOURABLY IN Q2, IN A SETTING WHERE THERE HAVE BEEN INFLATIONARY SURPRISES (a)**

The lifting of the pandemic containment measures has enabled the services sectors most affected by the restrictions to gain more momentum. Also, consumer prices have accelerated against a backdrop of continued high energy and food prices and of rising costs increasingly being passed through to other prices.



**SOURCES:** Eurostat, INE and Banco de España.

- a Quarter-on-quarter rates of change based on the seasonally adjusted series in the case of GDP, and year-on-year rates of change in the case of the HICP.
- b The Q2 data are Banco de España projections.

**These projections are subject to significant risks which are tilted to the downside in the case of GDP growth and to the upside in that of inflation.** Specifically, while medium-term inflation expectations in the euro area remain anchored around the monetary policy target of 2%, there are some signs of an incipient increase in the risks of de-anchoring (both in the measures of such expectations based on surveys of different types of economic agents and in financial market-based measures).

**Financing conditions in the Spanish economy have started to tighten slightly in recent months.** For instance, the Spanish 10-year government bond yield has increased by around 188 bp since the beginning of the year and its yield spread against the German Bund has widened by almost 35 bp. Furthermore, while the average costs of bank lending to households and firms have remained at record-low levels in recent months, given the typical lending market dynamics, the recent increase in interbank market interest rates can ultimately be expected to be passed through to the cost of bank lending to these agents, which could adversely impact their spending power. In addition, amid high volatility, influenced by monetary policy tightening and by investor concern over economic growth, bouts of financial turbulence on international capital markets, possibly leading to a further tightening of financing conditions, cannot be ruled out.

Figure 1

RECENT GLOBAL ECONOMIC DEVELOPMENTS, OUTLOOK AND MAIN SOURCES OF UNCERTAINTY

	MAIN RECENT DEVELOPMENTS	SHORT-TERM OUTLOOK	SOURCES OF UNCERTAINTY
ACTIVITY	Global growth, which was hampered in early 2022 by the resurgence of the pandemic, has continued slowing in recent months, mainly as a result of the war in Ukraine	The adverse effects of the war in Ukraine, China's zero-COVID strategy and the gradual withdrawal of economic policy stimuli dampen the global growth outlook in the coming quarters, despite the lifting of pandemic-related restrictions in most advanced economies	<ul style="list-style-type: none"> <li>– Energy prices and the possible indirect and second-round effects on inflation</li> <li>– Duration and intensity of the armed conflict in Ukraine, and the persistence of the possible geopolitical fallout, as well as of global production and supply chain bottlenecks</li> <li>– Global financing conditions and financial stability amid the normalisation of monetary policy around the world</li> <li>– The nature and magnitude of the fiscal response to contend with the war's adverse consequences</li> <li>– The pandemic</li> </ul>
PRICES	Rising energy and food prices and the persistence of bottlenecks have continued to drive up inflation. Inflationary pressures are now widespread in the basket of consumer goods and services, and also affect core inflation	The average inflation forecast for 2022 and, to a lesser degree, 2023, has been revised significantly upwards. Nonetheless, the current high inflation rates are still expected to gradually ease over the coming quarters, provided there are no significant indirect or second-round effects	
OTHER	In a context of high inflation, most of the world's central banks, in both the advanced and the emerging market economies, have continued to tighten their monetary policy stance	In a highly volatile setting shaped by monetary policy tightening and investor concern over economic growth, global financial conditions are likely to continue to tighten	

SOURCE: Banco de España.



## BOX 1

Spanish GDP growth in 2022 has been revised downwards, as economic activity slowed more sharply than expected in Q1. That said, activity seems to have become more buoyant in recent months. The intensity and persistence of the rise in inflation continues to surprise on the upside. Apart from the headline inflation rate in 2022, which has been revised down slightly owing to the entry into force of the Iberian mechanism to lower electricity bills, the other headline and underlying inflation rates have been revised significantly upwards in the period 2022-2024



## BOX 2

Consumer inflation expectations have increased in recent quarters, in particular among those households most exposed to the increase in energy prices and those that are most pessimistic about future economic developments



## BOX 3

At the end of 2021, mark-ups in Spain stood below their pre-pandemic levels and were less buoyant than in the euro area as a whole. Also, there have been signs of some decline in profit margins in recent quarters, although this aggregate behaviour is compatible with significant sectoral variation



## BOX 4

The Iberian mechanism to cap the price of gas used in electricity generation would reduce the inflation rate projected for 2022 by 0.5 pp and that projected for 2023 by 0.1 pp, although the uncertainty surrounding these estimates is very high

## MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)

These projections for the Spanish economy are the Banco de España's contribution to the Eurosystem's projections for the euro area as a whole released by the European Central Bank (ECB) on 9 June.<sup>1,2</sup> Under the assumptions of the exercise, Spanish GDP is projected to grow at 4.1%, 2.8% and 2.6% in 2022, 2023 and 2024, respectively (see Table 1). Headline inflation will decelerate from 7.2% in 2022 to 2.6% in 2023 and 1.8% in 2024, while the underlying component will go from 3.2% on average this year to 2.2% in 2023 and 2% in 2024. The cut-off date for this projection exercise was 24 May, with the exception of the data used to prepare the assumptions, for which the cut-off date was 17 May.

### Activity

In 2022 Q1 the GDP growth rate slowed substantially, to 0.3% quarter-on-quarter. Chronologically, this was initially due to the adverse impact of the COVID-19 Omicron variant on recreational activities and, subsequently, to the economic fallout of the invasion of Ukraine by Russia. These developments were compounded, at the end of the quarter, by the production and distribution disruptions caused by the road hauliers' strike in Spain. The effect of this temporary factor appears to have been greater than was estimated in the last projection exercise published by the Banco de España in April.<sup>3</sup>

In Q2, the war in Ukraine is adversely affecting economic activity through the persistence of high prices in numerous

commodities including energy, minerals and foodstuffs (see Chart 1), its impact on agents' confidence (which, in general, has not yet returned to where it stood before the Russian invasion), and the reduced buoyancy in world markets, in a setting in which the war and China's zero-COVID policy have hindered the resolution of supply chain bottlenecks or have even exacerbated them.

These adverse effects have tended to be offset by other countervailing effects, most notably the virtual elimination of the restrictions associated with the health crisis, which is driving a remarkable rebound in the services most affected by them. Additionally, the impact of the rise in inflation on consumption and production is being partially cushioned by the fiscal and regulatory measures adopted to address it. Lastly, the decline in household confidence in March has subsequently partially reversed, boosting consumption in Q2. As a result of all these factors, GDP is expected to increase by 0.4% in the current quarter, although this figure is subject to a high level of uncertainty as the quantitative economic information for the quarter is still limited.

In the short term, the war is expected to continue to have a considerable impact on activity. In the absence of significant additional shocks, economic activity is expected to gain greater momentum as from the final stretch of the year, in line with the gradual improvement in confidence, the progressive easing of supply chain

Table 1  
MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (a)

	GDP				Harmonised index of consumer prices (HICP)				HICP excluding energy and food				Unemployment rate (% of labour force) (b)			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
June 2022	5.1	4.1	2.8	2.6	3.0	7.2	2.6	1.8	0.6	3.2	2.2	2.0	14.8	13.0	12.8	12.7
April 2022	5.1	4.5	2.9	2.5	3.0	7.5	2.0	1.6	0.6	2.8	1.8	1.7	14.8	13.5	13.2	12.8

**SOURCES:** Banco de España and INE.

**NOTE:** Latest QNA figure published: 2022 Q1.

**a** Projections cut-off date: 24 May 2022.

**b** Annual average.

1 Compared with those published on 5 April, these projections incorporate the new information that has become available since then, including, in particular, the Quarterly National Accounts (QNA) data for 2022 Q1 and the changes in the technical assumptions underlying the performance of the different variables (see Table A.1).

2 See *Eurosystem staff macroeconomic projections for the euro area*, June 2022.

3 See Box 1, "Macroeconomic projections for the Spanish economy (2022-2024)", Quarterly Report on the Spanish Economy, *Economic Bulletin* 1/2022, Banco de España.

**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024) (cont'd)**

disruptions and the roll-out of NGEU-related funds. Financial conditions are, however, expected to be somewhat tighter than in the recent past (partly as a result of the monetary policy normalisation or tightening process undertaken by the main central banks worldwide), which could contribute to a certain moderation in the rate of growth of activity.

The projected GDP growth would allow the Spanish economy to return to its pre-pandemic output level in the second half of 2023 (see Chart 2). By demand component, economic growth in 2022 would rest very

significantly on the recovery of tourism exports and, to a lesser extent, on the implementation of investment projects associated with the NGEU programme. By contrast, in the period 2023-2024 growth would be underpinned by the expected greater dynamism of private consumption, spurred among other factors by strong job creation, which would bring the unemployment rate down to 12.6% at end-2024 (see Chart 3 and Table 2). Meanwhile, the budget deficit is projected to narrow appreciably once again in 2022 (to 4.6% of GDP, 2.3 pp below the 2021 level), although it would decline only marginally in the following two years.

Chart 1  
ENERGY PRICES

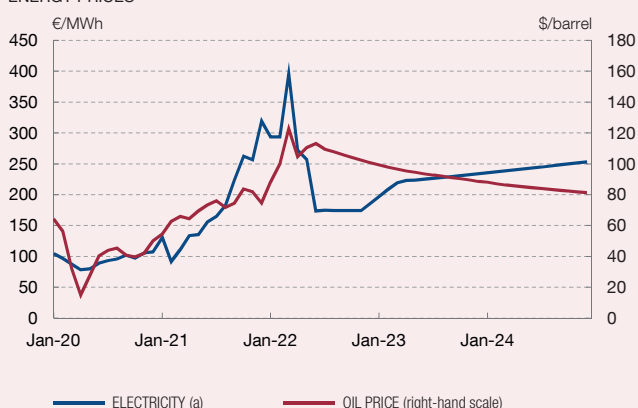
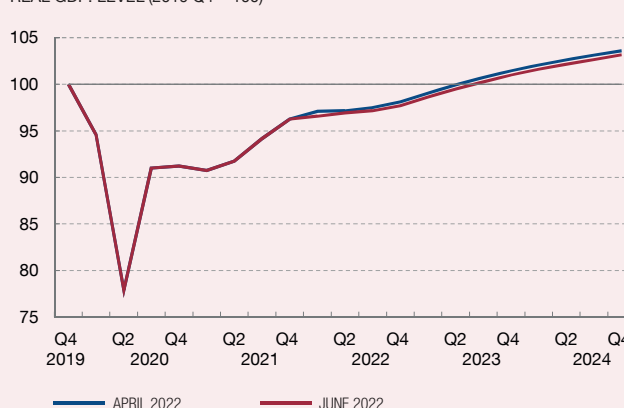


Chart 2  
REAL GDP. LEVEL (2019 Q4 = 100)



SOURCES: INE, Reuters and OMIP.

a Regulated rate for small consumers of electricity.

Chart 3  
GDP GROWTH AND CONTRIBUTIONS OF MAIN COMPONENTS

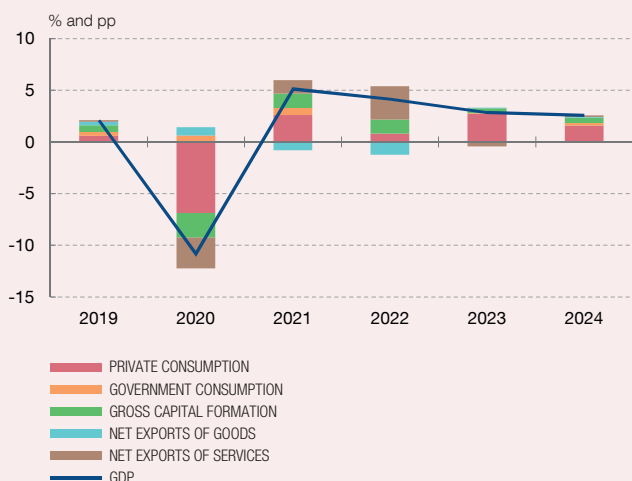
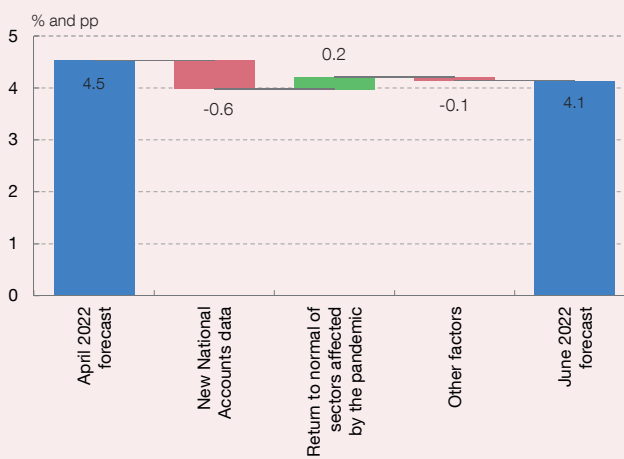


Chart 4  
CHANGES IN THE 2022 GDP FORECAST



SOURCES: Banco de España and INE.

**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

Compared with those published at the beginning of April, the current projections entail a downward revision of 0.4 pp to GDP growth in 2022, essentially as a result of the incorporation of the Q1 QNA data (see Chart 4). Specifically, lower GDP growth between January and March than was estimated in April automatically leads to a downward revision of 0.6 pp in this year's average growth rate. Conversely, the return to normal activity in the sectors most affected by the pandemic is proving faster and more intense than was expected in April. This is leading to stronger GDP growth in the current quarter, which boosts the average annual growth rate by 0.2 pp. Moreover, overall, the changes in the assumptions underlying the projections – including most notably the fiscal and financial assumptions and those relating to foreign market developments – lead to modest shifts in the projected GDP path for 2022. In the subsequent two-year period, the projections for activity are practically the same as those published in April. Therefore, the new information that has become known between these two

projection exercises is not expected to significantly alter the medium-term outlook for Spanish GDP growth.

**Prices and costs**

in April, Spanish headline inflation, measured by the HICP, fell by 1.5 pp to 8.3%. This decline was the result of two opposite trends. The sharp fall in energy prices (whose year-on-year rate of change dropped to 33.3%, a decrease of 27 pp) was partly as a result of the measures introduced under Royal Decree-Law 6/2022 of 29 March 2022 in the framework of the Spanish National Plan in response to the economic and social consequences of the war in Ukraine. However, food inflation accelerated by 2.9 pp to 9.3% and underlying inflation also rose, by 0.4 pp, to stand at 3.4%.

Looking ahead, commodity prices on futures markets, which continue to signal a gradual moderation in these prices in the coming quarters, and the entry into force of

Table 2  
PROJECTIONS FOR THE MAIN MACROECONOMIC AGGREGATES OF THE SPANISH ECONOMY (a)

Annual rate of change in volume terms (%) and % of GDP

	2021	June 2022 projections			April 2022 projections		
		2022	2023	2024	2022	2023	2024
GDP	5.1	4.1	2.8	2.6	4.5	2.9	2.5
Private consumption	4.6	1.4	4.9	2.8	4.5	3.9	2.4
Government consumption	3.1	-0.2	0.4	1.2	-0.3	0.8	1.2
Gross fixed capital formation	4.3	6.5	2.1	2.4	4.5	2.1	2.5
Exports of goods and services	14.7	12.5	2.9	3.5	12.0	3.8	3.7
Imports of goods and services	13.9	7.0	4.0	3.1	9.0	3.3	2.9
Domestic demand (contribution to growth)	4.6	2.1	3.2	2.4	3.3	2.7	2.1
Net external demand (contribution to growth)	0.5	2.0	-0.4	0.2	1.2	0.2	0.4
Nominal GDP	7.4	7.2	5.8	5.0	9.1	4.8	4.3
GDP deflator	2.2	2.9	2.9	2.4	4.4	1.9	1.7
Harmonised index of consumer prices (HICP)	3.0	7.2	2.6	1.8	7.5	2.0	1.6
HICP excluding energy and food	0.6	3.2	2.2	2.0	2.8	1.8	1.7
Employment (hours)	7.0	4.6	1.5	1.1	1.9	2.0	1.6
Unemployment rate (% of labour force). Annual average	14.8	13.0	12.8	12.7	13.5	13.2	12.8
Net lending (+) / net borrowing (-) of the nation (% of GDP)	1.9	3.1	3.2	3.0	2.7	3.3	3.2
General government net lending (+) / net borrowing (-) (% of GDP)	-6.9	-4.6	-4.5	-4.2	-5.0	-5.2	-4.7
General government debt (% of GDP)	118.4	114.9	113.2	112.5	112.6	112.8	113.5

**SOURCES:** Banco de España and INE.

**NOTE:** Latest QNA figure published: 2022 Q1.

**a** Projections cut-off date: 24 May 2022.



**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024) (cont'd)**

the so-called Iberian mechanism to cap gas prices and reduce electricity bills recently agreed with the European Commission, suggest that the energy component of Spanish prices will decelerate sharply over the projection period. In consequence, the year-on-year rate of change, which stood at 46% in 2022 Q1, is expected to turn negative from summer 2023 (see Chart 5).

Food prices and underlying inflation, which both surprised on the upside in April, are expected to continue to accelerate in the short term, in a setting in which the war in Ukraine and China's zero-COVID policy have delayed the resolution of the global supply chain disruptions (and in some cases have even heightened them), firms are partially passing through their production cost increases to sale prices, and demand is growing quite sharply in more contact-intensive services (see Chart 6). However, on a broader time horizon, both food and underlying inflation are expected to moderate slowly in 2023 and 2024, albeit to a limited extent. This is because demand is also expected to gradually recover, as the factors that have driven the recent surge in inflationary pressures in these items begin to reverse (see Chart 5).

These projections are essentially based on two assumptions. First, that the bulk of the pass-through to

sale prices of the recent cost increases has already occurred. Second, that the response of wage demands to the growth in inflation will be limited, consistent with the pattern observed to date, which would avoid feedback loops between wage increases and final prices.

Compared with the last projections, the surprise in underlying inflation in April and the assumption that the increase will be longer lasting, lead to an upward revision of 0.5 pp in the rate of change of underlying inflation for 2022, to 3.2%, and to a smaller revision, to 2.2% and 2%, respectively, for 2023 and 2024. By contrast, the headline inflation rate projected for 2022 – 7.2% – is now 0.2 pp lower than that forecast in April, as a result of the downward revision of the energy component which more than offsets the upward revisions to underlying and food price inflation in 2022. Projected electricity prices have been revised down, partly because of the incorporation, in this projection exercise, of the mechanism to cap gas prices and reduce electricity bills that Spain and Portugal have recently agreed with the European Commission. As explained in Box 4 of this report, under the assumption that the mechanism will come into effect on 15 June, in 2022 average inflation will fall by 0.5 pp.<sup>4</sup> In any event, the reversal of this measure in 2023, together with the higher inflation projected for the underlying components and food prices, explains the

Chart 5  
CONTRIBUTIONS TO HICP GROWTH BY COMPONENT

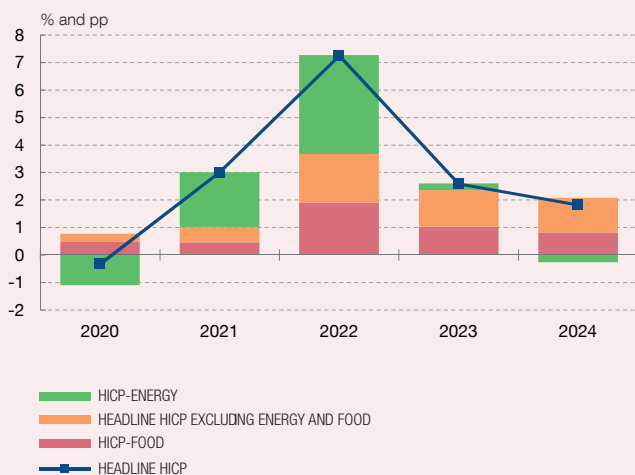
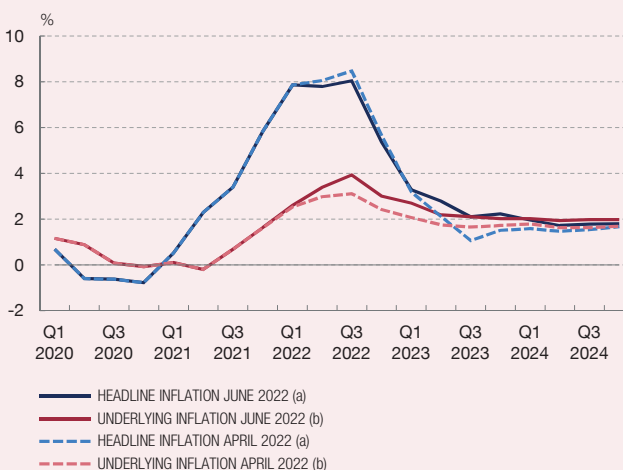


Chart 6  
HEADLINE AND UNDERLYING INFLATION



SOURCES: Banco de España and INE.

- a Measured by the harmonised index of consumer prices (HICP).
- b Measured by the HICP excluding energy and food.

4 The assumption was subsequently confirmed (the mechanism came into effect on 8 June).

**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024) (cont'd)**

upward revision of 0.6 pp – to 2.6% – in the headline HICP inflation rate for that year compared with the April projections. For 2024 the revisions are less significant.

**Latest data**

Since the cut-off date for this projections exercise – carried out jointly with the Eurosystem – two particularly relevant items of information have become known which, had they been available earlier, would have given rise to certain significant changes to these projections, especially insofar as the projected inflation rates for the short term are concerned.

First, on 30 May, the National Statistics Institute (INE) published its HICP flash estimate for May, which at 8.5% year-on-year is 0.5 pp higher than the figure included in these projections. An automatic update of the effects of this further upside inflationary surprise signals a headline inflation rate 0.1 pp higher in 2022 and 0.1 pp lower in 2023 than those forecast before this information was known. As a result of this surprise, the underlying inflation rates would also be revised upwards, by 0.2 pp for 2022 and by 0.1 pp for 2023.

Second, on 1 June, the Government announced its intention to extend to September the measures currently in force to counter the consequences of higher energy prices for households' and firms' income, in particular the fuel rebate and electricity tax reductions. By contrast, this projection exercise assumes that these measures will expire at end-June. According to the calculations made, the extension to September will lead to a headline inflation rate in 2022 some 0.3 pp lower than under the baseline scenario. This effect will be reversed completely in 2023. The underlying inflation rates for both 2022 and 2023 are almost unchanged compared with the baseline scenario of this projection exercise. In turn, the average rate of growth of GDP will be slightly higher in the short term, although this effect will be reversed when the measures recently extended are withdrawn. Lastly, the budget deficit is expected to grow as a percentage of GDP by between 0.2 pp and 0.3 pp in 2022.

**Risks**

The risks to the baseline scenario of the joint projections with the rest of the Eurosystem are tilted to the downside in the case of activity and to the upside in the case of inflation, primarily as a result of the uncertainty over the course of the war in Ukraine and its economic repercussions.

An additional and very significant source of risk is associated with the extent to which the recent rise in prices and costs is passed through to other prices in the economy and to wages. The intensity with which some indirect effects – i.e. the pass-through of higher production costs to final prices – appear to be materialising in recent months has increased the likelihood of significant second-round effects or price-wage feedback loops, which for the Spanish economy would mean a loss of external competitiveness, higher inflation and a lower level of activity and employment throughout the projection horizon.

The pace of NGEU implementation will be a further source of uncertainty in the coming quarters. The scant information available suggests that there may be some delay in the expenditure relative to the schedule considered in the projections. In addition, the uncertainty over the effective roll-out of NGEU projects could delay some private investment decisions. So suggests the qualitative information compiled by Banco de España in its telephone conversations with a number of Spanish non-financial corporations.

Lastly, the process of monetary policy normalisation is prompting a certain tightening of financing conditions, as has begun to become apparent in the wholesale markets. In the current highly uncertain setting, this process of monetary stimulus withdrawal could lead to more abrupt price adjustments in capital markets, especially in the event of spikes in risk aversion (associated, for example, with a potential further deterioration in the geopolitical situation). In the near term, the combination of higher inflation (which erodes households' and firms' real income) and an increase in interest rates could make it harder for the more vulnerable agents to service their debts (consequently limiting their spending levels).

**ANNEX 1****Assumptions underlying the projections**

As compared with the April projections, the main changes to the assumptions relate to short and long-term interest rates (both now higher), the euro exchange rate (now lower) and export markets (whose growth rate has been revised downwards in 2022) (see Box 1).<sup>5</sup>

As regards fiscal policy, there have been no regulatory changes except for the extension of the escape clause of the Stability and Growth Pact to 2023. In particular, no

5 For a description of the methodology used to construct projections for the Spanish economy's external markets for goods and services, prices in the financial and commodities market, and fiscal policy, see Box 1, "Macroeconomic projections for the Spanish economy (2022-2024)", Quarterly Report on the Spanish Economy, *Economic Bulletin* 1/2022, Banco de España.

**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024) (cont'd)**

new measures were included in the Stability Programme Update 2022-2025. In this setting, the information that has become known since the April projection exercise is important in three main dimensions.

First, the latest budget outturn data show that the strong tax revenue of recent times has been bolstered even further. Tax receipts are growing at far higher rates than would be inferred from developments in National Accounts tax bases. Accordingly, more buoyant revenue is considered over the projection horizon than in the April projections, and, as a result, it is assumed that tax revenue will converge more gradually towards the lower theoretical level estimated according to the tax bases.

Second, albeit subject to extraordinary uncertainty, the latest information on calls for funding proposals within the framework of NGEU bears out the assumptions considered

in the April projections regarding the pace of expenditure under this programme.

Lastly, the assumptions take into account the proposed European Commission recommendation to Spain, included in the European Semester Spring Package, which urges the authorities to limit, in 2023, the growth of nationally-financed current expenditure below medium-term potential GDP growth. As a result, the projected current expenditure has been revised down slightly. Otherwise, the fiscal projections are based on the usual technical assumptions.

The resulting fiscal policy stance, measured by the change in the primary structural balance net of European funds, is expected to be expansionary in 2022 and 2023 (0.9 and 0.6 pp of GDP, respectively) and contractionary in 2024 (-0.4 pp).<sup>6</sup>

Table A.1  
INTERNATIONAL ENVIRONMENT AND MONETARY AND FINANCIAL CONDITIONS (a)

Annual rates of change (%), unless otherwise indicated

	2021	June 2022 projections			Difference between the current projections and the April 2022 projections (b)		
		2022	2023	2024	2022	2023	2024
Spain's export markets (c)	9.9	4.6	3.0	3.4	-1.1	0.0	0.2
Oil price in dollars/barrel (level)	71.1	105.8	93.4	84.3	1.0	2.0	0.7
Monetary and financial conditions							
Dollar/euro exchange rate (level)	1.18	1.07	1.05	1.05	-0.04	-0.05	-0.05
Nominal effective exchange rate against non-euro area countries (d) (2000 = 100)	120.7	113.1	111.9	111.9	-2.2	-3.1	-3.1
Short-term interest rates (3-month EURIBOR) (e)	-0.5	0.0	1.3	1.6	0.2	0.3	0.3
Long-term interest rates (10-year Spanish government bond yield) (e)	0.3	1.8	2.4	2.6	0.4	0.6	0.7

**SOURCES:** Banco de España and ECB.

- a Cut-off date for assumptions: 18 May 2022 for Spain's export markets and 17 May 2022 for all other variables. Figures expressed as levels are annual average; the figures expressed as rates are calculated on the basis of the related annual averages.
- b The differences are in rates for export markets, in levels for oil prices and the dollar/euro exchange rate, in percentages for the nominal effective exchange rate and in percentage points for interest rates.
- c The assumptions regarding the behaviour of Spain's export markets presented in the table are obtained from the *June 2022 ECB staff macroeconomic projections for the euro area*.
- d A positive percentage change in the nominal effective exchange rate denotes an appreciation of the euro.
- e For the projection period, the figures in the table are technical assumptions, prepared following the Eurosystem's methodology. These assumptions are based on futures market prices or on proxies thereof and should not be interpreted as a Eurosystem prediction as to the course of these variables.

<sup>6</sup> These figures are primarily determined by developments in NGEU-funded expenditure. The funds received under this programme entail a lower structural deficit, but not a more contractionary fiscal policy stance, as they do not stem from taxes collected from resident agents. By contrast, the NGEU-funded expenditure in Spain does influence the fiscal policy stance.

**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

Figure 1  
SUMMARY OF THE MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)

	2022	2023	2024	MAIN REASONS FOR THE REVISION (with respect to the April projections)
GDP	<p><b>4.1%</b></p> <hr/> <p>↓ 0.4 pp</p>	<p><b>2.8%</b></p> <hr/> <p>↓ 0.1 pp</p>	<p><b>2.6%</b></p> <hr/> <p>= 0.0 pp</p>	<ul style="list-style-type: none"> <li>• The downside surprise in the economic growth data for Q1 automatically lowers GDP growth in 2022</li> <li>• However, this revision is partially offset by the buoyancy of services in April and May, signalling higher-than-projected growth in 2022 Q2</li> <li>• The growth outlook for the rest of the projection horizon is not significantly different from that published in April</li> <li>• Inflation in 2023 and 2024 is revised upwards due to the stronger and more persistent increase in underlying inflation</li> <li>• Despite the rise in underlying inflation, headline inflation in 2022 is revised downwards due to the impact of the Iberian mechanism to cap the gas price</li> </ul>
Inflation	<p><b>7.2%</b></p> <hr/> <p>↓ 0.2 pp</p>	<p><b>2.6%</b></p> <hr/> <p>↑ 0.6 pp</p>	<p><b>1.8%</b></p> <hr/> <p>↑ 0.3 pp</p>	<p><b>MAIN SOURCES OF UNCERTAINTY</b></p> <ul style="list-style-type: none"> <li>• New information that becomes available after the cut-off date which might significantly alter the projections (e.g. data on inflation in May and extension of measures in Spain to mitigate surging energy prices)</li> <li>• Intensity of the indirect and second-round effects on inflation</li> <li>• Duration and severity of the war in Ukraine and developments in energy prices and global value chain bottlenecks</li> <li>• Developments in financial conditions in a context of monetary policy normalisation globally</li> <li>• Use and macroeconomic impact of European funds</li> </ul>

SOURCE: Banco de España.

## CHANGES IN CONSUMER INFLATION EXPECTATIONS IN RESPONSE TO THE RECENT RISE IN PRICES AND THE WAR IN UKRAINE

Luis Guirola and Iván Kataryniuk

Inflation has soared globally since early 2021. This rise has fed through, to differing degrees, to economic agents' medium and long-term inflation expectations. For instance, financial market-based long-term inflation compensation has increased continuously during this period in both the euro area and the United States (see Chart 1). Professional forecasters' long-term inflation expectations have also risen (to 2% in the euro area and to 3% in the United States).

Leaving these measures to one side, this box focuses on recent changes in consumer inflation expectations. Monitoring these expectations is particularly important from the monetary policy conduct standpoint. Indeed, they influence employees' demands for wage increases and, the more such increases are passed through to the prices of companies' goods and services, future inflation developments as well. In addition, these expectations also affect household consumption and investment decisions, with the ensuing knock-on effect on aggregate economic activity and, ultimately, once again, inflation.

Charts 2 and 3 highlight that since mid-2021 consumer inflation expectations have risen noticeably both in the United States and in the euro area. The increase has been particularly sharp in the euro area since the start of Russia's invasion of Ukraine at the end of February.

Drawing on granular data from the European Central Bank's monthly Consumer Expectations Survey (CES) of more than 10,000 respondents who are representative of the population of the six largest euro area countries, it is possible to analyse how the exposure of different types of households to energy prices and the deterioration in the economic outlook induced by the war in Ukraine have recently influenced euro area consumer inflation expectations. In this regard, at a time when the increase in inflation in recent months has largely been due to the rise in energy prices, the households most exposed to such higher prices can be expected to have adjusted more sharply their future inflation expectations. Likewise, it could also be the

case that, as certain papers suggest,<sup>1</sup> the future inflation perceptions of the households with a more pessimistic economic outlook have risen more sharply, potentially compounding the adverse effects of the recent slowdown in activity on short and medium-term growth and hindering the task of economic policy.

Chart 4 depicts, by consumers' exposure to rising energy prices, the changes in euro area consumer inflation expectations three years ahead. To do so, households are divided on the basis of their percentage of spending, in October 2021, on transport and basic utilities – mainly electricity, gas and other fuels –, distinguishing between the most exposed 30% of households (i.e. with a greater share of spending on these items) and the remaining 70%. In this regard, it should be highlighted that, in general, the group of households most exposed to the higher energy prices have a lower level of income<sup>2</sup> and, in the current inflationary episode, appear to be experiencing higher average inflation.<sup>3</sup>

Up to mid-2021, both types of households had similar expectations for future inflation (see Chart 4). However, from 2021 Q3 onwards, the inflation outlook of the households most exposed to the increase in energy prices has risen more sharply. This trend became more pronounced following Russia's invasion of Ukraine. This group of households is also currently more uncertain about future inflation developments (see Chart 5).

As mentioned above, the deterioration in the economic outlook triggered by the outbreak of the war in Ukraine could have impacted – possibly unevenly – medium-term consumer inflation expectations. In this regard, Chart 6 depicts, for each month of the period July 2021–April 2022, the estimated relationship between each household's revised three-years-ahead inflation expectations and their revised economic outlook for the next 12 months. In contrast to what is observed in the rest of the period, precisely from March 2022, after the war broke out, there is a negative and statistically significant correlation between the variables analysed. In other words, between

1 See S. Tsiaplias (2021), "Consumer inflation expectations, income changes and economic downturns", *Journal of Applied Econometrics*, Vol. 36(6), pp. 784–807.

2 The level of inflation expectations largely depends on household characteristics. Specifically, lower-income households, older households and women tend to have higher inflation expectations. See K. Bańkowska et al. (2021), "ECB Consumer Expectations Survey: an overview and first evaluation", *ECB Occasional Paper Series*, No 287.

3 See Chapter 3 of the Banco de España *Annual Report 2021*.

**CHANGES IN CONSUMER INFLATION EXPECTATIONS IN RESPONSE TO THE RECENT RISE IN PRICES AND THE WAR IN UKRAINE (cont'd)**

Russia launching its invasion of Ukraine and the end of the period analysed, the consumers who revised their medium-term inflation forecast upwards the most were, on average, those who became most pessimistic about the economic outlook.

In sum, this box highlights that the recent rise in euro area consumer inflation expectations is in part influenced by households' exposure to the increase in energy prices and by their pessimism about future economic developments.

Chart 1  
INFLATION SWAPS MARKET-BASED MEASURES OF INFLATION EXPECTATIONS (a)

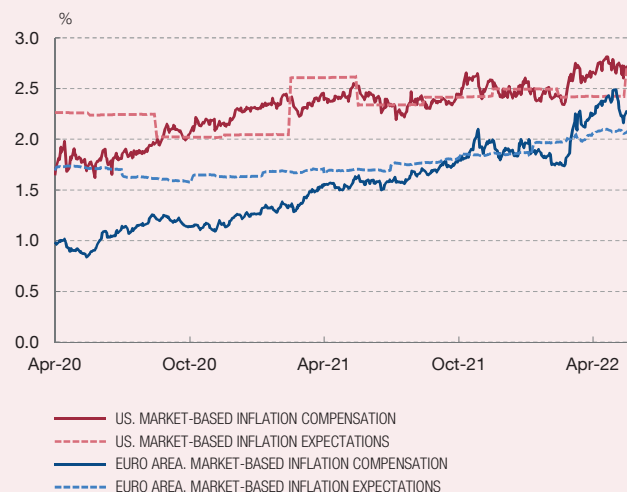


Chart 2  
US CONSUMER INFLATION EXPECTATIONS (MEDIAN)

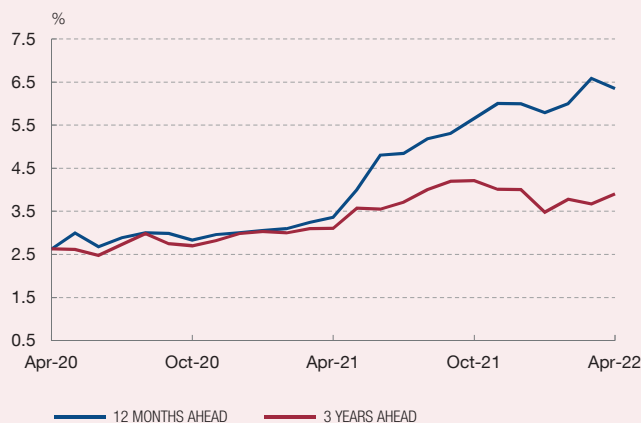


Chart 3  
EURO AREA CONSUMER INFLATION EXPECTATIONS

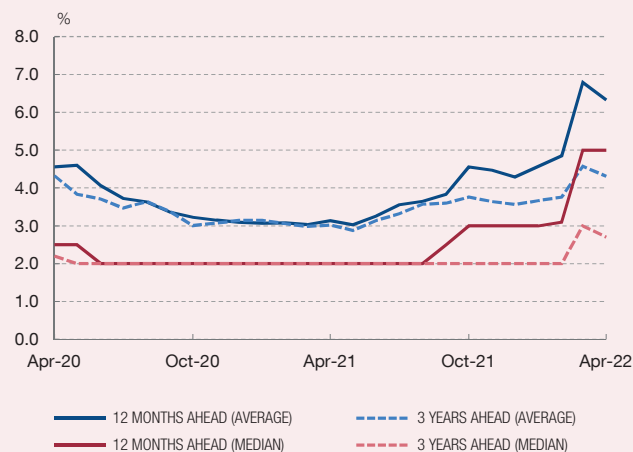
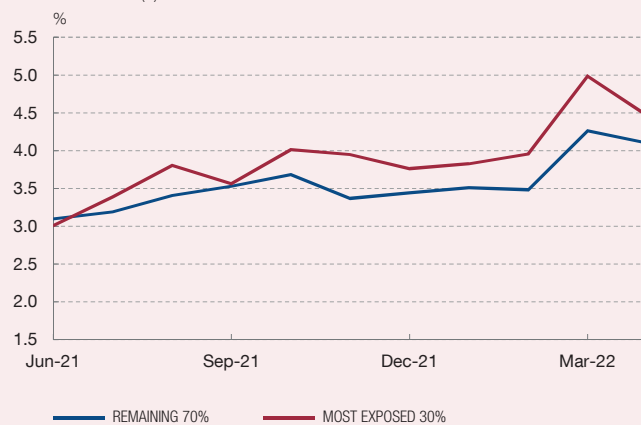


Chart 4  
AVERAGE INFLATION EXPECTATIONS THREE YEARS AHEAD, BY TYPE OF HOUSEHOLD (b)



**SOURCES:** CES (ECB), Survey of Professional Forecasters (ECB and Federal Reserve Bank of Philadelphia), Bloomberg and own calculations.

- a Five-year, five-year forward inflation compensation, daily data to 27 May 2022. The compensation for inflation priced into inflation swaps is, for each horizon, broken down into the sum of the inflation expectations and the risk premium by term, using a model that estimates the term structure of inflation using daily data on inflation swaps at several time horizons (for the euro area or for the United States), monthly HICP data for the euro area (CPI for the United States) and quarterly data on one, two and five-year inflation expectations from the Survey of Professional Forecasters conducted by the ECB (Federal Reserve Bank of Philadelphia in the United States). See R. Gimeno and E. Ortega (2022), "Modelling inflation expectations: the value of mixing information and frequencies", *Working Papers*, Banco de España, forthcoming.
- b The most exposed households are those whose percentage of consumer spending on transport and basic utilities is in the upper 30% of the distribution. The findings are similar using country-specific thresholds and other percentages.

**CHANGES IN CONSUMER INFLATION EXPECTATIONS IN RESPONSE TO THE RECENT RISE IN PRICES AND THE WAR IN UKRAINE (cont'd)**

Chart 5  
PROBABILITY DISTRIBUTION OF CONSUMER INFLATION EXPECTATIONS THREE YEARS AHEAD, BY EXPOSURE (a)

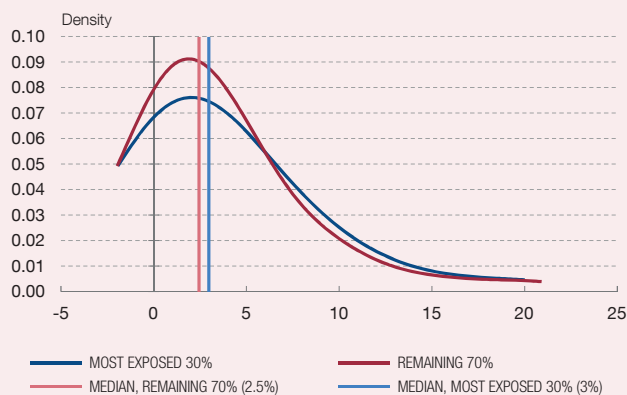
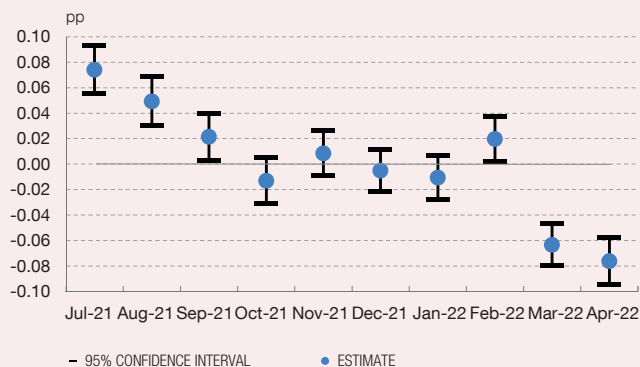


Chart 6  
RELATIONSHIP BETWEEN REVISED INFLATION AND GROWTH EXPECTATIONS (b)



**SOURCES:** CES (ECB), Survey of Professional Forecasters (ECB and Federal Reserve Bank of Philadelphia), Bloomberg and own calculations.

- a The most exposed households are those whose percentage of consumer spending on transport and basic utilities is in the upper 30% of the distribution. The findings are similar using country-specific thresholds and other percentages.
- b The chart shows the coefficient of a regression on the change in consumer inflation expectations three years ahead and the growth expectations for the following twelve months.

**MARK-UPS IN SPAIN: RECENT DEVELOPMENTS**

Alejandro Fernández-Cerezo, José Manuel Montero and Elvira Prades

Global production and supply chain bottlenecks and the surge in numerous energy and other commodity prices have in recent quarters put considerable upward pressure on firms' costs, both in Spain and worldwide. As the Banco de España has indicated in various reports,<sup>1</sup> the degree to which Spanish firms pass these cost increases through to the prices of the goods and services they produce will be crucial in determining how long the current inflationary episode will persist and in any assessment of possible future developments in the Spanish economy's international competitiveness and employment.

Various indicators suggest that costs are already being passed through to prices. Indeed, the fact that inflationary pressures have spread in recent quarters (beyond energy inputs) and are already evident in a very significant proportion of goods and services in the household consumption basket is consistent with an incipient materialisation of these indirect effects on inflation.

The Banco de España Business Activity Survey (EBAE)<sup>2</sup> points in the same direction. On the basis of qualitative data, it shows that Spanish firms have recently been increasing their selling prices. However, according to the same source, this pass-through is only partial, insofar as selling prices are not perceived to be rising as forcefully as input prices. This qualitative evidence would thus be consistent with a certain decline in mark-ups in Spain in recent quarters.

To supplement this evidence, the behaviour of profit margins in Spain and other European economies since the outbreak of the pandemic is analysed in this box on the basis of a quantitative approach, using certain metrics commonly employed in the academic literature to proxy the behaviour of this variable. It should be noted, however, that there are considerable difficulties involved in estimating mark-ups (a variable that cannot be directly observed), so that the results

of this exercise must be treated with caution. In fact, whether for conceptual or methodological reasons, significant differences have frequently been observed between the dynamics of profit margins estimated using different quantitative approaches.<sup>3</sup>

A first approach defines mark-ups as the ratio of the gross operating surplus (GOS) to the gross value added (GVA) of non-financial corporations,<sup>4</sup> both of which are available in the non-financial accounts of the institutional sectors in the National Accounts. According to this metric, mark-ups were highly volatile in Spain at the height of the pandemic, increased slightly in the first half of 2021 and were somewhat subdued in the second half of 2021, as inflation surged. In any event, at the end of last year, profit margins in Spain were some 3 pp below their pre-pandemic levels, a wider gap than in other euro area countries (and above the euro area average), where mark-ups recovered more forcefully following the turbulence in 2020 (see Chart 1).

A second way of estimating mark-ups consists in calculating the ratio of GOS to GVA for the economy as a whole using the INE's estimation of GDP in the Quarterly National Accounts by means of the income approach. This approach has certain limitations compared with the first one,<sup>5</sup> but it also has the advantage of enabling mark-up developments to be analysed across sectors of activity. According to this indicator, and in line with the first approach, profit margins in Spain still stand almost 4 pp below their pre-pandemic level, although they vary considerably across sectors of activity. On one hand, mark-ups in manufacturing, mining and quarrying, energy and water have recovered strongly following their fall in 2020 and, in 2022 Q1, stood above their pre-pandemic levels. On the other hand, in construction and market services, mark-ups have remained more subdued following their decline at the height of pandemic and are still below their 2019 levels (see Chart 2).<sup>6</sup>

1 See, for example, [Chapter 3, Annual Report 2021](#), Banco de España.

2 For further details of the latest wave of this survey, see M. Izquierdo (2022), "Encuesta a las empresas españolas sobre la evolución de su actividad: segundo trimestre de 2022", *Notas Económicas, Boletín Económico*, 2/2022, Banco de España.

3 For an example of these discrepancies, see J. M. Montero and A. Urtasun (2013), "Recent developments in non-financial corporations' mark-ups", *Economic Bulletin*, 12/2013, Banco de España.

4 This approach is not free from interpretation and measurement problems as the GOS includes, among other items, capital remuneration and depreciation costs, which means it is difficult to interpret it as corporate profit.

5 This approach to mark-ups can be considered to be less precise than the first metric presented in this box because it includes other institutional sectors apart from NFCs (such as households and general government) and does not subtract from the GOS net taxes on products and imports.

6 These results are consistent with those obtained using an alternative approach to mark-ups based on the difference between the change in the GDP deflator and unit labour costs. For further details of this methodology, see Box 4, "Recent developments in euro area labour costs and mark-ups", Quarterly report on the Spanish economy, *Economic Bulletin* 2/2019, Banco de España.



**MARK-UPS IN SPAIN: RECENT DEVELOPMENTS** (cont'd)

A third approach to monitoring mark-ups uses the firm-level data available in the Banco de España's Central Balance Sheet Data Office Quarterly Survey (CBQ).<sup>7</sup> In particular, the CBQ enables the operating margin (defined as the ratio of gross operating profit to turnover) to be calculated for each firm. According to this metric, the

aggregate behaviour of profit margins in Spain since the outbreak of the pandemic is generally consistent with the behaviour observed on the basis of information from the National Accounts. In particular, at the end of 2021, the aggregate operating margin had still not recovered to pre-pandemic levels, although it varied considerably across

Chart 1  
NFCs' GOS/GVA RATIO

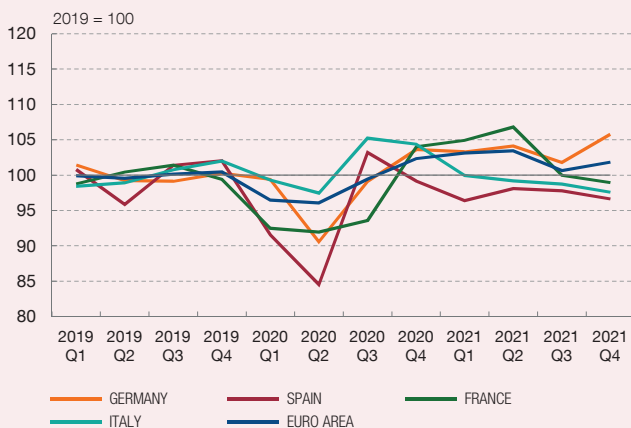


Chart 2  
GOS/GVA RATIO IN SPAIN, BY SECTOR OF ACTIVITY (a)

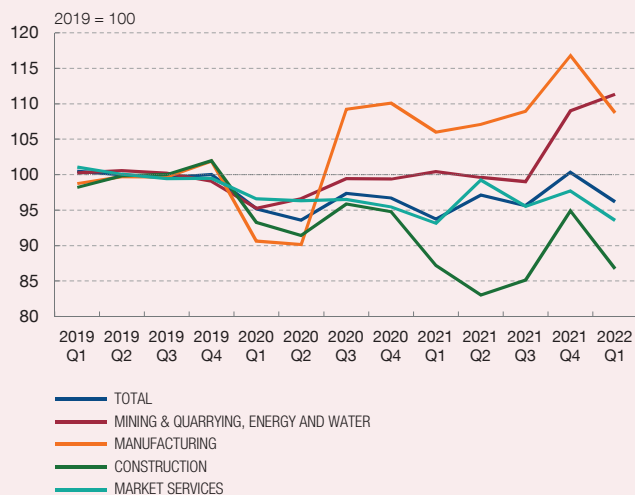


Chart 3  
OPERATING MARGIN ACCORDING TO THE CBQ, BY SECTOR OF ACTIVITY (b)

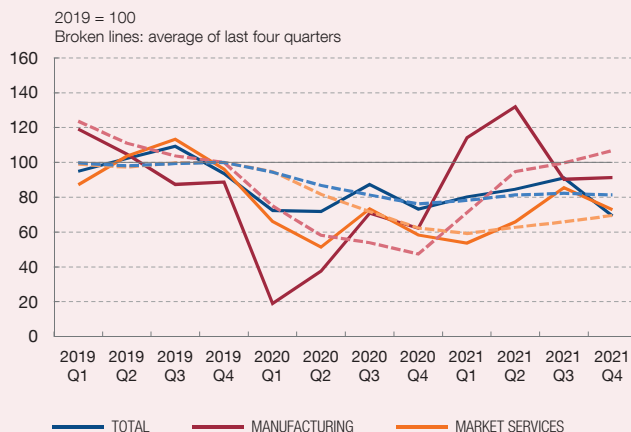
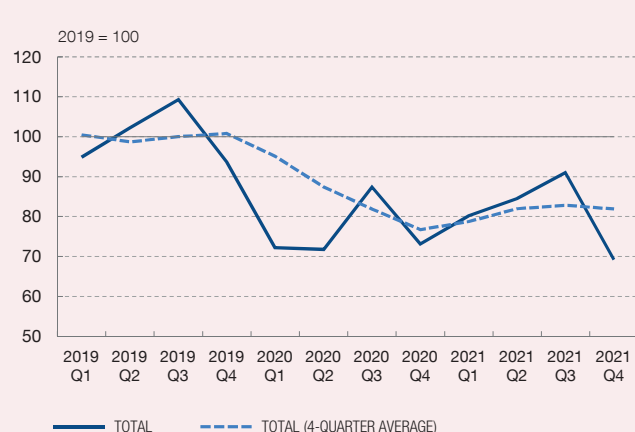


Chart 4  
OPERATING MARGIN ACCORDING TO THE CBQ (b)



**SOURCES:** EUROSTAT, INE and Banco de España.

- a Gross operating surplus (GOS) is calculated as gross value added (GVA) less compensation per employee.
- b Operating margin = gross operating profit / net turnover.

7 For further details, see Á. Menéndez and M. Mulino (2020), "Results of non-financial corporations to 2021 Q4. Preliminary year-end data", Analytical Articles, *Economic Bulletin*, 1/2022, Banco de España.

**MARK-UPS IN SPAIN: RECENT DEVELOPMENTS** (cont'd)

sectors (see Chart 3). Also, mark-ups appear to have edged down in 2021 Q4, the latest data available in the CBQ (see Chart 4).<sup>8</sup>

In short, although the measurement of mark-ups is surrounded by great uncertainty, certain conclusions regarding their recent behaviour can be drawn from the various indicators analysed in this box. First, at the end of 2021, profit margins in Spain stood below their pre-pandemic levels and were less buoyant than in the euro area as a whole. Second, this overall behaviour is

compatible with considerable variation across sectors, mark-ups having been seen to behave less favourably in the market services sectors most affected by the pandemic restrictions. Finally, there are signs that profit margins were somewhat subdued over recent quarters, especially according to the information reported by firms to the Banco de España. In any event, the difficulty of proxying an unobservable variable, such as mark-ups, means that it is advisable to interpret these conclusions with caution and, above all, that verifiable metrics of the behaviour of mark-ups in the current context need to be developed.

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<sup>8</sup> This figure would, however, be heavily influenced by the performance of the operating margins of certain electric utilities.

**IMPACT ON INFLATION OF THE MECHANISM TO CAP GAS PRICES ON THE IBERIAN MARKET**

Matías Pacce and Isabel Sánchez

The sharp rise in natural gas prices on European markets has played a key role in the current inflationary episode, particularly because it has prompted an increase in electricity prices.<sup>1</sup> In this setting, Spain and Portugal have agreed with the European Commission to implement the so-called Iberian mechanism to temporarily cap the cost of the gas used in electricity generation and thus lower electricity bills. This box describes this mechanism and presents an estimate of its impact on future inflation developments in Spain.<sup>2</sup>

The main element of the mechanism is the capping of the cost of the gas used by fossil fuel-based power plants to generate electricity.<sup>3</sup> Specifically, the reference price is set at €40/MWh until December 2022, and will then be increased by €5/MWh each month in the following five months until it reaches €65/MWh in May 2023. In operational terms, the affected power plants will receive, for each MWh generated, a transfer for the difference between the price of natural gas on the Iberian Gas Market (MIBGAS) and the reference price.<sup>4</sup> Thus, the mechanism will generate costs equal to this unit amount multiplied by the electricity generated by the affected power plants (see Chart 1). These costs will have to be funded by consumers with contracts indexed to the wholesale price of electricity and by those with fixed-price contracts who have renewed them since end-April. However, since the price of electricity will be lower in Spain than in France, once the aforementioned mechanism becomes effective electricity sales to France will increase

sharply<sup>5</sup> and this additional income will also be used to fund the costs of the mechanism.

Based on these details, the measure's ultimate impact on inflation in Spain will depend on future developments in four key variables: gas prices, the total volume of electricity generation affected by the measure, the percentage of consumers that will bear the costs and the difference between Spanish and French wholesale market prices. Although the uncertainty surrounding future developments in these variables is very high, this box considers the following assumptions in order to construct a baseline scenario to estimate the potential impact of the mechanism on inflation. First, it is assumed that gas prices between June 2022 and May 2023 will follow the path of MIBGAS gas futures (see Chart 2). Second, it is assumed that, from June 2022 to May 2023, the electricity generated to meet Spanish mainland demand that is affected by the measure will equal that of the same month of the previous year.<sup>6</sup> A further assumption is that the additional electricity required for exports to France will be generated by power plants affected by the measure (see Chart 3). Third, it is assumed that 46% of Spanish mainland demand for electricity would fund the costs of the adjustment mechanism in the first month, a percentage that would increase by 4.9 pp each subsequent month in which the mechanism remains in force.<sup>7</sup> Fourth, it is assumed that the price difference between the Spanish and the French market throughout this period will be equal to the

1 See M. Pacce, I. Sánchez and M. Suárez-Varela (2021), "Recent developments in Spanish retail electricity prices: the role played by the cost of CO2 emission allowances and higher gas prices", *Occasional Paper* No 2120, Banco de España.

2 Although this rule entered into force with the publication of *Royal Decree-Law 10/2022* on 13 May (only available in Spanish), the mechanism will be effective from 14 June 2022 onwards – after receiving the European Commission's approval on 8 June – and will remain in place until 31 May 2023.

3 Combined cycle, cogeneration and coal-fired power plants. Only cogeneration power plants that do not fall under the specific remuneration framework are included. For more details, see *Royal Decree-Law 10/2022* of 13 May 2022 (only available in Spanish).

4 The MIBGAS gas price refers to the "average weighted price of all natural gas trades in daily products with delivery on the following day at the virtual balancing point". Additionally, this difference is divided by 0.55 (i.e. the reference value to estimate the thermal efficiency of combined cycle power plants, meaning that 1.8 MWh of gas is needed to generate 1 MWh of electricity).

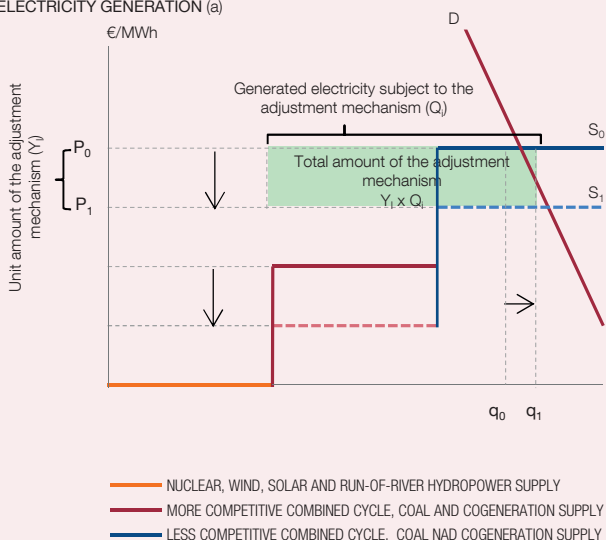
5 This exercise assumes an increase in exports to France of 1.2 TWh per month, which is the difference between the average monthly maximum export capacity to France (1.7 TWh) and average monthly exports (0.5 TWh) in 2021. In other words, since, once the measure comes into effect, the price will be lower in Spain, it is assumed that the maximum available capacity will be exported.

6 While it is possible that demand in mainland Spain will increase slightly compared with last year owing to the price drop induced by the measure, this effect is not considered in this exercise.

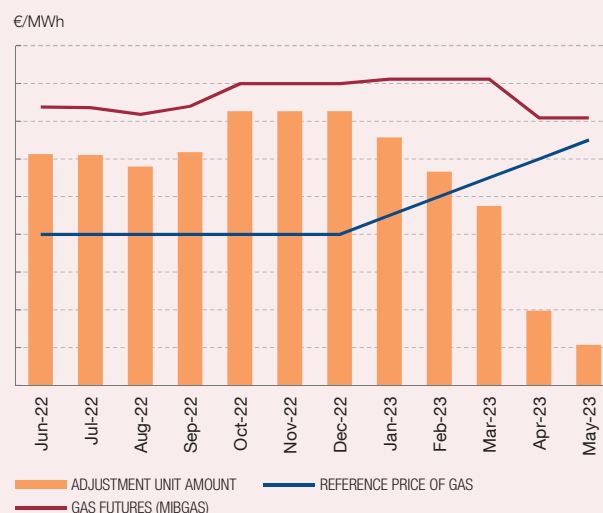
7 According to the National Commission on Markets and Competition (CNMC), at 31 October 2021 41% of electricity was sold at a variable price. Assuming a 4.9 pp monthly increase from April 2022 onwards would result in this proportion reaching 46% of the electricity sold in June 2022 (the 4.9 pp monthly increase stems from the assumption that approximately one-twelfth of fixed-price contracts are updated each month). See CNMC (2022), *Informe de supervisión de los mercados minoristas de gas y electricidad. Año 2020 y avance sobre la situación de crisis energética actual*.

**IMPACT ON INFLATION OF THE MECHANISM TO CAP GAS PRICES ON THE IBERIAN MARKET (cont'd)**

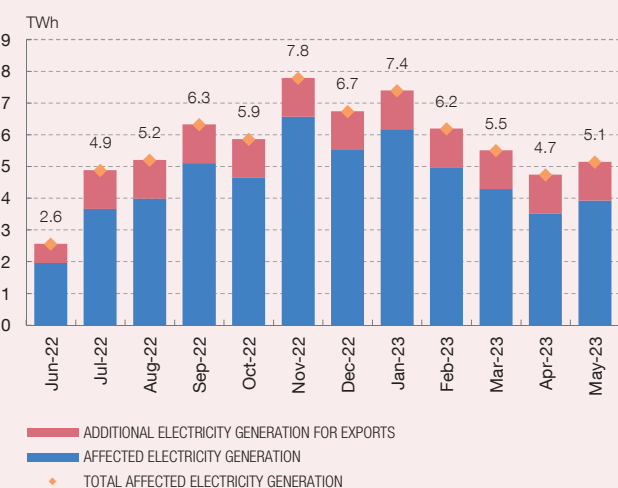
**Chart 1**  
EXAMPLE OF THE REDUCTION IN THE SUPPLY PRICE AND THE ADJUSTMENT MECHANISM'S TOTAL AMOUNT OWING TO THE PRICE CAP ON GAS FOR ELECTRICITY GENERATION (a)



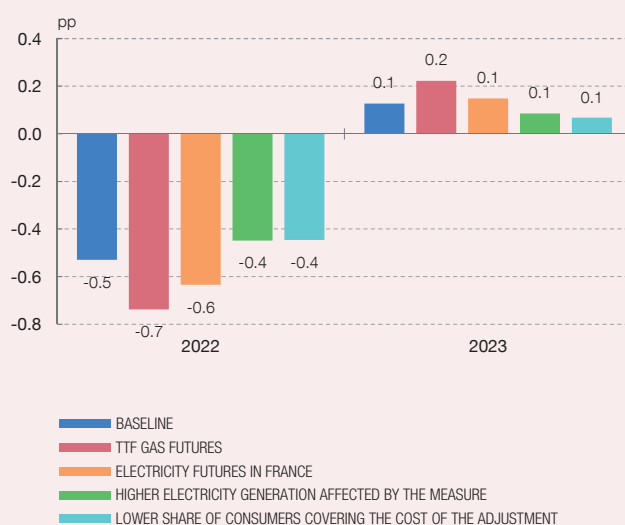
**Chart 2**  
GAS FUTURES, REFERENCE PRICE OF GAS FOR THE ADJUSTMENT MECHANISM AND ESTIMATED UNIT AMOUNT OF THE ADJUSTMENT MECHANISM



**Chart 3**  
ELECTRICITY GENERATION ASSUMPTIONS FOR THE TECHNOLOGIES SUBJECT TO THE ADJUSTMENT MECHANISM (b)



**Chart 4**  
ESTIMATED IMPACT OF THE GAS PRICE CAP ON HEADLINE INFLATION IN 2022 AND 2023 (c)



**SOURCES:** OMIE, Red Eléctrica de España, MIBGAS and Banco de España.

- a For the sake of simplicity, electricity supplied by storage hydropower facilities, whose supply price is similar to that of the less competitive combined cycle, coal and cogeneration plants, is excluded from the example.
- b It is assumed that the electricity generated in each month equals that generated in the same month of the previous year. Only half of the electricity generated in June is considered.
- c The baseline scenario refers to the most likely scenario described in the main text. The scenario "TTF gas futures" considers the path of the Dutch TTF gas futures rather than the MIBGAS futures; the scenario "electricity futures in France" considers that the price difference between the Spanish and French markets is that between the expected price in Spain taking into account the adjustment mechanism and the price signalled by electricity futures in France, instead of the unit amount of the adjustment mechanism; the scenario "higher electricity generation affected by the measure" assumes 20% more electricity will be generated in combined cycle, cogeneration and coal power plants than in the baseline scenario; the scenario "lower share of consumers covering the cost of the adjustment" considers that in June the percentage of energy demand covering the cost of the adjustment is 35%, rather than the 46% assumed in the baseline scenario.

**IMPACT ON INFLATION OF THE MECHANISM TO CAP GAS PRICES ON THE IBERIAN MARKET (cont'd)**

mechanism's unit amount, which would generate additional income of around €300 million from increased electricity exports to France through "congestion income",<sup>8</sup> which would be used to cover the cost of the mechanism.

Under these assumptions, the mechanism to cap the price of gas on the Iberian market would reduce wholesale electricity prices by around 30% on average over the next 11 and a half months. As a result, the regulated rate for small consumers would decrease by 17%,<sup>9</sup> after taking into account the additional charge to fund the total costs of the mechanism. This would result in the HICP electricity component declining by 13 pp on average in 2022. Thus, bearing in mind that electricity accounts for around 4% of the HICP basket, the mechanism would subtract approximately 0.5 pp from the average inflation rate for 2022 (see Chart 4). As regards the impact on inflation in 2023, although the retail consumer bill would be lower than in the absence of this mechanism, its effect on the average inflation rate for 2023 can be expected to be slightly positive (of around 0.1 pp). This is because the impact of the measure will wane over 2023 H1 (given the rising profile of the reference price of gas) and because in 2023 H2 electricity prices will be compared with lower price levels in the same period of 2022, thanks to the implemented measure.<sup>10</sup>

In any event, the great uncertainty as to future changes in the different variables incorporated into the baseline

scenario makes it advisable to complement this point estimate with some sensitivity analyses. First, the possibility of gas prices rising higher is considered, based on Dutch TTF futures rather than on MIBGAS futures. Under this assumption, the impact of the mechanism on average inflation would be -0.7 pp in 2022 (see Chart 4). Second, a greater price differential between Spain and France is assumed, considering the price signalled by electricity futures in France. This assumption would entail congestion income of more than €2 billion, compared to the €300 million envisaged in the baseline scenario, which would therefore cover a higher percentage of the mechanism's total costs. This would reduce the burden on consumers' bills and the impact on average inflation in 2022 would stand at around -0.6 pp. Lastly, two additional sensitivity exercises are considered which would result in a weaker impact of the mechanism on the average inflation rate for 2022. First, it is envisaged that the generated electricity affected by the measure will be 20% higher than that assumed in the baseline scenario (for instance, due to lower renewable generation). In this case, the estimated impact would stand at around -0.4 pp in 2022. Second, the possibility that the percentage of Spanish mainland demand (i.e. the consumers) that would have to cover the costs of the mechanism from June onwards would be 35% (instead of the 46% considered in the baseline scenario) is taken into account. In this case, the impact of the mechanism on average inflation in 2022 would also be -0.4 pp.

8 As indicated above, monthly exports of 1.7 TWh are assumed, which would mean that interconnections are operating at maximum capacity. This entails the payment of congestion income, which is calculated by multiplying the electricity exported (or imported) in each hour of system saturation by the price difference between the two markets. This income is split equally between the two countries. See [CNMC Resolution of 6 May 2021](#) (only available in Spanish). Spain's congestion income has been estimated at €525 million over the next 11 and a half months. However, only additional congestion income should be taken into account, i.e. the congestion income amount for the same months of the previous year should be subtracted (some €250 million, which also include congestion income received by Spain owing to imports from France).

9 The impact has been estimated based on a standard bill with an annual consumption of 3.49 MWh and an authorised service capacity of 4.5 kW.

10 However, it should be mentioned that the impact of the measure in 2023 is shrouded in even greater uncertainty due to the Government's commitment, set out in [Royal Decree-Law 10/2022](#) of 13 May 2022, to establish a new regulated rate starting in early 2023, which will have a direct impact on the HICP electricity component.