Box 1

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

This box describes the key features of the most recent update to the Banco de España's macroeconomic projections for the Spanish economy. Under the assumptions of the exercise, Spanish GDP is projected to grow by 4.5%, 1.4% and 2.9% in 2022, 2023 and 2024, respectively (see Table 1).[1] Headline inflation is projected to decelerate from 8.7% in 2022 to 5.6% in 2023 and 1.9% in 2024, and underlying inflation from 3.9% this year to 3.5% next year and 2.1% in 2024. The cut-off date for the projections is 30 September 2022.[2]

### Activity

In 2022 Q2, GDP grew by 1.5%, 1.1 pp more than anticipated under the baseline scenario of the June projections,[3] partly reflecting strong tourism exports. This demand component was boosted by the lifting of the pandemic restrictions, a factor that more than offset the adverse impact on economic activity arising from the Russian invasion of Ukraine. The latest QNA data also reflect revised growth rates for previous quarters and, in particular, for 2022 Q1, the rate now estimated being 0.4 pp lower. Overall, in terms of their impact on average GDP growth in 2022, these data amount to a somewhat more favourable starting point for activity in the current projection exercise than was anticipated in June.

Following the pick-up in activity in Q2, various developments, exacerbated by the war in Ukraine, had a negative impact on economic activity during the summer and have darkened the global economic outlook for the coming quarters. In particular, the rise in geopolitical uncertainty and the recent deepening of the energy crisis in Europe, as a consequence of the interruptions to supplies from Russia, have had global consequences, weighing on economic growth and increasing inflationary pressures. All this has affected the spending decisions of private agents in Spain and other countries, by knocking their confidence and exacerbating the loss of real income they were already experiencing. Moreover, the persistent pronounced upside surprises in consumer price growth have led to monetary policy tightening worldwide. In the specific case of the ECB, this has taken the form of a cumulative interest rate hike of 125 bp since June, so that financial conditions in the euro area are now less accommodative.

Table 1
Macroeconomic projections for the Spanish economy (a)

Annual rates of change (%)

| | GDP | | | | 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 |
| October 2022 | 5.5 | 4.5 | 1.4 | 2.9 | 3.0 | 8.7 | 5.6 | 1.9 | 0.6 | 3.9 | 3.5 | 2.1 | 14.8 | 12.8 | 12.9 | 12.4 |
| 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 |

**SOURCES:** Banco de España and INE.
NOTE: Latest QNA figure published: 2022 Q2.

**a** Projections cut-off date: 30 September 2022.
**b** Annual average.

1 Compared with the projections published on 10 June, the current projections incorporate the new information that has become available since then. In particular, this includes, first, the latest Annual National Accounts estimates (the first estimate for 2021 and the revised figures for 2019 and 2020). According to this source of information, GDP growth in 2021 was 5.5% (0.4 pp higher than estimated on the available QNA data), while the fall in GDP in 2020 was 11.3% (0.5 pp more than had been estimated previously). Second, the 2022 Q2 data from the Quarterly National Accounts (QNA) and the Quarterly Non-Financial Accounts of the Institutional Sectors (QNFAIS) are also incorporated. Finally, the current projections take into account the changes in the technical assumptions underlying developments in the different key variables in the exercise (see Table 2).

2 With the exception of the assumptions regarding export market developments, which are taken from the *September ECB staff macroeconomic projections for the euro area,* with cut-off date of 23 August.

3 See Macroeconomic projections for the Spanish economy (2022-2024).

Box 1
## MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024) (cont'd)

These developments have been reflected in the latest monthly indicators for the Spanish economy, which point to a slowdown in activity in Q3. Thus, social security registrations show that job creation, albeit continuing in this period, slowed significantly. Furthermore, firms' turnover also slowed, according to the Banco de España Business Activity Survey (EBAE).[4] However, there appears to have been significant cross-sector heterogeneity in activity developments, according to the results of the EBAE. In particular, sectors that have benefited most from the end of the pandemic restrictions, such as hospitality and leisure, posted higher turnover in Q3.

In short, subject to the caveats arising from the fact that the quantitative information available for August and September is still incomplete, quarter-on-quarter GDP growth in Q3 is estimated at 0.1%. In terms of the demand components, the loss of momentum in private consumption – implied by the weakness of the latest data for indicators such as retail sales and private vehicle registrations – stands out, against a background in which, according to the European Commission indicator, consumer confidence reached its lowest level since 2013.

A crucial assumption underpinning the projections are the gas and electricity price trajectories. In the present context, with such high levels of uncertainty, Iberian Gas Market (MIBGAS) futures prices are assumed to be the most likely scenario for the future developments in gas

Table 2
International environment and monetary and financial conditions (a)

Annual rates of change (%), unless otherwise indicated

| | | October 2022 projections | | | Difference between the current projections and the June 2022 projections (b) | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | 2023 | 2024 | 2022 | 2023 | 2024 |
| Spain's export markets (c) | 9.8 | 6.3 | 2.6 | 3.2 | 1.8 | -0.4 | -0.2 |
| Oil price in dollars/barrel (level) | 71.1 | 102.9 | 79.5 | 74.2 | -3.0 | -13.9 | -10.1 |
| Monetary and financial conditions | | | | | | | |
| Dollar/euro exchange rate (level) | 1.18 | 1.04 | 0.98 | 0.98 | -0.03 | -0.07 | -0.07 |
| Nominal effective exchange rate against non-euro area countries (d) (2000 = 100) | 120.7 | 111.3 | 107.3 | 107.3 | -1.8 | -4.6 | -4.6 |
| Short-term interest rates (3-month EURIBOR; level) (e) | -0.5 | 0.3 | 2.9 | 3.0 | 0.4 | 1.6 | 1.4 |
| Long-term interest rates (10-year Spanish government bond level; level) (e) | 0.3 | 2.2 | 3.4 | 3.6 | 0.4 | 1.0 | 1.0 |

**SOURCES:** ECB and Banco de España.

a Cut-off date for assumptions: 23 August 2022 for Spain's export markets and 30 September 2022 for all other variables. Figures expressed as levels are annual averages; 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, the dollar/euro exchange rate and 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 *September 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.

4 See M. Izquierdo (2022), "Encuesta a las empresas españolas sobre la evolución de su actividad: tercer trimestre de 2022", Notas Económicas, *Boletín Económico* 3/2022, Banco de España.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

prices.[5] In particular, the prices on these markets can be expected to reflect all the relevant information regarding the most likely future scenario for the geographical diversification of European gas imports (to replace Russian gas with supplies from other producer countries), the substitution of other energy sources for gas and energy-saving measures. Gas prices on futures markets should also reflect to some extent the most likely scenario for how quickly the impact of the current uncertainty on agents' spending decisions will dissipate.

Over the next few quarters, high gas and electricity prices will adversely affect economic activity. However, the high gas prices themselves, coupled with the measures adopted at European level to reduce gas use, will dampen demand for this commodity. This should avoid the need for severe gas rationing, even if Russian gas supplies to the European Union were cut off completely.

Activity will recover momentum from spring, fuelled by a combination of factors. These include an easing of the ongoing energy market tensions – bringing with it a progressive recovery in agents' real income, confidence improvements and a strengthening of external demand –, the gradual abatement of the persisting supply chain disruptions and a larger deployment of Next Generation EU (NGEU) funds.[6] Inbound tourism flows, which have now virtually recovered pre-health crisis levels, will also underpin activity, although in the near term their momentum will be tempered by the effects of higher inflation on the real income of potential tourists.

In annual average terms, GDP growth of 4.5% is projected for 2022 (see Table 1 and Chart 1). Given the significant slowdown in economic activity expected in the second half of the year, this output growth essentially reflects the activity improvements that had already materialised by

Chart 1
GDP growth and contributions of main components

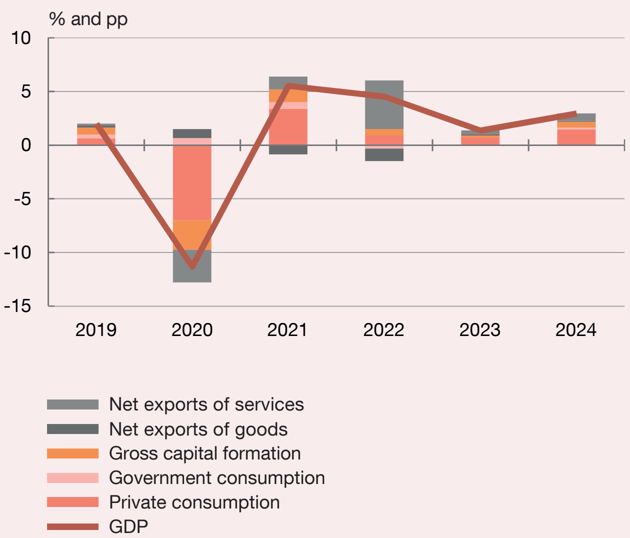
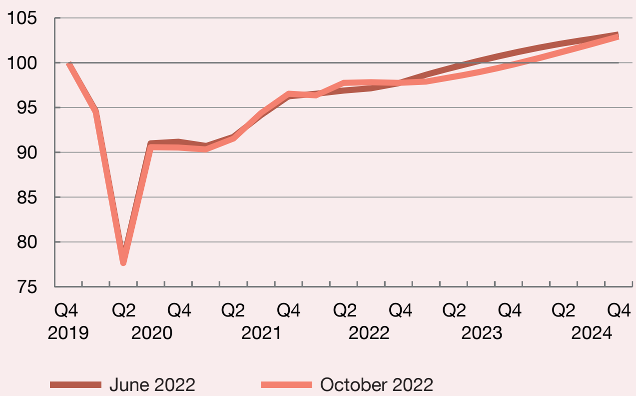



Chart 2
Real GDP. Level (2019 Q4 = 100)




**SOURCES:** INE and Banco de España.

5 Specifically, gas prices on futures markets are taken up to the one-year term. Thereafter, prices are considered not very representative, owing to limited market liquidity, and therefore it has been decided to keep the price of this commodity constant at the futures price for October 2023 until the end of the projection horizon. The electricity price trajectory, meanwhile, is obtained from a formula that approximates the technical efficiency of electricity generation from gas with currently existing technology. Also, the cost of $CO_2$ emission allowances is included. The trajectory of this cost is assumed to coincide with that used by the ECB staff in the September ECB staff macroeconomic projections for the euro area. Finally, the calculation of the electricity price trajectory takes into account the mechanism to cap the price of gas until May 2023 and the reversal of the tax measures when the period they have been approved for expires.

6 The projects under the NGEU's Recovery and Resilience Facility are being implemented with something of a delay compared with the June projections, translating into a lower contribution to economic growth in the near term and a higher one towards the end of the projection horizon. See Annex 1.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

the end of Q2. In 2023, GDP growth will moderate very significantly to 1.4% as a result of weak activity levels in 2022 H2 and in 2023 Q1. Lower output growth in the final stretch of one year considerably curbs the average growth rate in the following year through carry-over effects. Meanwhile, the economic improvement from spring 2023 will progressively intensify, paving the way for GDP growth of 2.9% in 2024. The return to pre-pandemic output levels will probably be delayed until 2024 Q1 (see Chart 2), some two quarters later than projected in June.

As compared with those published in June, the current projections revise up GDP growth for 2022 by 0.4 pp (see Table 3). The latest QNA data, to Q2, which reflect a sharper overall increase in GDP than estimated in June, mean an automatic upward revision of 0.7 pp in the average growth rate for this year. However, that increase is undermined by the weaker activity growth now expected for H2. Meanwhile, the forecast growth for 2023 is 1.5 pp lower than projected in June. The factors behind this notable downward revision to growth for 2023 include higher projected inflation rates, less favourable financing conditions, the difficulties faced by firms in the sectors hardest hit by the deepening of the energy crisis, heightened uncertainty and the weakening of global demand.

## Prices and costs

The pace of consumer price growth, measured by the harmonised index of consumer prices (HICP), continued to surprise on the upside in the summer months. In July, this index reached a year-on-year rate of 10.8%, its highest level since 1984. Since then, the food, non-energy industrial goods and services components have continued to accelerate, meaning a growing proportion of components have been recording very high rates of inflation. In particular, the prices of leisure, hospitality and tourism services have risen sharply, linked to the notably robust demand that followed the lifting of virtually all of the pandemic restrictions. However, the rate of change in the

Table 3
Projections for the main macroeconomic aggregates of the Spanish economy (a)

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

| | | October 2022 projections | | | June 2022 projections | | |
|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | 2023 | 2024 | 2022 | 2023 | 2024 |
| GDP | 5.5 | 4.5 | 1.4 | 2.9 | 4.1 | 2.8 | 2.6 |
| Private consumption | 6.0 | 1.6 | 1.3 | 3.2 | 1.4 | 4.9 | 2.8 |
| Government consumption | 2.9 | -1.5 | 0.0 | 0.9 | -0.2 | 0.4 | 1.2 |
| Gross fixed capital formation | 0.9 | 4.7 | 1.7 | 2.6 | 6.5 | 2.1 | 2.4 |
| Exports of goods and services | 14.4 | 17.5 | 4.0 | 3.1 | 12.5 | 2.9 | 3.5 |
| Imports of goods and services | 13.9 | 8.2 | 3.1 | 2.4 | 7.0 | 4.0 | 3.1 |
| Domestic demand (contribution to growth) | 5.2 | 1.1 | 0.9 | 2.5 | 2.1 | 3.2 | 2.4 |
| Net external demand (contribution to growth) | 0.3 | 3.4 | 0.5 | 0.4 | 2.0 | -0.4 | 0.2 |
| Nominal GDP | 7.9 | 8.1 | 5.9 | 5.6 | 7.2 | 5.8 | 5.0 |
| GDP deflator | 2.3 | 3.5 | 4.5 | 2.6 | 2.9 | 2.9 | 2.4 |
| HICP | 3.0 | 8.7 | 5.6 | 1.9 | 7.2 | 2.6 | 1.8 |
| HICP excluding energy and food | 0.6 | 3.9 | 3.5 | 2.1 | 3.2 | 2.2 | 2.0 |
| Employment (hours) | 7.2 | 4.0 | 0.8 | 2.5 | 4.6 | 1.5 | 1.1 |
| Unemployment rate (% of labour force). Annual average | 14.8 | 12.8 | 12.9 | 12.4 | 13.0 | 12.8 | 12.7 |
| Net lending (+)/net borrowing (-) of the nation (% of GDP) | 1.9 | 2.6 | 2.7 | 3.4 | 3.1 | 3.2 | 3.0 |
| General government net lending (+)/net borrowing (-) (% of GDP) | -6.9 | -4.3 | -4.0 | -4.3 | -4.6 | -4.5 | -4.2 |
| General government debt (% of GDP) | 118.3 | 113.3 | 110.7 | 109.9 | 114.9 | 113.2 | 112.5 |

**SOURCES:** Banco de España and INE.
NOTE: Latest QNA figure published: 2022 Q2.

**a** Projections cut-off date: 30 September 2022.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

headline index has eased somewhat recently thanks to the decline in fuel prices.[7] Nonetheless, this deceleration has been less intense than envisaged in the June projections owing to the surge in gas prices, which persisted through to end-August and also affected electricity prices.

One factor that has reined in inflation developments are the very measures introduced by authorities to dampen the impact of these higher gas prices. Specifically, it is estimated that in August these measures helped to lower headline inflation by somewhat more than 2 pp, with approximately half of this effect owing to the cap on the price of gas used to produce electricity.

Over the projection horizon, headline HICP is expected to gradually ease from its current levels, largely due to the expected reduction in the pace of growth in the energy and food components (see Chart 3), which is consistent with the price trajectories of oil, gas and food commodities on the futures markets.

However, underlying inflation is not expected to decline from its current levels until next spring (see Chart 4), since, over the coming months, firms will finish off passing through the recent cost increases to their selling prices. The completion of this pass-through, coupled with the firming of the recent indications that the persistent global supply chain disruptions are fading away, should lead to a progressive moderation of underlying inflation. Thus, in average annual terms, underlying inflation will reach 3.9% this year and moderate to 3.5% in 2023 and 2.1% in 2024. Headline inflation, meanwhile, will ease from 8.7% in 2022 to 5.6% in 2023 and 1.9% in 2024.

These projections rest on two very important assumptions. First, the available evidence indicates that the prices of non-energy goods and services have responded to the current energy price shock more swiftly in the current inflationary episode than they have, on average, in the past. The projections therefore assume that the feed-through of higher energy costs to final selling prices is already at a relatively advanced stage. Second, the wage response to the upturn in inflation has, thus far, been moderate. Looking ahead, this response is expected to remain relatively constrained, so that a price-wage spiral will be avoided.

The recent surprises in price growth – largely explained by sharper increases in energy and food commodity prices

Chart 3
Contributions to HICP growth by component

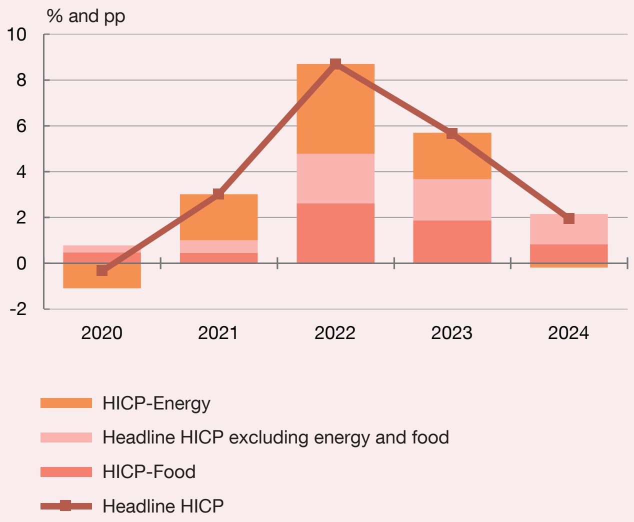
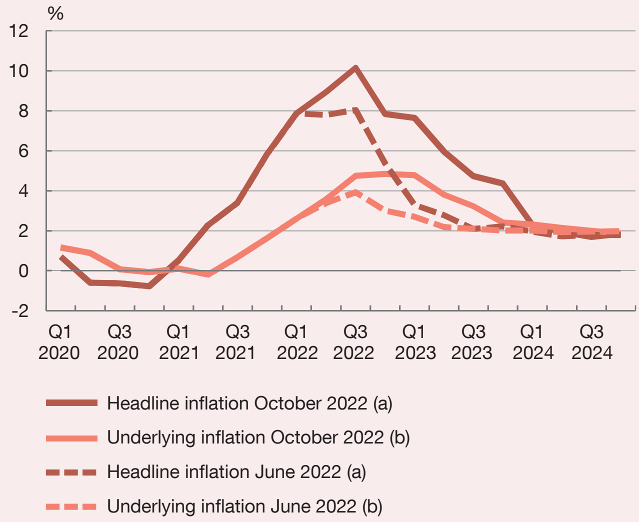



Chart 4
Headline and underlying inflation




**SOURCES:** Banco de España and INE.

**a** Measured by the HICP.
**b** Measured by the HICP excluding energy and food.

7 According to the flash estimate, HICP inflation stood at 9.3% in September.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

than expected in June, and by a faster feed-through of that price growth to the prices of other goods and services – mean a higher starting point than envisaged in the June projections. This new starting point, together with the new projected trajectories for energy prices and a lower euro exchange rate, implies persistently higher headline and underlying inflation rates than projected in June (see Table 1).

## Risks

The risks to these projections are tilted to the downside in the case of activity and to the upside in the case of inflation. In particular, the main risk derives from developments in the energy markets that could differ significantly from those envisaged in the baseline scenario. Such risks would in principle be concentrated in the gas market, and they could manifest themselves in prices (following a higher or lower trajectory than in the baseline scenario) and in volumes (greater supply problems than those considered or, conversely, a complete absence of restrictions on the use of gas).

In this respect, performing various sensitivity exercises is useful for assessing how certain significant changes in the baseline assumptions regarding natural gas market dynamics may affect growth and inflation.

First, in the case of gas price developments, two alternative paths to that envisaged in the baseline scenario are considered. In particular, under an adverse scenario, it is assumed that gas prices gradually increase from their current level, reaching their August 2022 peak in January 2023 and remaining at that level over the rest of the projection horizon (see Chart 5).

A benign scenario is also considered, which envisages lower gas prices from October 2022 than under the baseline scenario. Specifically, prices are assumed to decline on a linear basis to January 2024, whereupon they reach the level indicated by the futures markets for transactions for this time horizon, to hold steady at this level until December 2024.[8]

Second, as regards volumes, a single alternative scenario has been drawn up, which assumes that Europe's ability to replace Russian gas imports in the short term is limited and stands at the lower end of the range of elasticities of substitution considered in Quintana (2022).[9] Such limitations may owe to the difficulty in finding alternative

Chart 5
Gas prices

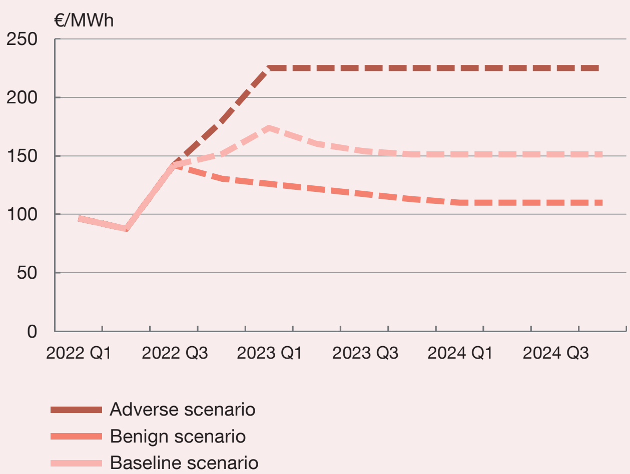
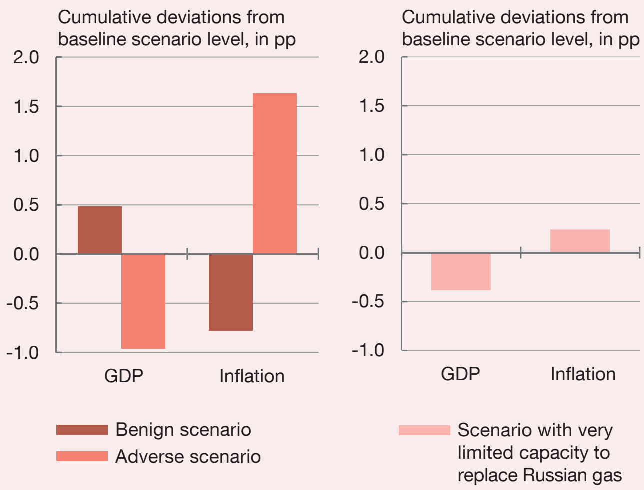



Chart 6
Cumulative impact on GDP and inflation in the period 2023-2024




**SOURCES:** MIBGAS and Banco de España.

8 As mentioned, the baseline scenario envisages that gas prices from November 2023 would remain constant at their October 2023 value on the futures markets. The reason for this assumption is that futures market liquidity is very low at horizons of over one year.

9 See J. Quintana (2022). "Economic consequences of a hypothetical suspension of Russia-EU trade", Analytical Articles, *Economic Bulletin* 2/2022, Banco de España.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

suppliers, gas not being easily replaceable by other energy sources, or demand being high ahead of an unusually cold winter. It should be noted that, under the baseline scenario, the elasticity of substitution is assumed to be at the upper end of this range (as a result of the preparatory work undertaken by many European countries in recent months to limit the economic impact of Russian gas supplies being cut off), reflecting a relatively moderate replacement capacity in the short term.

The simulations performed using the Quarterly Macroeconometric Model of the Banco de España suggest that, under the adverse price scenario, GDP in 2024 would be 1 pp lower than that envisaged in the current projections, while inflation would be 1.1 pp and 0.5 pp higher in 2023 and 2024, respectively (see left-hand panel of Chart 6). Conversely, the sharper correction in gas prices envisaged under the benign gas price scenario would lead to a greater reduction in inflation rates and stronger rates of growth in activity from 2023 than those projected under the baseline scenario. Lastly, under the scenario that assumes a limited capacity to replace Russian gas, activity in 2023-2024 would grow 0.4 pp less than under the baseline scenario, while inflation would be 0.2 pp higher (see right-hand panel of Chart 6).

The projections are also subject to other additional risks. A first source of uncertainty 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. In this respect, the force with which higher production costs have been passing through to final prices in recent months has increased the likelihood of significant second-round effects or price-wage spirals and, therefore, of an exacerbation of the inflationary process, with adverse ramifications for external competitiveness and for activity and employment. Further, the persistence of the current episode of high price growth increases the risks of a deanchoring of medium-term inflation expectations, which have risen, albeit modestly, in recent months.

Looking forward, the pace with which the investment projects under the NGEU programme filter through to the economy also represents a further source of uncertainty, following the delays that seem to have occurred in recent quarters. In addition, in the current setting of high uncertainty, a potential rise in precautionary saving – weighing down household spending and aggregate consumption – cannot be ruled out.

Lastly, the combination of the monetary normalisation process and the worsening economic outlook is translating into a tightening of financial conditions in the financial markets, which could lead to a potentially disruptive episode on these capital markets. In any event, the cumulative real income losses of firms and households, together with the higher interest rates projected, increase the vulnerability of those agents in a less sound economic and financial position. This could have a greater impact on their spending levels than that envisaged in the current projections.

## ANNEX 1
## Assumptions underlying the projections

As compared with the June projections, the main changes to the assumptions relate to energy prices (lower for oil, but significantly higher for gas), 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 2023 and, to a lesser extent, in 2024) (see Table 2).

In the fiscal policy arena, the new measures approved since the cut-off date for the June projections entail an increase in the general government budget deficit of 0.8 pp of GDP.[10] All these measures are temporary, except for the increase in defence spending of 0.1 pp of GDP. Overall, the temporary measures approved since the start of 2022 in relation to the rise in energy prices and the fall-out from the war are expected to amount to 1.3 pp of GDP. Nevertheless, as compared with the June projections, a sharper reduction in the budget deficit is expected this year, as, on the latest information available, the increase in tax revenue in the year as a whole will amply exceed the cost of the new measures.

For 2023 and 2024, it is estimated that the temporary taxes on the energy sector and on credit institutions and specialised lending institutions will lead to a transitory improvement in the budget balance of 0.3 pp of GDP in each year. In the absence of sufficient information, other assumptions made in the exercise include a rise in public sector wages in line with that expected in the private sector and a slight convergence of actual tax revenue towards the lower level that would be implied by its

10 The tax measures announced on 29 September have not been included, pending the specifics of the legislation and a subsequent detailed analysis.

Box 1
**MACROECONOMIC PROJECTIONS FOR THE SPANISH ECONOMY (2022-2024)** (cont'd)

historical relationship with the tax bases. For the other items, the projections are based on the usual technical assumptions (including the indexation of pensions to the CPI) and on the "no-policy-change" growth in the more discretionary items, entailing higher nominal increases than those projected in June owing to the upward revisions in the expected rate of change in the deflators. Lastly, the data available on the pace of NGEU implementation lead to estimated expenditure being revised down in 2022 and 2023 and slightly up in 2024.

As a result of the various temporary measures approved, the fiscal policy stance, measured by the change in the primary structural balance,[11] is expected to be moderately expansionary in 2022 and contractionary in 2023, after these measures have been withdrawn. In 2024, the increase in pensions (in line with the CPI for the prior year) above the economy's potential growth, together with a slight narrowing of the tax revenue gap, is expected to once again make for an expansionary fiscal policy stance.

11 Adjusted for EU payments and receipts, given that, although they affect the structural deficit, they have no impact on the fiscal policy stance in Spain, as they do not affect resident agents.