

MACROECONOMIC PROJECTIONS FOR SPAIN 2022-2024

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- 2. The Spanish economy's starting point
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KEY MESSAGES:

After the strong growth recorded in Q2 (1.5% quarter-on-quarter), the latest activity indicators point to a significant slowdown in GDP growth in Q3, to 0.1%

The global economic slowdown, the energy crisis, heightened inflationary pressures, tightening financial conditions, uncertainty and the fall in confidence will weigh on GDP growth in the coming quarters

Activity

Insofar as some of the above factors start to fade from spring 2023, Spanish economic activity will increasingly regain momentum

GDP growth is revised upwards in 2022, to 4.5% (essentially due to the Q2 surprise), but significantly downwards in 2023, to 1.4%. Recovery of the pre-pandemic level of output will probably be delayed until 2024 Q1, with the Spanish economy projected to grow by 2.9% in 2024 as a whole

KEY MESSAGES:

Inflation

In recent quarters, the repeated upside inflation surprises have been mainly due to higher-than-initially-expected growth in the prices of energy and food commodities...

...but also to a somewhat faster and stronger response by underlying inflation to energy shocks than in the past

Given these developments and the other factors shaping the macroeconomic scenario, price growth over the projection horizon is revised upwards, so that significantly higher and more persistent inflation rates are envisaged, specifically 8.7% in 2022, 5.6% in 2023 and 1.9% in

Risks

At the current juncture, this projections exercise is subject to an exceptional degree of uncertainty

The risks to these projections are tilted to the downside for activity and to the upside for inflation, especially as a result of the hypothetical adverse developments on energy markets

2024

GLOBAL CONTEXT: GLOBAL ECONOMIC ACTIVITY IS SLOWING...

Very high and persistent inflation globally

Normalisation/tightening of monetary policy worldwide

War in Ukraine

Slowdown in global economic activity

Growth revised downwards

Inflation revised upwards

The euro area especially affected by these revisions

Energy crisis in Europe

Growing <u>dispersion of</u> <u>analysts' forecasts</u>

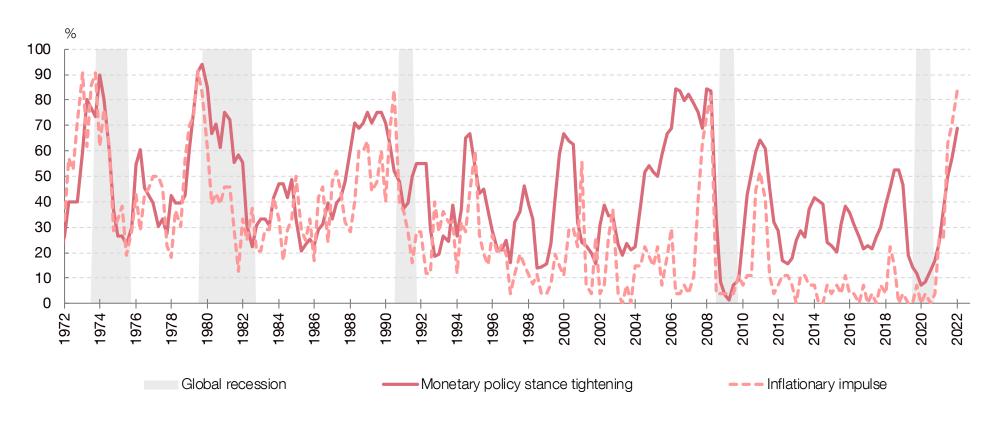
Falling confidence

Greater <u>volatility</u> on the financial markets

Euro depreciation

...PARTLY BECAUSE OF THE HIGH INFLATIONARY PRESSURES AND MONETARY POLICY TIGHTENING ACROSS A LARGE NUMBER OF COUNTRIES

PERCENTAGE OF COUNTRIES WITH INCREASES IN INFLATION AND POLICY INTEREST RATE HIKES (a)



Sources: National statistics, BIS, IMF and Refinitiv.

⁽a) Inflationary impulse shows the percentage of countries which each quarter simultaneously experience an inflation rate higher than that of the previous quarter and a level of inflation above their historical average (1984 Q1-2022 Q2). Monetary policy stance tightening shows the percentage of countries that are raising their interest rates each quarter. Global recession refers to periods in which growth in world GDP per capita is close to 0 or negative. For the purpose of these measures the number of geographical areas increases gradually to 28: Australia, Canada, Switzerland, Denmark, United Kingdom, Japan, South Korea, Norway, New Zealand, Sweden, United States and the euro area (advanced economies) and Brazil, China, India, Mexico, Malaysia, Poland, Russia, Saudi Arabia, Turkey, South Africa, Argentina, Chile, Colombia, Hungary, Indonesia and Peru (emerging market economies). The euro area data begin in 1999.

THE SPANISH ECONOMY'S STARTING POINT: BETTER THAN EXPECTED A FEW MONTHS AGO, DESPITE HIGH INFLATION

Q2 growth higher than expected and above the euro area rate

Positive <u>labour market</u> performance

Corporate vulnerability falling, except in certain sectors

Recovery still incomplete and uneven across demand components and sectors

Government receipts notably buoyant

Credit standards tightening

Inflation very high and broad based

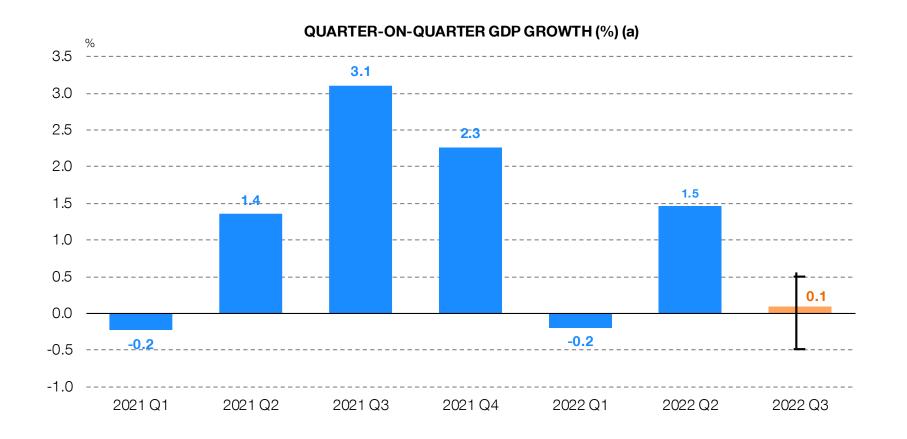
Manufacturing industry performing better than in Europe as a whole

Bank funding costs beginning to rise

ACTIVITY IN Q3: SIGNS OF SIGNIFICANT SLOWDOWN FROM THE PREVOUS QUARTER

Employment appears to be losing momentum Deterioration in confidence indicators Other consumption and activity indicators also weak The EBAE points to a decline in business turnover Insufficient demand as a <u>factor limiting industrial production</u> has risen slightly In contrast, the summer tourism season exceeded expectations

GDP GROWTH OF 0.1% IS PROJECTED FOR Q3, ALTHOUGH THIS FORECAST IS SUBJECT TO CONSIDERABLE UNCERTAINTY



Sources: INE and Banco de España.

a) The range of forecasts for Q3 represents the results of four models: Spain-Sting, DENSI, a sectoral model based on social security registrations data by sector and a linear regression model based on EBAE information.

MACROECONOMIC PROJECTIONS (2022-2024): BASELINE SCENARIO

Main elements/assumptions characterising the baseline scenario Inflation **GDP** Public finances

BASELINE SCENARIO:

MAIN ELEMENTS/ASSUMPTIONS CHARACTERISING THE BASELINE SCENARIO

With respect to the June exercise:

- Positive Q2 growth surprise
- Repeated upside inflation surprises
- Suspension of practically all Russian gas supplies to Europe via pipelines
- Higher interest rates
- Higher future energy costs
- Lower external demand
- Further Euro depreciation
- Smaller roll-out of NGEU programme in 2022 and 2023, but somewhat larger in 2024

Also:

- No severe gas rationing (moderate ability to substitute Russian gas in the near term)
- No further escalation of the war in Ukraine, but no early resolution of the conflict either, ...
- ... or of bottlenecks (very gradual improvement during 2023) ...
- ... or of the energy crisis (futures trajectory)
- No significant second-round effects
- Only with already approved economic policy measures and for the duration announced

Assumptions

PROJECTIONS SUMMARY

| | | | OCTOBER 2022 PROJECTIONS (a) | | | DIFFERENCE WITH THE JUNE PROJECTIONS | | |
|---|-------|-------|---------------------------------|-------|-------|--------------------------------------|------|------|
| Annual rates of change (%), unless otherwise indicated | 2020 | 2021 | 2022 | 2023 | 2024 | 2022 | 2023 | 2024 |
| GDP | -11.3 | 5.5 | 4.5 | 1.4 | 2.9 | 0.4 | -1.5 | 0.4 |
| Harmonised index of consumer prices (HICP) | -0.3 | 3.0 | 8.7 | 5.6 | 1.9 | 1.5 | 3.1 | 0.1 |
| HICP excluding energy and food | 0.5 | 0.6 | 3.9 | 3.5 | 2.1 | 0.7 | 1.3 | 0.1 |
| Unemployment rate (% of labour force). Annual average | 15.5 | 14.8 | 12.8 | 12.9 | 12.4 | -0.2 | 0.2 | -0.3 |
| General government net lending (+) / net borrowing (-) (% of GDP) | -10.1 | -6.9 | -4.3 | -4.0 | -4.3 | 0.3 | 0.5 | 0.0 |
| General government debt (% of GDP) | 120.4 | 118.3 | 113.3 | 110.7 | 109.9 | -1.6 | -2.5 | -2.6 |

Sources: INE and Banco de España.



a) Projections cut-off date: 30 September 2022. The differences with the June projections are calculated taking the figures to two decimal places.

INFLATION

What are the reasons for the inflation forecasting errors in recent quarters?

What are the indirect effects of rising commodity prices?

What are firms' expectations regarding the persistence of current inflationary pressures?

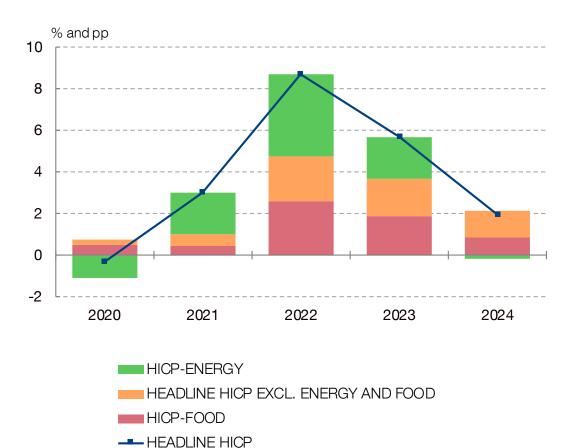
Collective bargaining developments

Behaviour of profit margins

Effect of <u>measures implemented</u> by the authorities

SUMMARY OF THE INFLATION FORECASTS

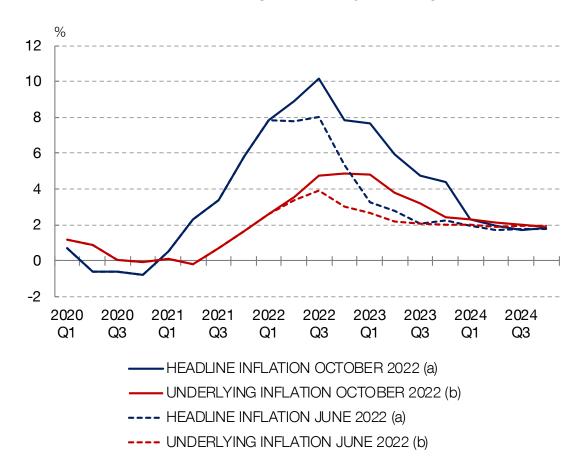
CONTRIBUTIONS TO HICP GROWTH BY COMPONENT



Sources: INE and Banco de España.

- (a) Measured using the HICP.
- (b) Measured using the HICP excluding energy and food.

HEADLINE AND UNDERLYING INFLATION



Q2 growth surprise:

the average growth rate for 2022 is therefore revised upwards by 0.7 pp

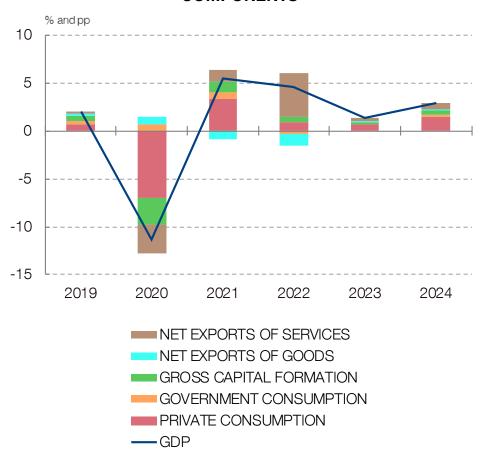
The pace at which NGEU funds are filtering through to the economy is revised down

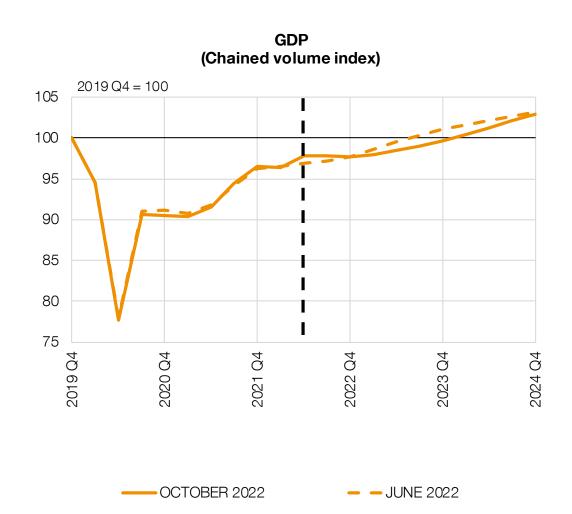
<u>Private consumption</u> over the coming quarters is revised down, penalised, above all, by deteriorating confidence, the drop in real income and tightening financing conditions

For these same reasons, and on account of the worse economic outlook, <u>private investment</u> over the coming quarters is also revised down

SUMMARY OF THE GROWTH FORECASTS

GDP GROWTH AND CONTRIBUTIONS OF THE MAIN COMPONENTS





Sources: INE and Banco de España.

PUBLIC FINANCES

Budget balance

The balance continues to improve, due to the strength of government receipts...

...and despite the adverse impact in 2022 (positive in 2023) of the measures announced in relation to soaring energy prices and the fallout from the war

Government debt-to-GDP ratio

Revised down over the projection horizon, due mainly to the increase in nominal GDP and the improvement in the primary balance

MACROECONOMIC PROJECTIONS FOR 2022-2024: MAIN RISKS

The projections are subject to an extraordinary level of uncertainty

The risks to the projections are tilted to the downside for activity and to the upside for inflation

Energy market developments (prices and/or quantities)

Scale of the second-round effects on inflation

Implementation and impact of NGEU

Saving/consumption developments

Behaviour of global and European economic activity

Capital market dynamics and financial vulnerability of firms and households

Main risks

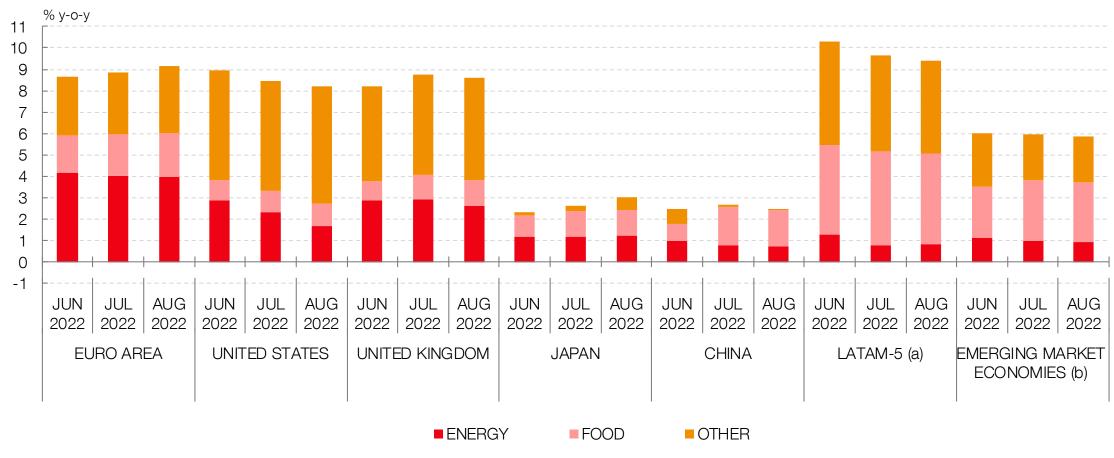


THANK YOU FOR YOUR ATTENTION



PARTICULARLY HIGH AND PERSISTENT INFLATION DYNAMICS WORLDWIDE

RECENT CHANGES IN INFLATION RATES AND CONTRIBUTIONS, BY GEOGRAPHICAL AREA



Sources: National statistics.

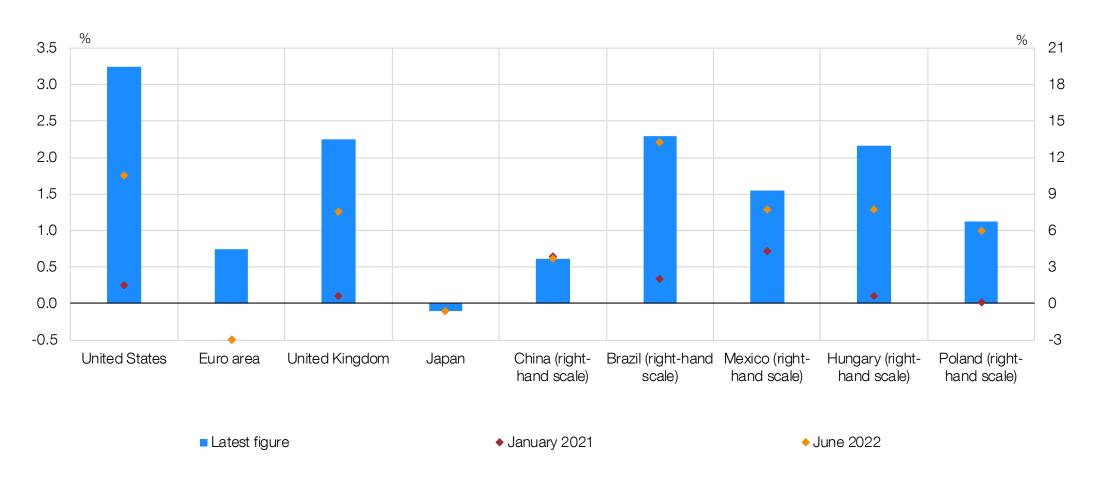


⁽a) "LATAM-5" comprises Brazil, Chile, Colombia, Mexico and Peru.

⁽b) "Emerging market economies" comprises four geographical areas: China, Asia (excluding China), LATAM-5 and Eastern Europe.

NORMALISATION/TIGHTENING OF MONETARY POLICY GLOBALLY

POLICY INTEREST RATES

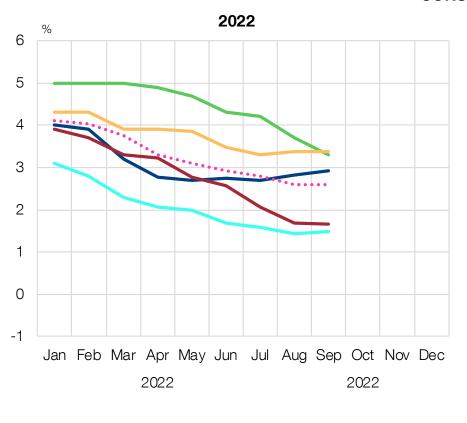


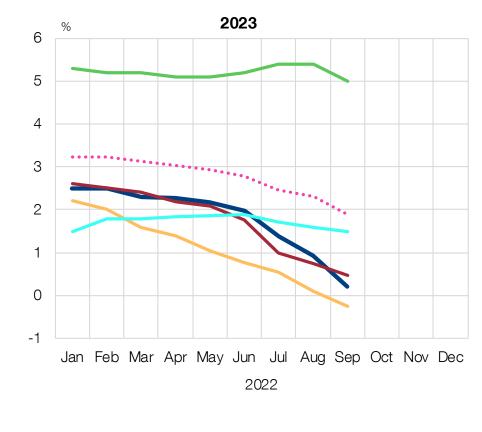
Sources: National Central Banks.



GROWTH REVISED DOWN

GDP GROWTH FORECASTS CONSENSUS FORECASTS





Source: Consensus Economics.

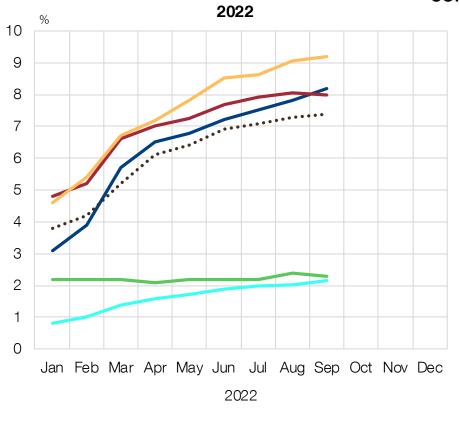


INFLATION REVISED UP

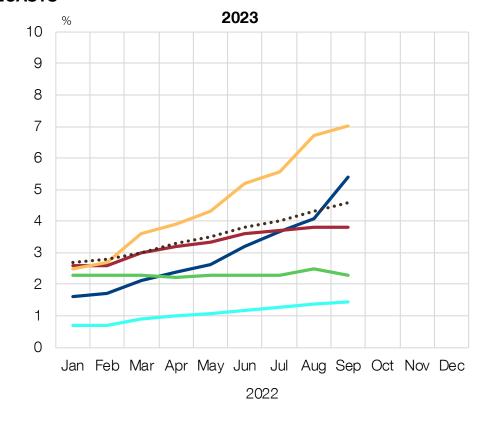
INFLATION FORECASTS CONSENSUS FORECASTS

-----CHINA

-UNITED KINGDOM



— UNITED STATES



JAPAN

····· WORLD

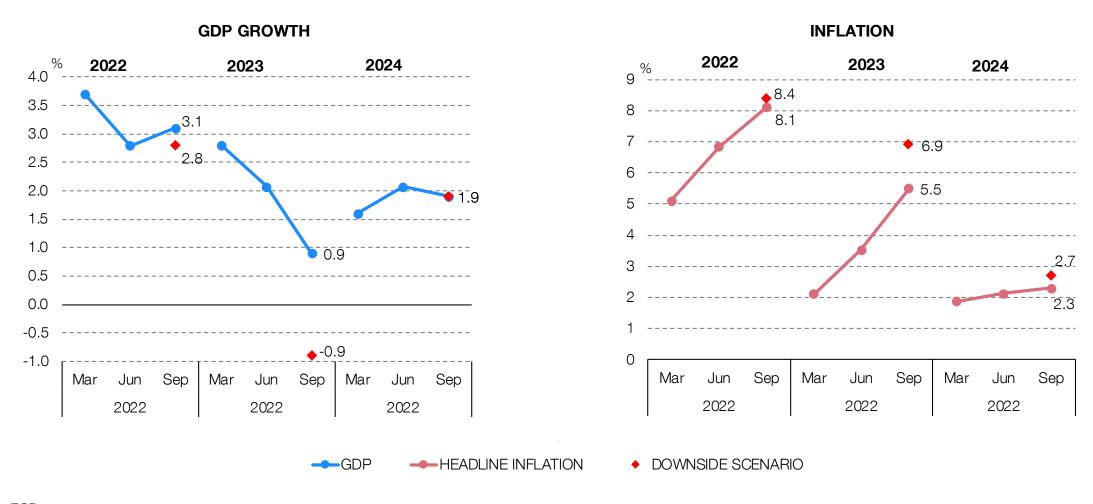
Source: Consensus Economics.



——EURO AREA

THE EURO AREA IS PARTICULARLY AFFECTED BY THE REVISED GROWTH AND INFLATION OUTLOOK

ECB AND EUROSYSTEM STAFF MACROECONOMIC PROJECTIONS FOR THE EURO AREA

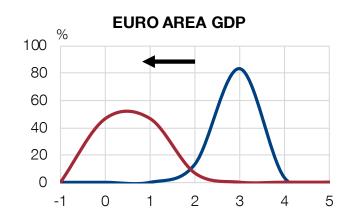


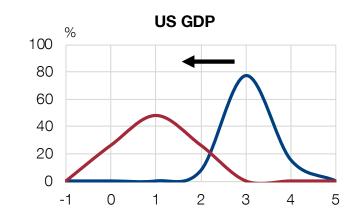
Source: ECB.

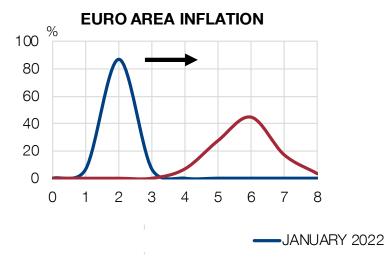


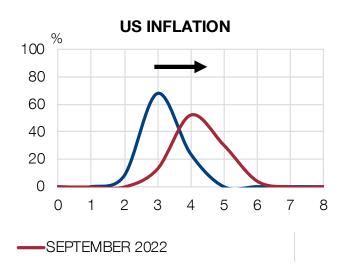
THE DISPERSION OF ANALYSTS' FORECASTS IS WIDENING

PROBABILITY DISTRIBUTION OF THE CONSENSUS FORECASTS FOR 2023





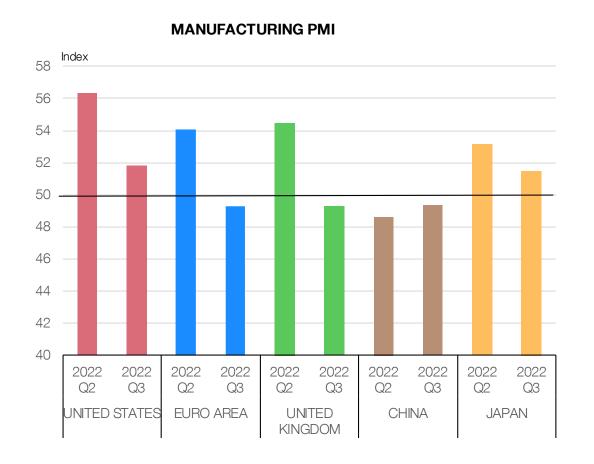


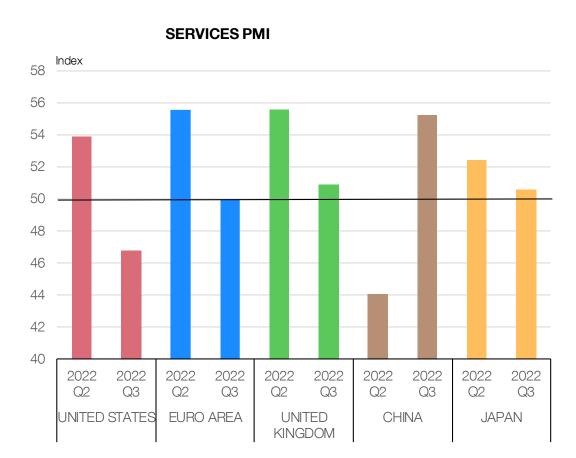


Source: Consensus Economics.



CONFIDENCE IS FALLING





Source: S&P Global.

Note: China's Services PMI for Q3 refers to the July and August average; for the remainder the September flash estimate is used.



GREATER VOLATILITY ON FINANCIAL MARKETS



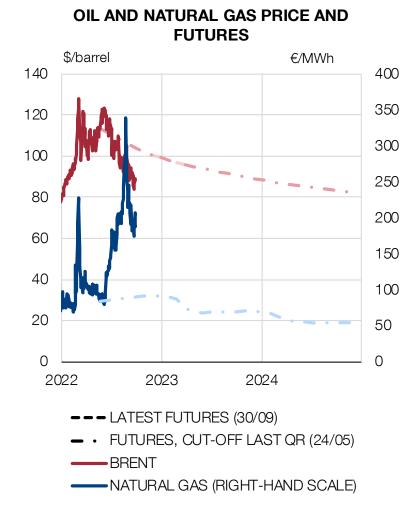
TEN-YEAR SOVEREIGN DEBT YIELDS

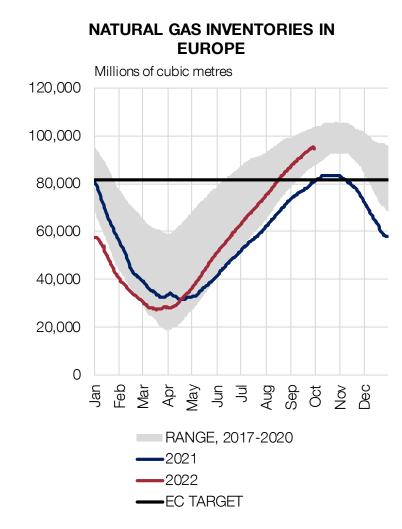


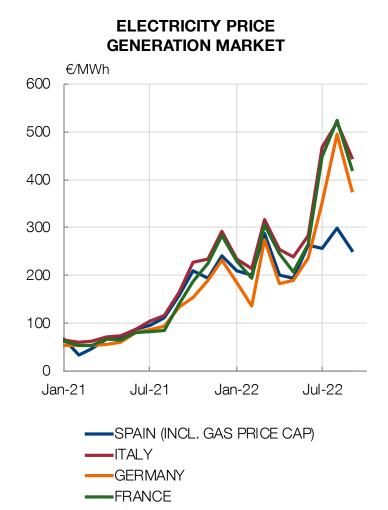
Source: Refinitiv Datastream.



ENERGY CRISIS IN EUROPE







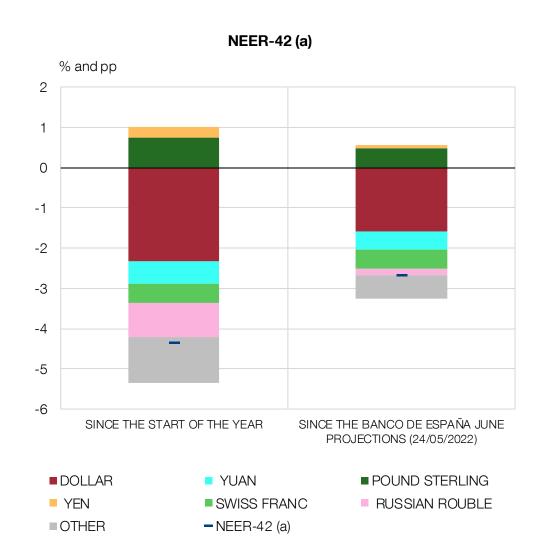
Sources: Refinitiv, International Energy Agency, Bloomberg and ENTSOG.



DEPRECIATION OF THE EURO

EURO EXCHANGE RATE IN 2022



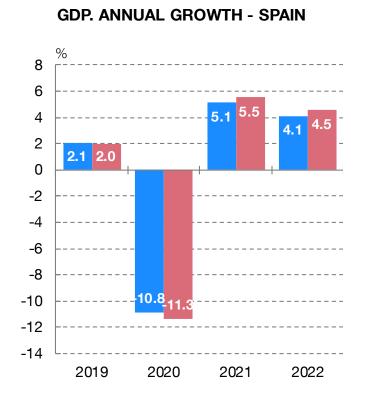


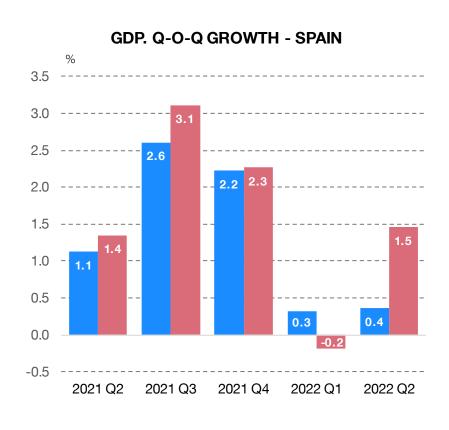
Source: ECB. Latest observation: 27/09/2022.

(a) Nominal effective exchange rate of the euro against 42 trading partners, according to the breakdown of the euro area's foreign trade.



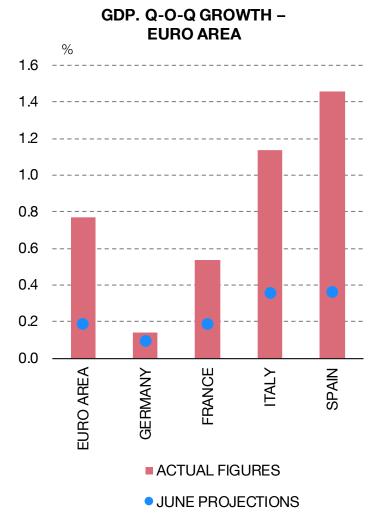
GROWTH IN Q2 WAS HIGHER THAN EXPECTED AND ABOVE THAT OF THE EURO AREA











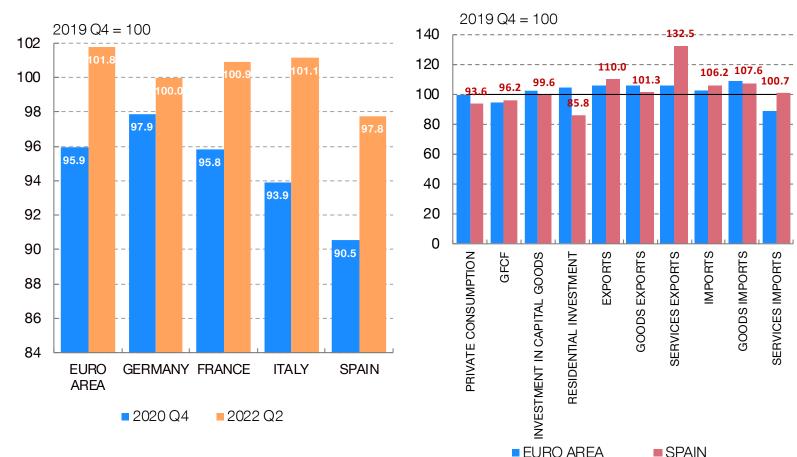
Sources: INE, Eurostat, ECB and Banco de España.



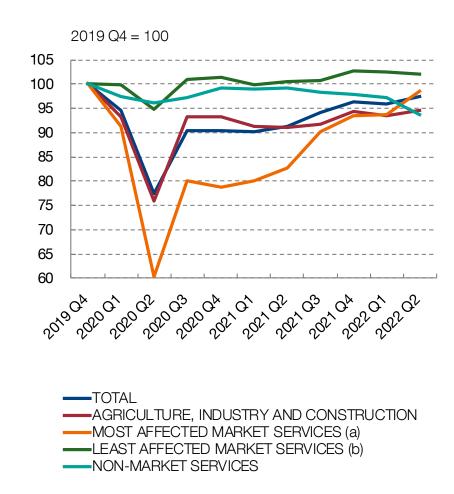
THE RECOVERY REMAINS INCOMPLETE AND UNEVEN ACROSS DEMAND COMPONENTS AND SECTORS

RETURN TO PRE-PANDEMIC LEVELS

RETURN OF GDP TO PRE-PANDEMIC LEVELS



GROSS VALUE ADDED, BY SECTOR



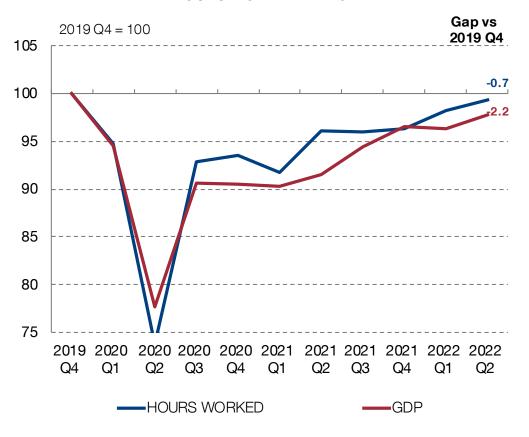
Sources: INE, Eurostat and Banco de España.

- a) Trade, transportation and hospitality, professional, scientific and administrative activities and arts and recreation services.
- b) Information and communication, financial and insurance activities and real estate activities.

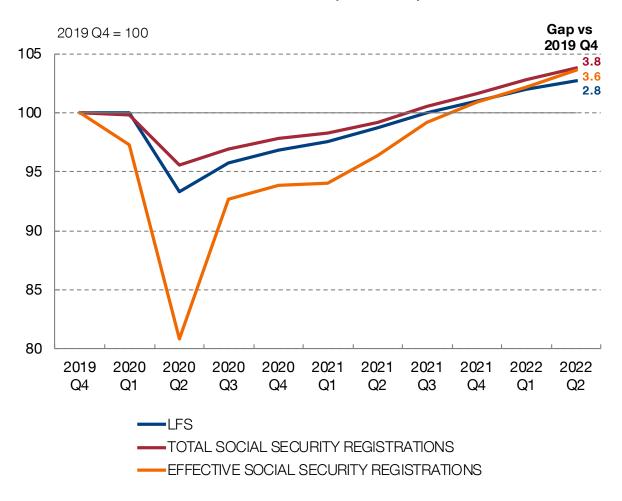


POSITIVE LABOUR MARKET DEVELOPMENTS

HOURS WORKED AND GDP



EMPLOYMENT (PERSONS)

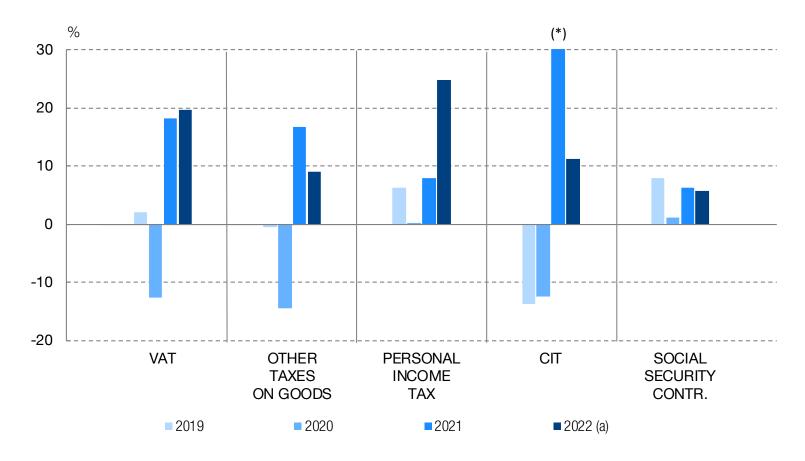


Sources: INE, Ministerio de Inclusión, Seguridad Social y Migraciones and Banco de España. Latest observation: 2022 Q2.



GENERAL GOVERNMENT RECEIPTS ARE NOTABLY BUOYANT

ANNUAL CHANGE IN GOVERNMENT RECEIPTS



Source: IGAE (National Audit Office).

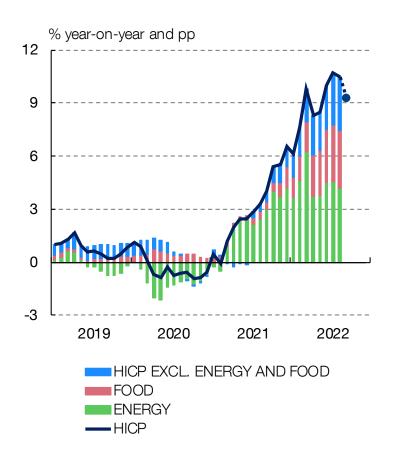


⁽a) Data from January to July 2022.

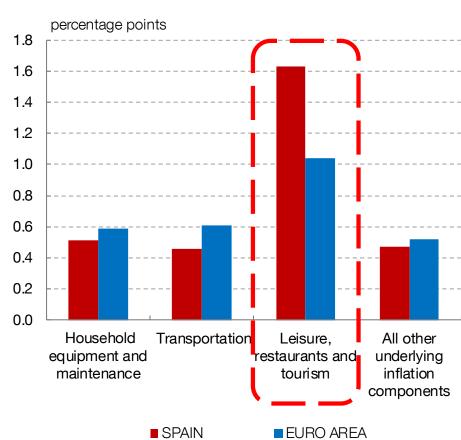
^(*) Growth of corporate income tax of 46.8% in 2021 not shown in the chart (10 pp of this increase is explained by the extraordinary income relating to corporate operations).

INFLATION IS HIGH AND WIDESPREAD

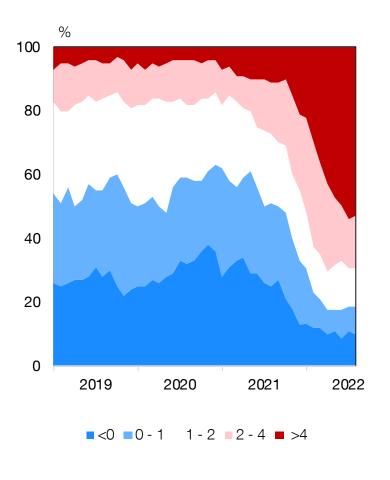
HEADLINE HICP. CONTRIBUTIONS



CONTRIBUTION TO HEADLINE INFLATION AUGUST 2022



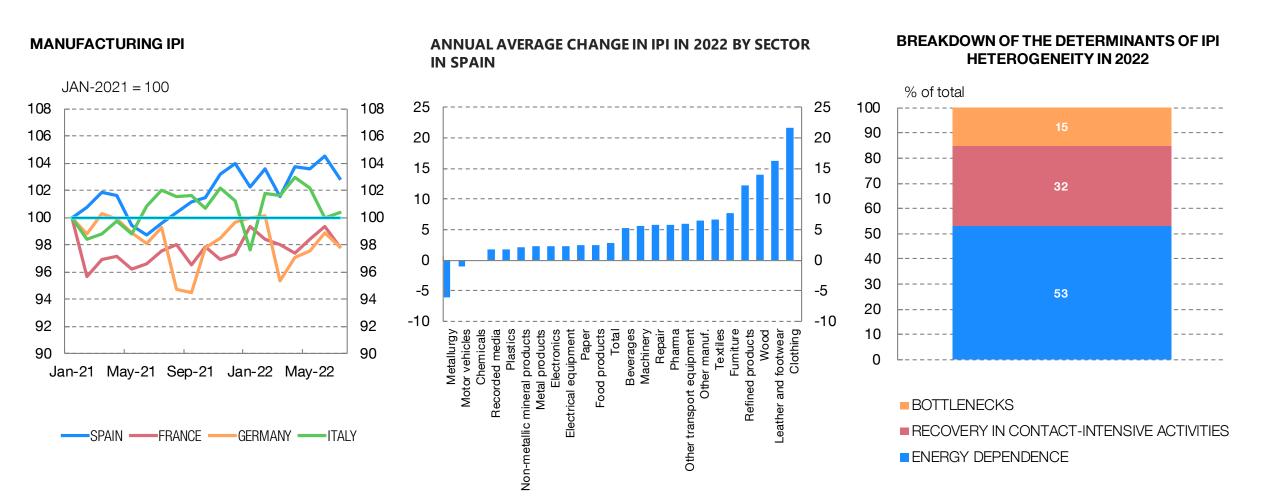
PERCENTAGE OF HICP CLASSES IN EACH GROWTH RANGE



Sources: INE, Eurostat and Banco de España.



THE MANUFACTURING SECTOR HAS FARED BETTER IN SPAIN THAN IN EUROPE



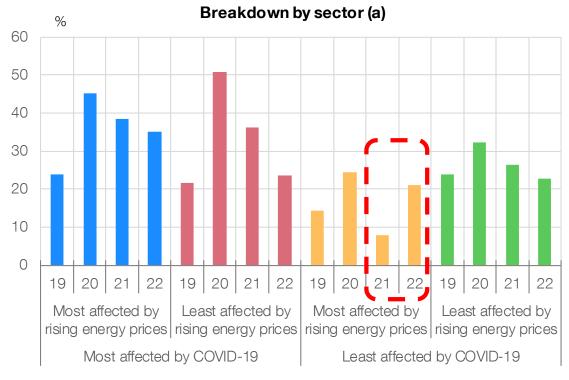
Sources: INE, Eurostat and Banco de España. Latest available data: July 2022.

MANUFACTURING IN SPAIN: RECENT DEVELOPMENTS, "Quarterly report on the Spanish economy", Economic Bulletin 3/2022, Banco de España.

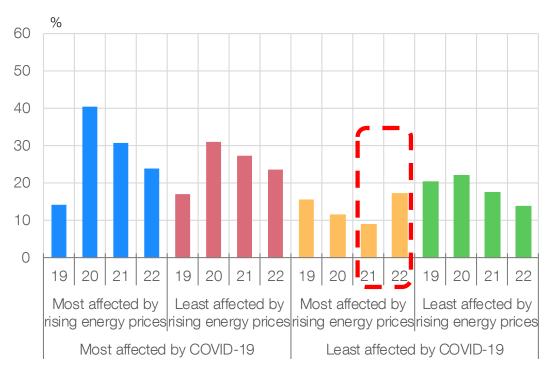


THE VULNERABILITY OF FIRMS IS DECREASING, EXCEPT IN SOME SECTORS

PERCENTAGE OF FIRMS WITH A NEGATIVE RETURN ON ASSETS. H1.



PERCENTAGE OF VULNERABLE FIRMS BASED ON RATIO OF NET DEBT / (GROSS OPERATING PROFIT + FINANCIAL REVENUE). H1. Breakdown by sector (b)



Source: Banco de España.

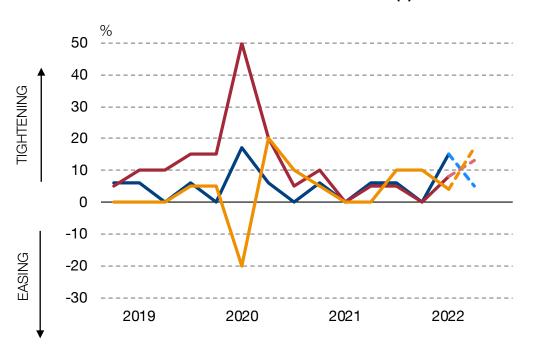
b) The most vulnerable firms are defined as those whose Net financial debt / (GOP + Financial revenue) ratio is greater than 10 or who have positive net financial debt and zero or negative earnings.



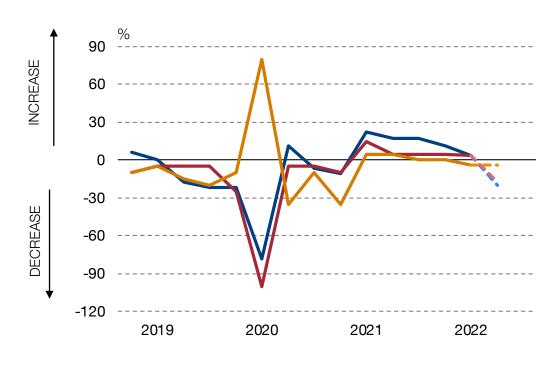
a) The sectors hardest hit by the COVID-19 crisis are defined as those whose sales fell by more than 15% in 2020. The sectors most affected by the rise in energy prices include transportation, mining and quarrying, basic metals, chemical products and non-metallic mineral products, plastic and fishing.

CREDIT STANDARDS ARE TIGHTENING

BLS: CHANGE IN CREDIT STANDARDS (a)



BLS: CHANGE IN LOAN DEMAND (b)



—HOUSE PURCHASE —CONSUMER CREDIT AND OTHER LENDING —NON-FINANCIAL CORPORATIONS

Source: Banco de España. Latest observation: 2022 Q2. The dotted line refers to the projections for 2022 Q3.

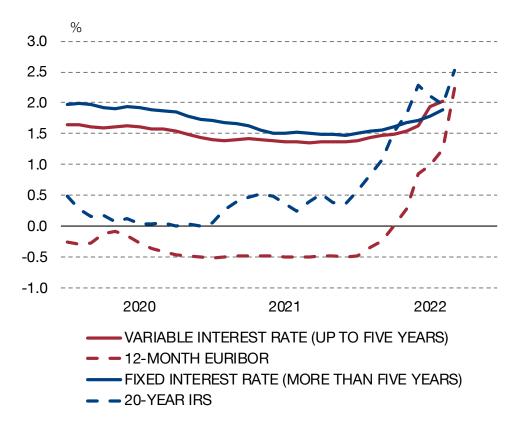
b) Indicator = percentage of banks reporting a considerable increase × 1 + percentage of banks reporting some increase × 1/2 – percentage of banks reporting a considerable decrease × 1/2 – percentage of banks reporting a considerable decrease × 1.



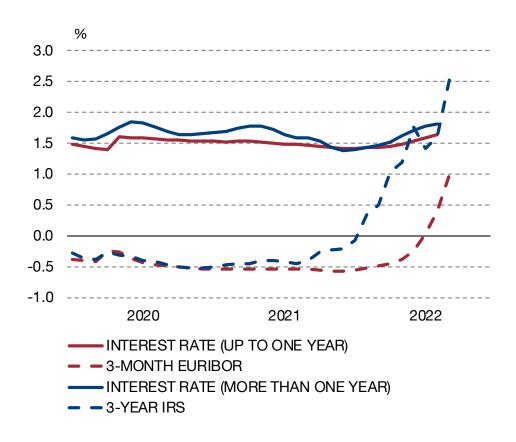
a) Indicator = percentage of banks that have tightened their credit standards considerably \times 1 + percentage of banks that have tightened their credit standards somewhat \times 1/2 - percentage of banks that have eased their credit standards somewhat \times 1/2 - percentage of banks that have eased their credit standards considerably \times 1.

BANK FUNDING COSTS HAVE STARTED TO INCREASE

LOANS FOR HOUSE PURCHASE



LOANS TO NON-FINANCIAL CORPORATIONS

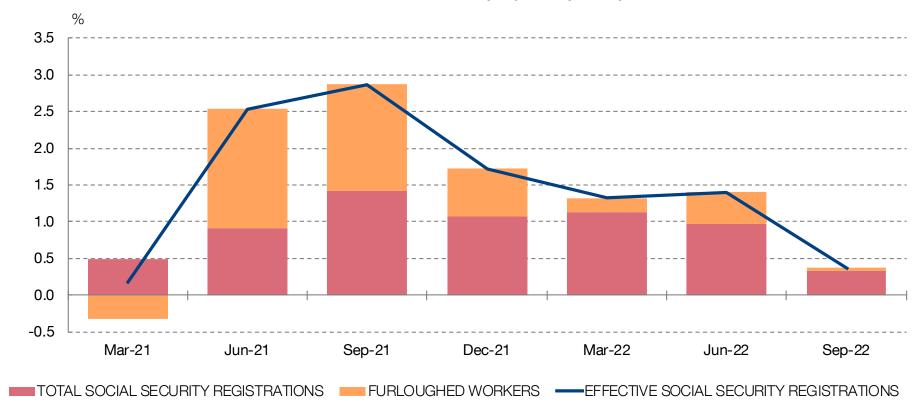


Sources: Banco de España and Refinitiv Datastream. Latest observation: August (bank interest rates) and September (reference interest rates).



EMPLOYMENT SEEMS TO BE LOSING MOMENTUM

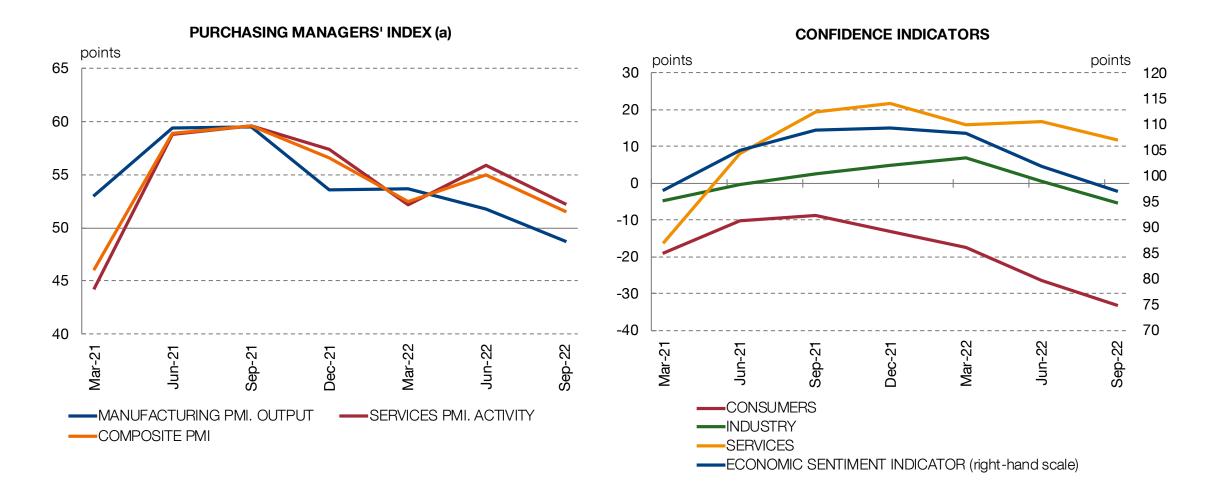
TOTAL SOCIAL SECURITY REGISTRATIONS, FURLOUGHED WORKERS AND EFFECTIVE SOCIAL SECURITY REGISTRATIONS. Seasonally adjusted quarterly rates



Sources: Ministerio de Inclusión, Seguridad Social y Migraciones and Banco de España.



CONFIDENCE INDICATORS HAVE DETERIORATED

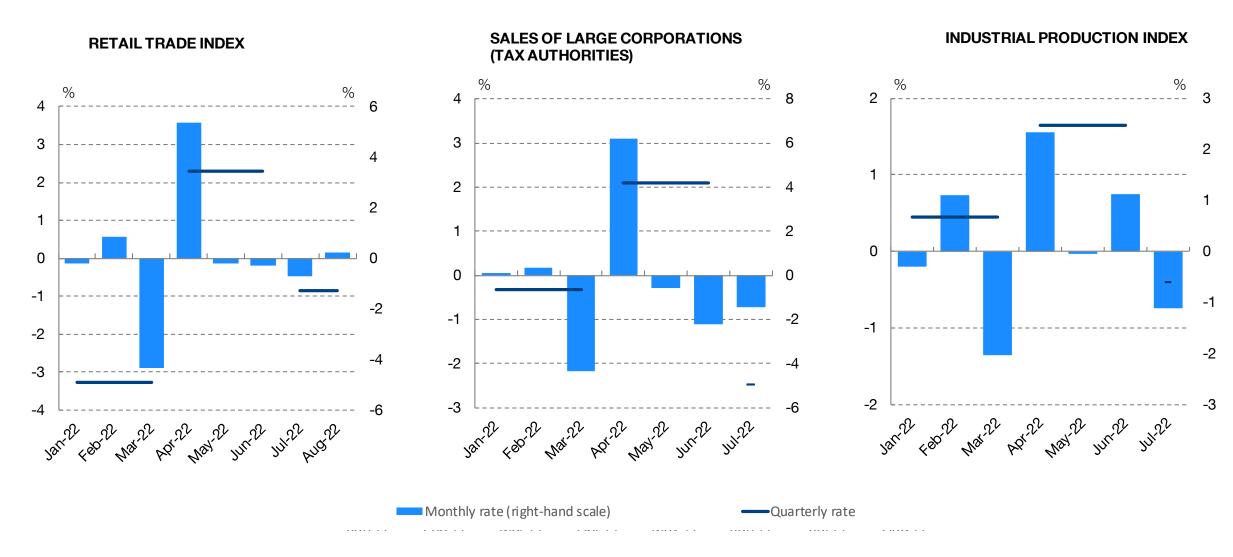


Sources: S&P Global and European Commission.

a) Quarterly averages based on data available for the period: July-August average for the services PMI and full quarter for all others.



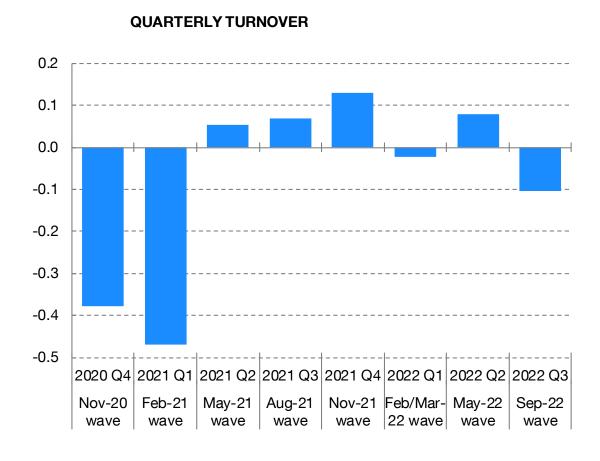
OTHER CONSUMPTION AND ACTIVITY INDICATORS ARE ALSO WEAK

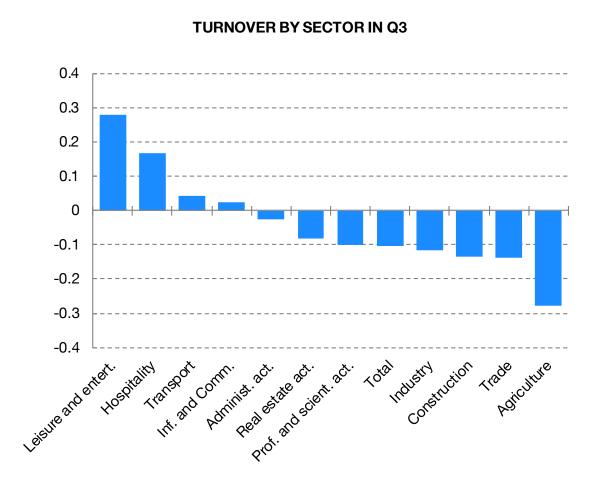


Sources: INE, Agencia Tributaria and Banco de España. Seasonally adjusted series.



THE BANCO DE ESPAÑA BUSINESS ACTIVITY SURVEY (EBAE) SUGGESTS A DECLINE IN FIRMS' TURNOVER





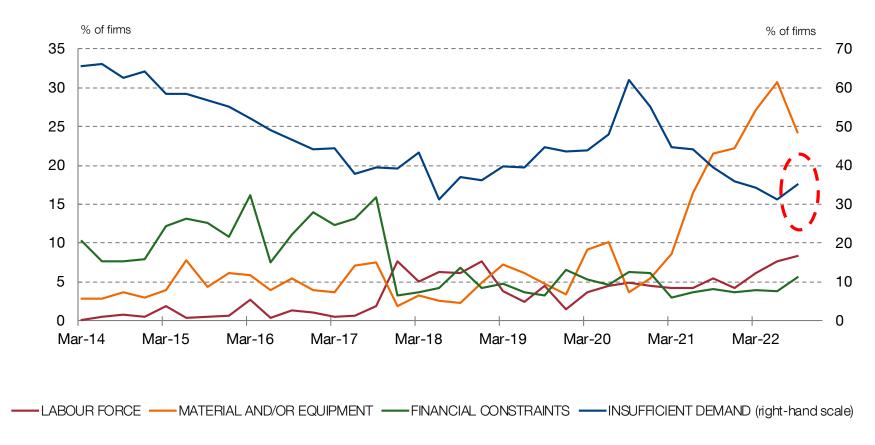
Source: Banco de España (EBAE).



a) Index calculated as significant decline = -2; slight decline = -1; stable = 0; slight increase = 1; significant increase = 2

INSUFFICIENT DEMAND AS A FACTOR LIMITING INDUSTRIAL PRODUCTION HAS RISENSLIGHTLY

FACTORS LIMITING PRODUCTION

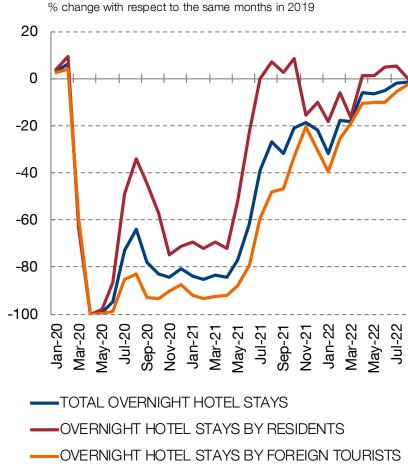


Source: European Commission.

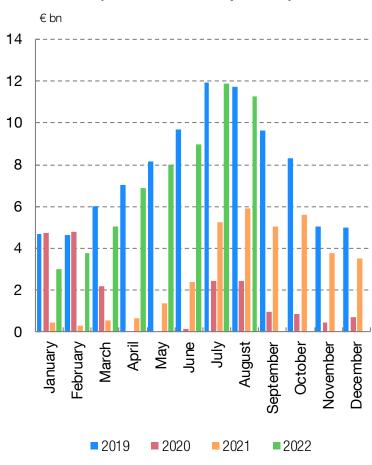


IN CONTRAST, THE SUMMER TOURIST SEASON HAS EXCEEDED EXPECTATIONS

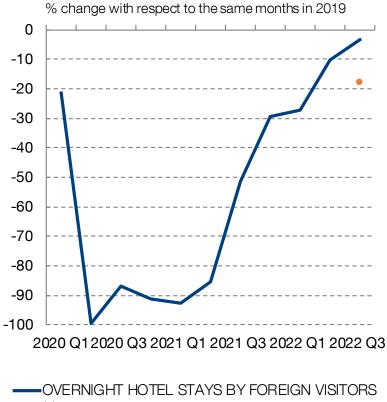
OVERNIGHT HOTEL STAYS



SPENDING BY FOREIGN TOURISTS (2019 - 2022 comparison)



OVERNIGHT HOTEL STAYS BY FOREIGN VISITORS



OVERNIGHT HOTEL STAYS BY FOREIGN VISITORS
(a)
JUNE QUARTERLY REPORT ESTIMATE



Sources: INE and Banco de España.

a) Seasonally adjusted data.

ASSUMPTIONS REGARDING THE INTERNATIONAL ENVIRONMENT AND MONETARY AND FINANCIAL CONDITIONS

| | | October 2022 projections (a) | | | Difference between the current projections and June 2022 projections (b) | | |
|--|-------|------------------------------|-------|-------|--|-------|-------|
| Annual rates of change, unless otherwise indicated | 2021 | 2022 | 2023 | 2024 | 2022 | 2023 | 2024 |
| | | | | | | | |
| Spain's export markets (c) | 9.8 | 6.3 | 2.6 | 3.2 | 0.8 | -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) (e) | -0.5 | 0.3 | 2.9 | 3.0 | 0.4 | 1.6 | 1.4 |
| Long-term interest rates (10-year Spanish government bond) (e) | 0.3 | 2.2 | 3.4 | 3.6 | 0.4 | 1.0 | 1.0 |

Sources: Banco de España and ECB.

- 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 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 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 Eurosystem 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.



MACROECONOMIC PROJECTIONS 2022-2024:

BASELINE SCENARIO

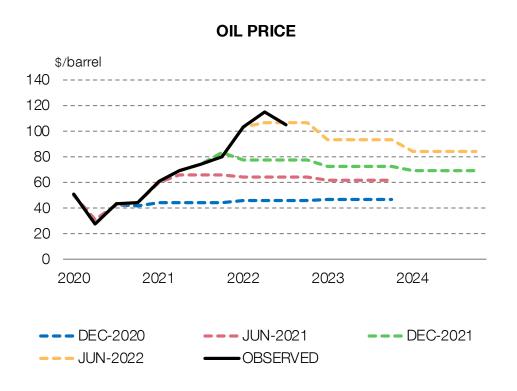
| Annual rate of change in volume terms (%) and % of GDP | | October 2022 projections | | | June 2022 projections | | |
|---|-------|--------------------------|-------|-------|--------------------------|-------|-------|
| | 2021 | 2022 | 2023 | 2024 | 2022 | 2023 | 2024 |
| GDP | 5.5 | 4.5 | 1.4 | 2.9 | 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. Latest QNA figure published: 2022 Q2. Projections cut-off date: 30 September 2022.

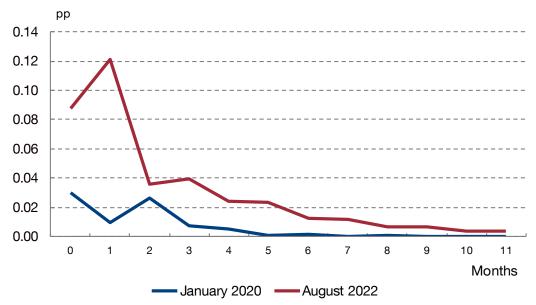


WHAT ARE THE REASONS FOR THE INFLATION FORECASTING ERRORS IN RECENT QUARTERS?

- They are mainly due to higher-than-expected growth in the price of energy and food commodities...
- ...but also to a somewhat faster and stronger response by underlying inflation to the energy shocks in the current episode than in the past







Sources: Reuters, ECB and Banco de España.

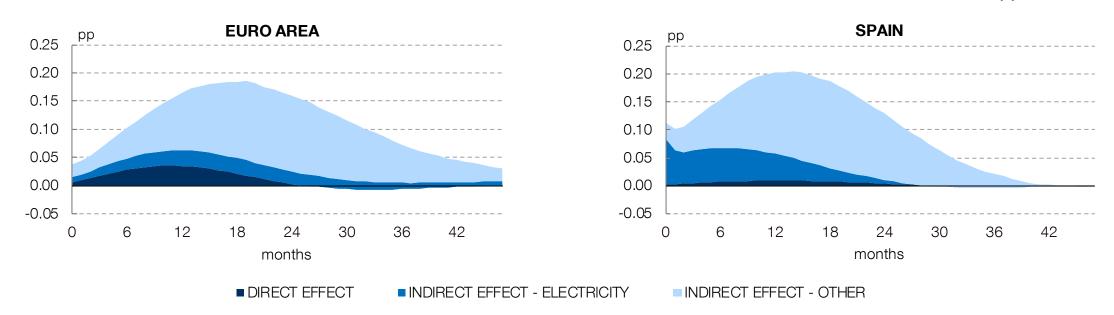
a) Effect of an unexpected 1% increase in energy prices on underlying inflation. See González-Mínguez, Hurtado, Leiva-León and Urtasun (2022) (forthcoming).



WHAT ARE THE INDIRECT EFFECTS OF A RISE IN COMMODITY PRICES?

- An increase in natural gas prices, for instance, would pass through to inflation via direct and indirect effects
- Indirect effects, which arise from a increase in the price of products using that commodity in their productive process, take longer to emerge, but are significant and more persistent

CONTRIBUTIONS TO THE EFFECT ON INFLATION OF A PERMANENT 10% INCREASE IN NATURAL GAS PRICES (a)

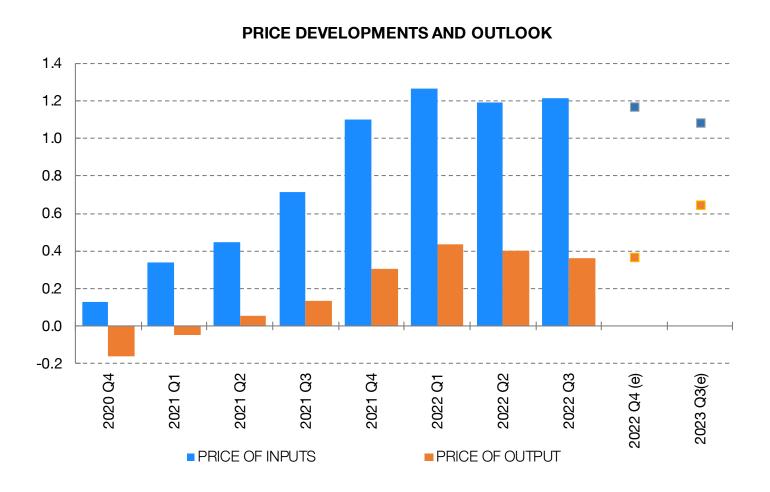


Source: Banco de España.

(a) Impulse-response functions to a permanent 10% increase in natural gas prices, expressed in euro, estimated through a Bayesian Vector Autoregression (BVAR) model that includes year-on-year changes in the HICP (headline HICP, the electricity component and the gas-derived products component), in natural gas prices in Europe and in oil prices.



ACCORDING TO THE EBAE, SPANISH FIRMS EXPECT THE CURRENT HIGH INFLATIONARY PRESSURES TO PERSIST OVER THE COMING MONTHS

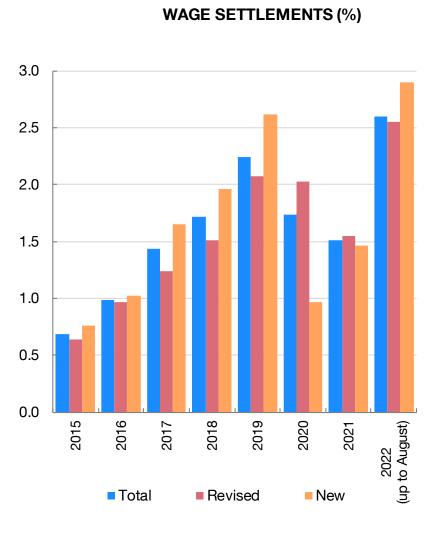


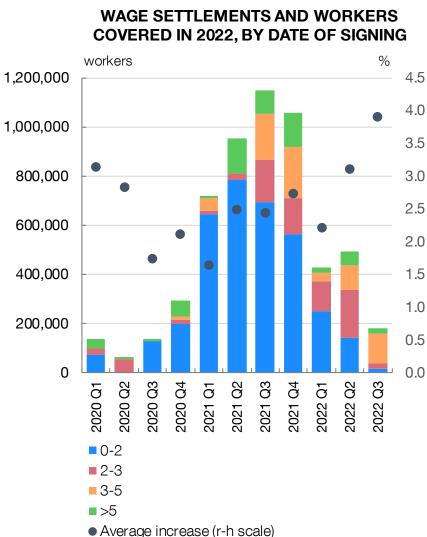
Source: Banco de España (EBAE).

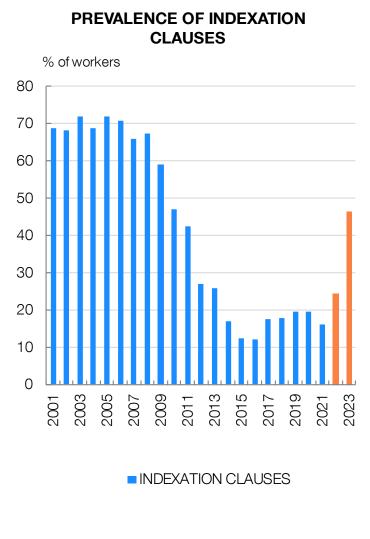
a) Index calculated as significant decline = -2; slight decline = -1; stability = 0; slight increase = 1; significant increase = 2.



FOR THE TIME BEING, THERE APPEAR TO BE NO SIGNIFICANT SECOND-ROUND EFFECTS ON INFLATION VIA WAGES, BUT THERE IS A GROWING PREVALENCE OF INDEXATION CLAUSES





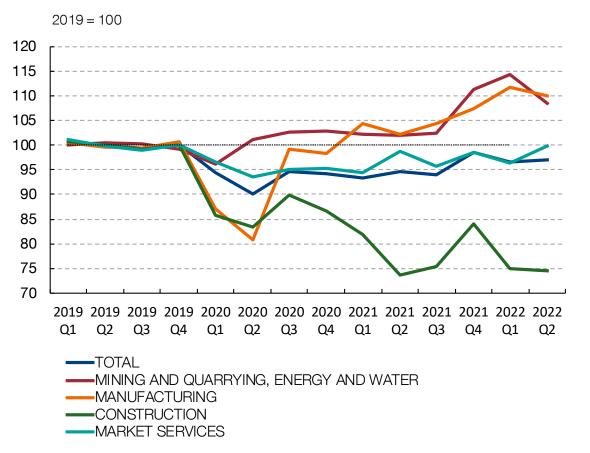


Source: Ministerio Trabajo y Economía Social.

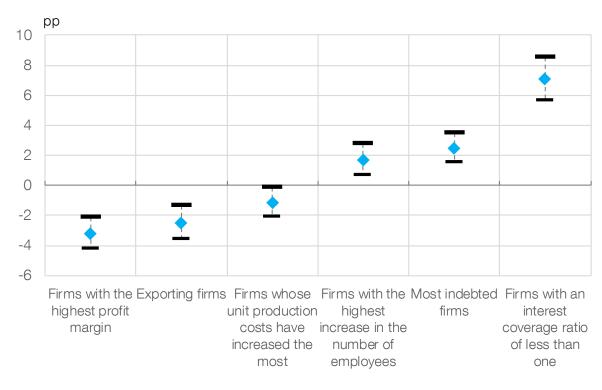


PROFIT MARGINS REMAIN RELATIVELY SUBDUED IN AGGREGATE TERMS, ALBEIT WITH SIGNIFICANT HETEROGENEITY ACROSS SECTORS AND FIRMS

SPAIN: GOS/GVA BY SECTOR (a)



CHANGE IN PROFIT MARGINS 2022 H1 vs 2021 H1. BY FIRM CATEGORY (b) (c)



- 90% CONFIDENCE BANDS

Sources: INE and Banco de España.

- a) Gross operating surplus (GOS) is calculated as Gross Value Added (GVA) less compensation per employee.
- b) The profit margin is calculated as the ratio of gross operating profit to net turnover.
- c) Coefficients estimated using a linear regression analysis. Explanatory variables refer to firms' characteristics. Fixed effects associated with the sections of NACE Rev. 2.



EFFECT OF THE MEASURES ROLLED OUT BY THE AUTHORITIES

Extraordinary and temporary discount in the retail price of fuel (from 1 April to 31 December)

2% cap on rent increases (from 1 April to 31 December)

Mechanism to cap the price of gas used in electricity generation (from 15 June to 31 May 2023)

Electricity bill tax reduction: VAT at 5% and excise duty on electricity at 0.5% (until 31 December)

Butane price freeze (May prices are maintained until 31 December)

Reduction in travel pass prices and free rail passes (from 1 September to 31 December)

Reduced VAT rate on natural gas (from 1 October to 31 December)

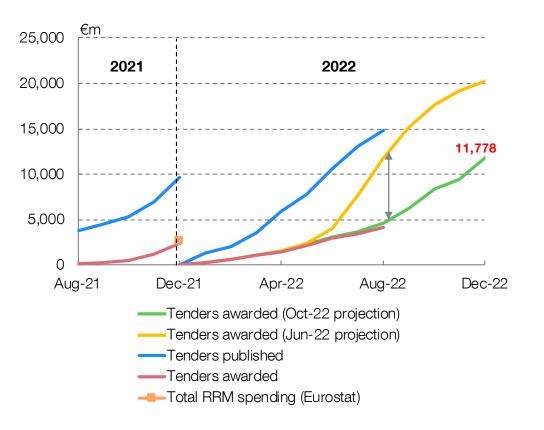
Reduction of just over 3 pp in the August inflation rate (compared with a scenario of no measures)

With effects from September/October onwards

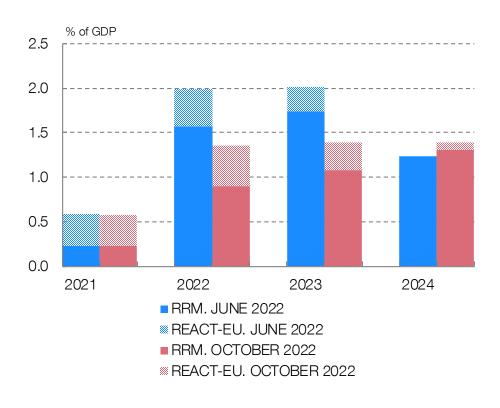


NGEU INVESTMENT PROJECTS APPEAR TO BE FILTERING THROUGH TO THE ECONOMY AT A SLOWER PACE THAN ANTICIPATED IN THE JUNE PROJECTIONS

RRM TENDERS (ACCUMULATED IN THE YEAR) (a) (b)



GOVERNMENT SPENDING FINANCED WITH NGEU (c)



Sources: Website of the Spanish Recovery, Transformation and Resilience Plan (RTRP) and Banco de España.

- a) Not including tenders in "forthcoming" status, those relating to government guarantees, those intended for other tiers of general government or those identified as REACT-EU.
- b) Tenders published on the RTRP website up to 15/09/2022, on a cumulative monthly basis.
- c) The Next Generation EU (NGEU) programme has several components, of which the two most important are the Recovery and Resilience Mechanism (RRM) and REACT-EU.

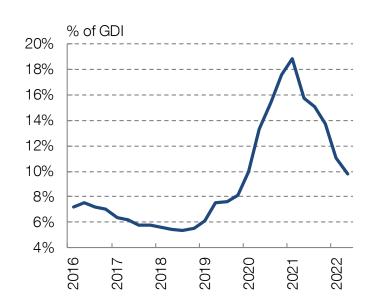


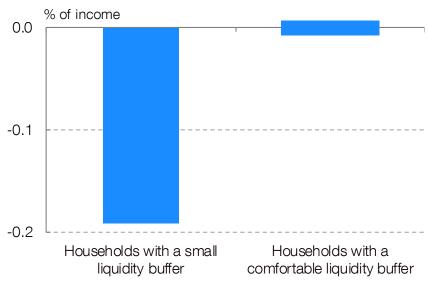
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A SIGNIFICANT STOCK OF SAVINGS WAS BUILT UP AT THE START OF THE PANDEMIC, BUT ITS DISTRIBUTION BY HOUSEHOLD IS VERY UNEVEN AND SOME NOW HAVE A SMALL BUFFER

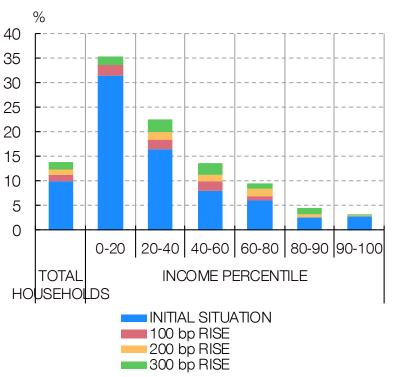
HOUSEHOLD SAVING RATE Four-quarter cumulative data

REDUCTION IN SPENDING ON NON-ENERGY GOODS AND SERVICES IN RESPONSE TO A 1 PP INCREASE IN SPENDING ON ENERGY AS A SHARE OF HOUSEHOLD INCOME (a)





IMPACT OF AN INTEREST RATE RISE ON THE PERCENTAGE OF HOUSEHOLDS WITH A HIGH DEBT BURDEN. BREAKDOWN BY INCOME PERCENTILE (b)



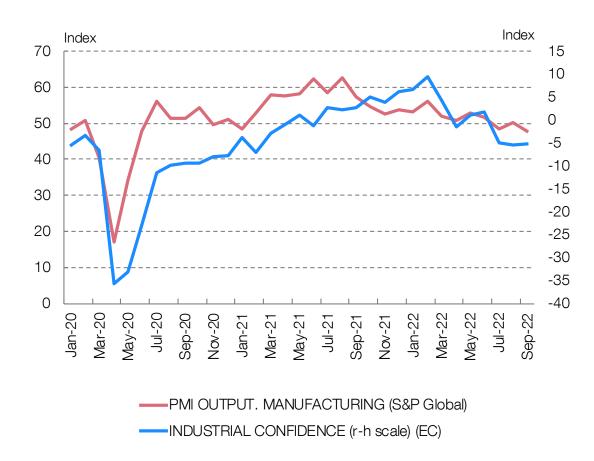
a) Source: Martínez-Carrascal (2022). Households with a small liquidity buffer are defined as those with insufficient liquidity (or no way of obtaining it) to meet unexpected expenses amounting to one month's worth of household income. Spending on energy is proxied by total spending on electricity, gas, water, sewerage, telephone and cable TV, given that the survey on which the estimation is based (Consumer Expectations Survey) does not allow the amount spent on each of these items to be identified separately.

b) Sources: Survey of Household Finances (2017) and Banco de España.

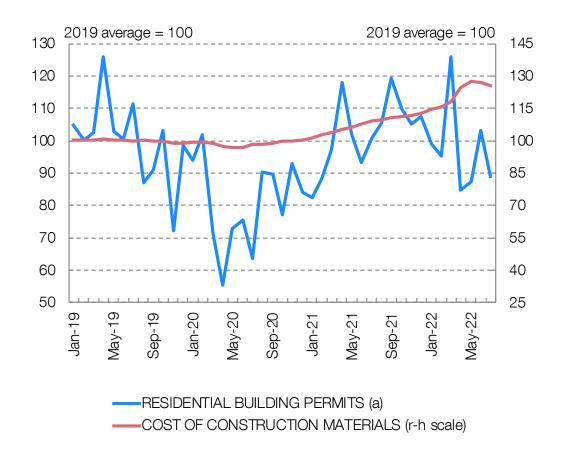


UNCERTAINTY, THE TIGHTENING OF FINANCING CONDITIONS AND THE PERSISTENCE OF SOME BOTTLENECKS WILL WEIGH DOWN ON FUTURE INVESTMENT GROWTH

INDUSTRIAL CONFIDENCE INDICATORS



BUILDING PERMITS AND CONSTRUCTION COSTS

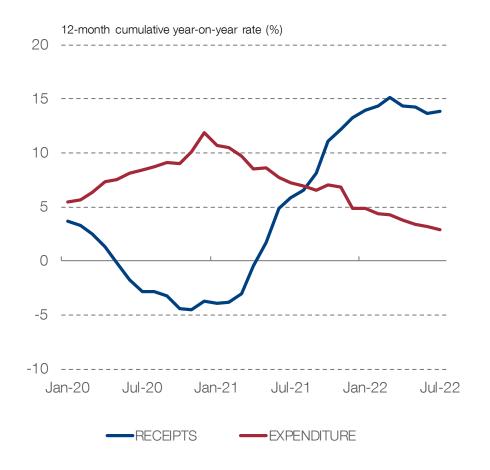


Sources: S&P Global, European Commission, INE, CIEN and Banco de España. a) The building permit series is seasonally adjusted.

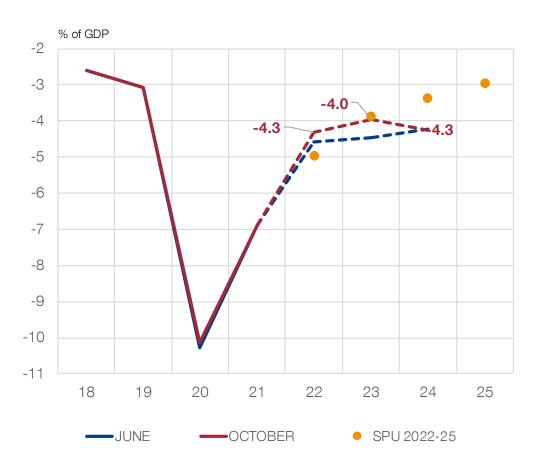


THE GENERAL GOVERNMENT BALANCE CONTINUES TO IMPROVE DRIVEN MAINLY BY STRONG GOVERNMENT RECEIPTS

GOVERNMENT RECEIPTS AND EXPENDITURE



GENERAL GOVERNMENT BALANCE

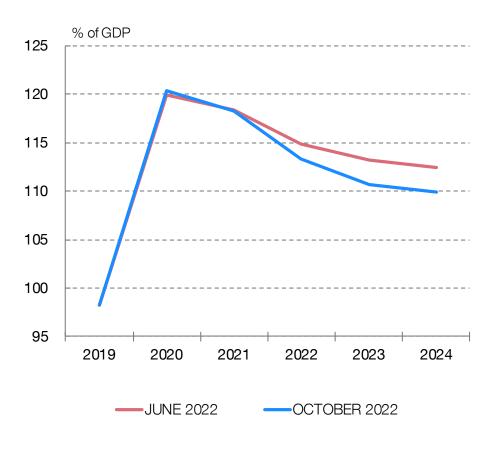


Sources: Banco de España, IGAE and Stability Programme Update 2022-2025.

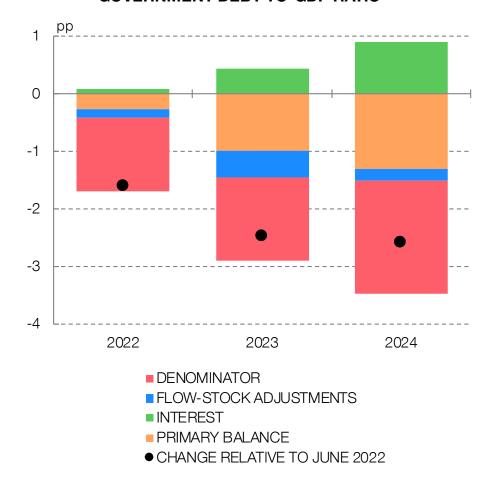


THE GOVERNMENT DEBT-TO-GDP RATIO IS REVISED DOWN OVER THE PROJECTION HORIZON MAINLY AS A RESULT OF THE INCREASE IN NOMINAL GDP AND A BETTER PRIMARY BALANCE

GOVERNMENT DEBT PROJECTIONS



CHANGES IN THE PROJECTIONS FOR THE GOVERNMENT DEBT-TO-GDP RATIO

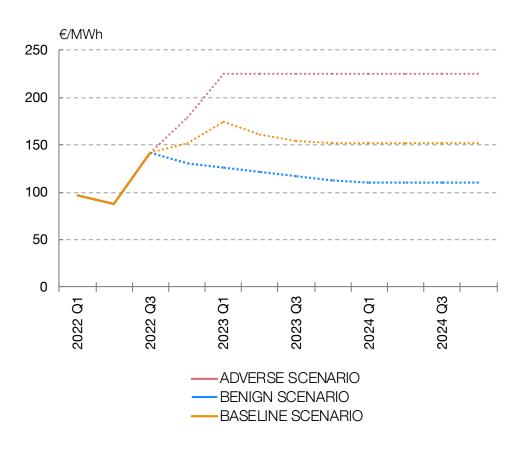


Sources: Banco de España and IGAE.

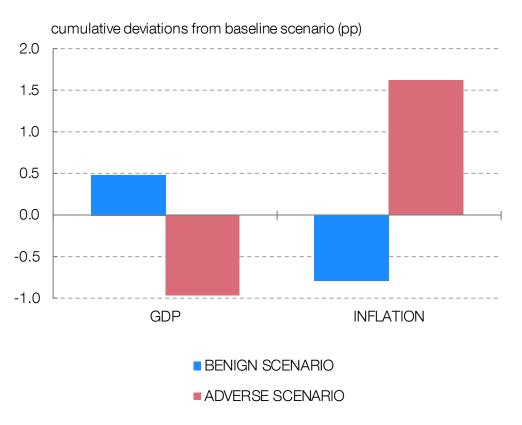


SENSITIVITY ANALYSIS NO. 1: TWO ALTERNATIVE PATHS ARE CONSIDERED FOR THE PRICE OF GAS (MIBGAS) VIS-À-VIS THE BASELINE SCENARIO

GAS PRICES



CUMULATIVE IMPACT ON GDP AND INFLATION IN THE PERIOD 2023-2024

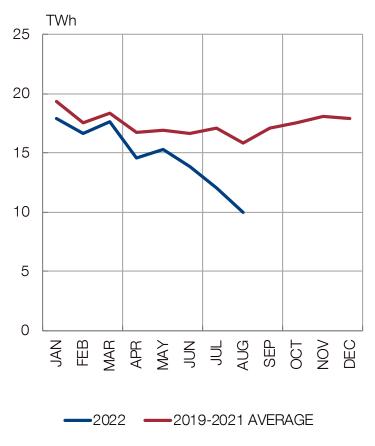


Source: Banco de España.

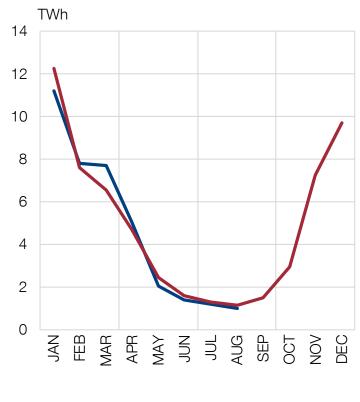


SENSITIVITY EXERCISE NO. 2: IT IS ASSUMED THAT EUROPE'S ABILITY TO REPLACE RUSSIAN GAS IMPORTS IN THE SHORT TERM IS LIMITED

MONTHLY DEMAND FOR NATURAL GAS BY INDUSTRY IN MAINLAND SPAIN AND THE BALEARIC ISLANDS

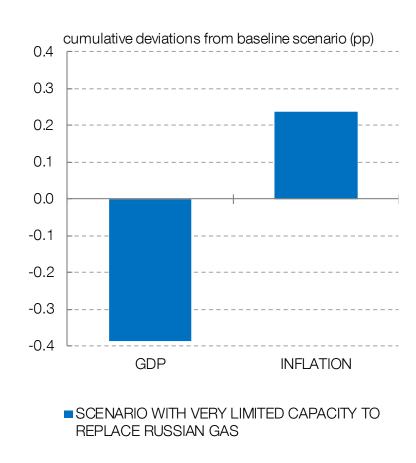


MONTHLY DEMAND FOR NATURAL GAS BY HOUSEHOLDS AND SMEs IN MAINLAND SPAIN AND THE BALEARIC ISLANDS



—2022 —2019-2021 AVERAGE

CUMULATIVE IMPACT ON GDP AND INFLATION IN THE PERIOD 2023-2024 (a)



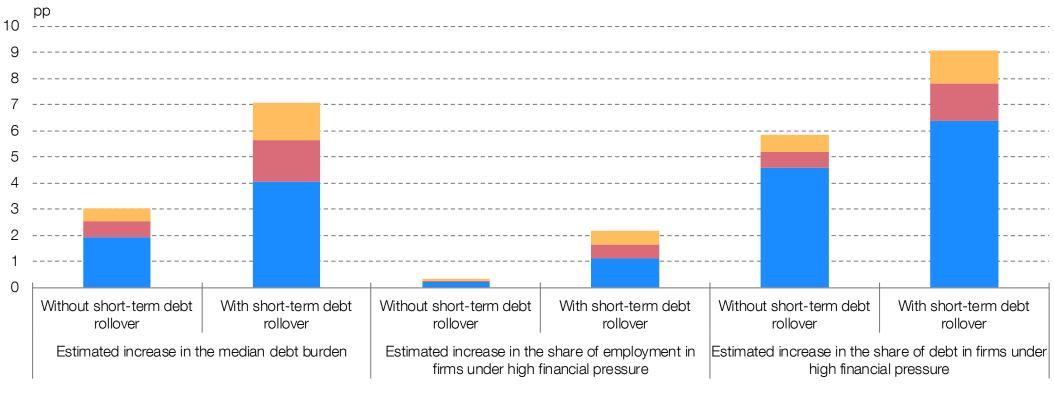
Sources: ENAGAS and Banco de España.

a) Represents the difference between the baseline scenario (with a moderate elasticity of substitution) and one where the elasticity of substitution lies in the lower end of the range considered in Quintana (2022).



IMPACT OF AN INTEREST RATE RISE ON FIRMS' FINANCIAL POSITION

IMPACT OF AN INTEREST RATE RISE ON FIRMS' DEBT BURDEN AND ON FIRMS UNDER HIGH FINANCIAL PRESSURE (a) (b)



400 pb RISE

Source: Banco de España.

300 pb RISE

200 bp RISE

b) Firms under high financial pressure are defined as those which have a ratio of (Gross operating profit + Financial revenue) / Financial costs lower than one.



a) The debt burden is defined as Financial costs / (Gross operating profit + Financial revenue). Firms with no financial costs are excluded from this calculation.