

Spain Economic Outlook

4Q21

Key points Global



GDP growth

The recovery process will continue, but with less momentum than expected. COVID-19 vaccination and significant stimuli will continue to support the global economy. However, it will be affected by more persistent supply shocks. Global growth will be 6.1% in 2021 and 4.6% in 2022, slightly less than expected.



Inflation

Inflation will remain higher than anticipated and above the levels of the previous decade. Likewise, inflation will moderate in 2022 as supply chain issues are addressed and energy prices regulate.



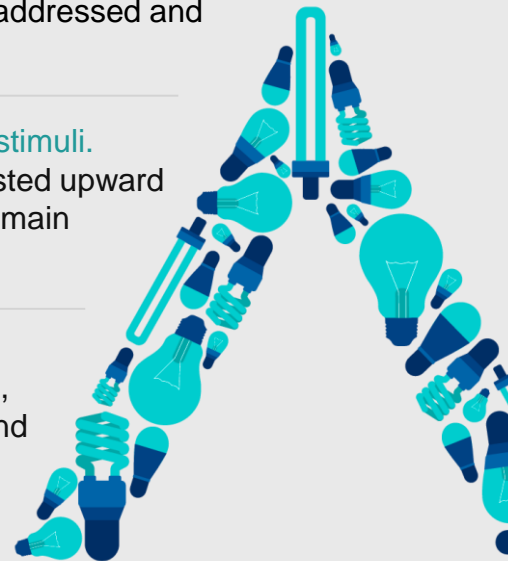
Monetary policy

The Fed is preparing to begin the process of withdrawing monetary stimuli. Tapering is likely to begin this quarter and interest rates will be adjusted upward starting in late 2022. In any case, the tone of economic policy in the main regions is expected to remain accommodative.



Risks

Risks to the recovery scenario with high but controlled inflation are mostly on the downside. These include longer-lasting supply shocks, turbulence in the stimuli withdrawal process, a slowdown in China and new strains of the coronavirus.



Key points Spain



GDP in 2021

2021 growth has been adjusted downward from 6.5% to 5.2%.

Despite the good performance of household consumption, the revision is explained by the poorer performance of investment and a more negative contribution from the external sector.



Growth accelerates in 3Q21

Data for 3Q21 suggests that growth is expected to accelerate (4% quarter-on-quarter).

A reversal of the decline in productivity is expected. In addition, progress made in vaccination and the easing of restrictions, among other factors, have led to growth of private consumption, primarily in services.



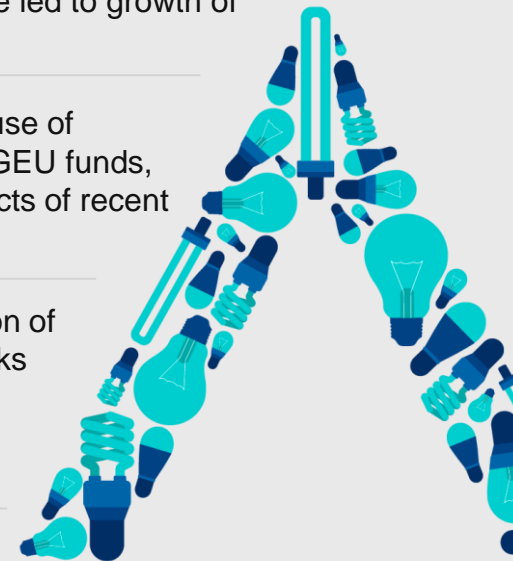
GDP in 2022

In 2022, GDP could rise to 5.5%. The control of the pandemic, the use of household savings, the acceleration of the implementation of the NGEU funds, ECB measures and a high productive capacity would offset the effects of recent bottlenecks and energy prices.



Risks

The short-term bias is toward a downward trend. The implementation of NGEU-related funds needs to be accelerated. In addition, bottlenecks and rising input prices and transportation costs could pose a risk to recovery. In the medium term, the bias will depend on the reforms implemented over the coming months.



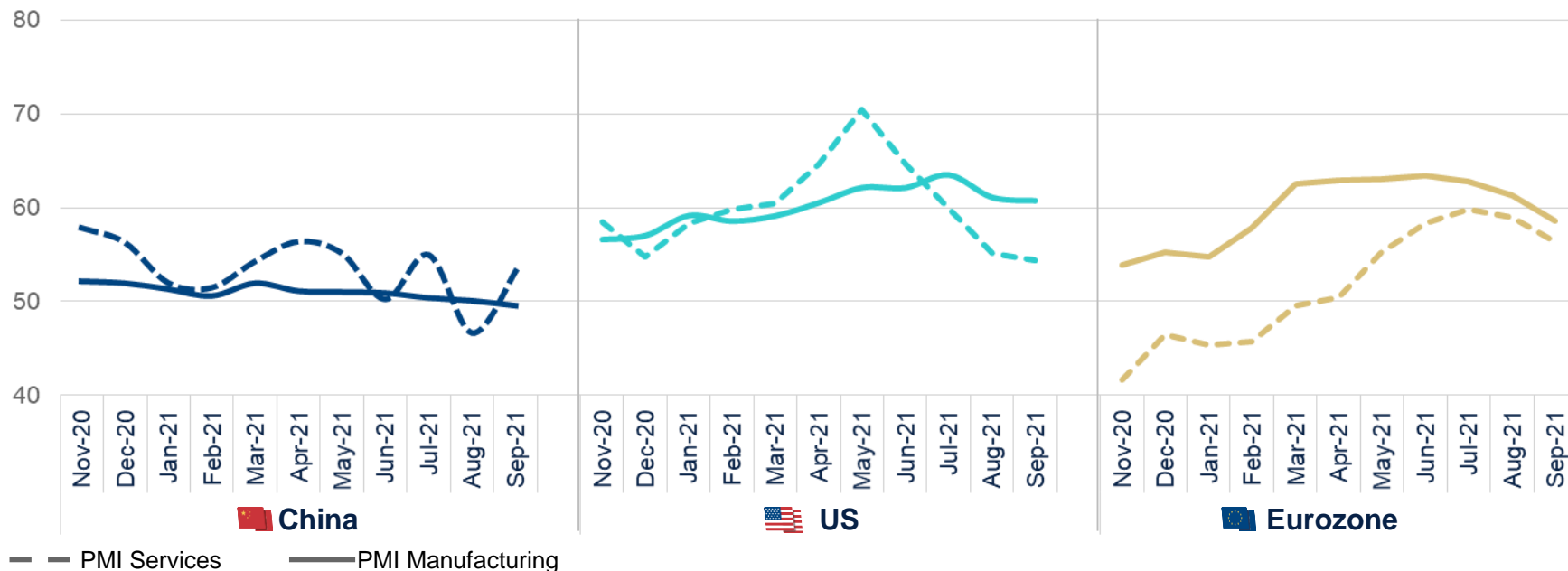
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Global Economic Outlook 4Q21

Growth is moderating, mainly in the US and China, after a strong rebound driven by the economic activity reopening in the first half of the year

PMI

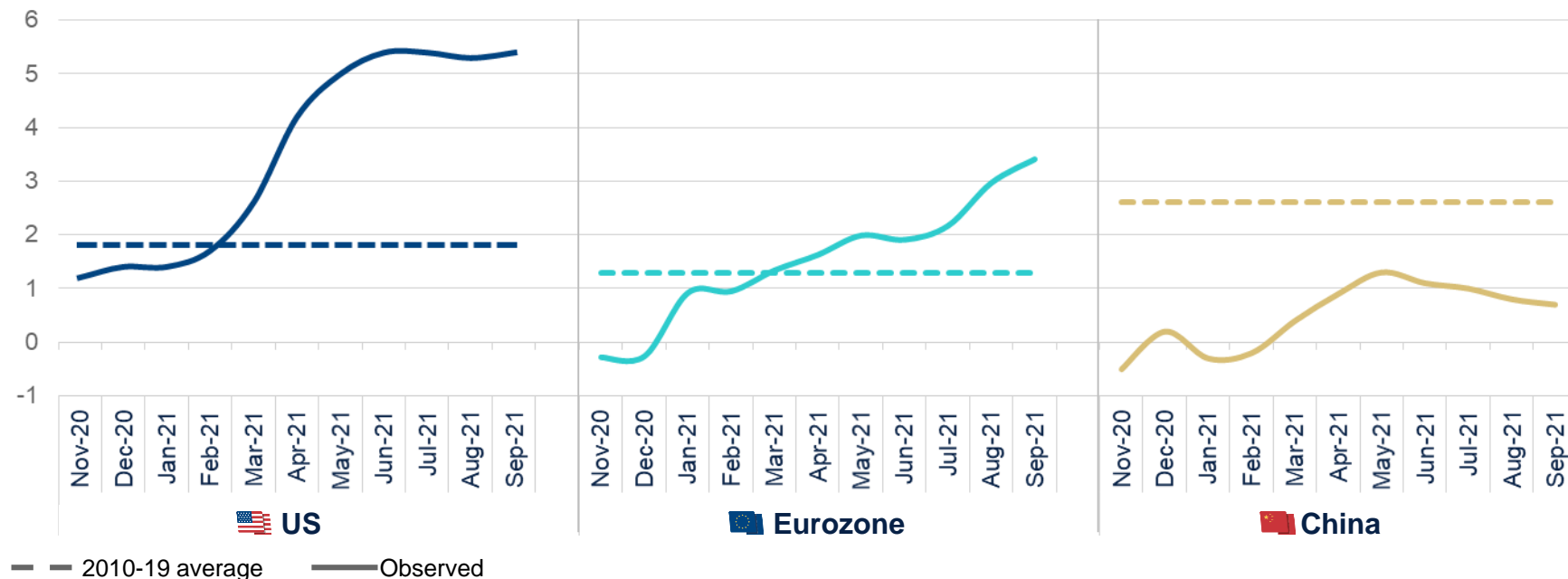
(HIGHER THAN 50: EXPANSION; LOWER THAN 50: CONTRACTION)



Inflation remains high, more in the US than in Europe

INFLATION: CPI

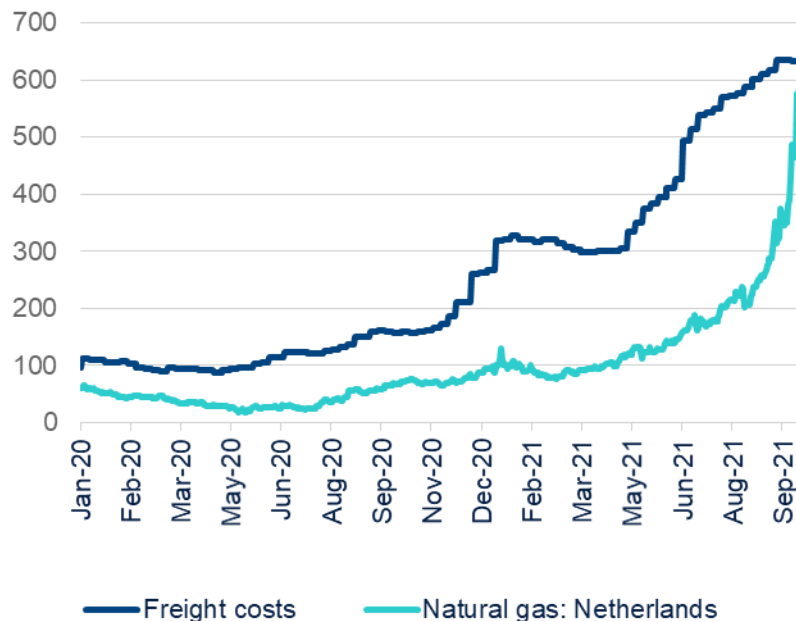
(Y/Y %, END OF PERIOD)



Source: BBVA Research based on local statistics.

Supply chain disruptions have contributed to both the growth moderation and the increasing inflationary pressures

FREIGHT COSTS AND GAS PRICE (*) (INDEXES)



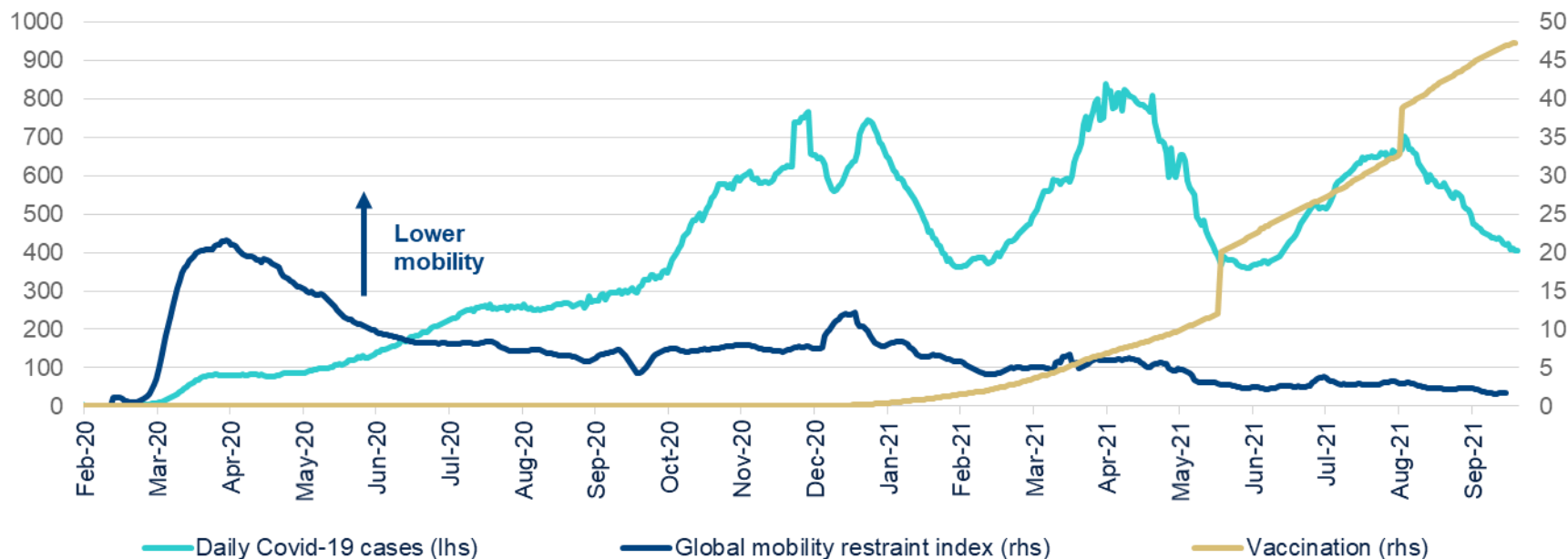
- More significant and persistent bottlenecks than anticipated, particularly in the manufacturing and transport sectors
- Moreover, the price of some commodities, mainly in the **energy sector**, has risen significantly
- A number of factors are behind these strong and unexpected cost pressures:
 - supply rigidity, especially given the expansion of the Delta strain in China and the US
 - labor shortage in some sectors
 - demand resilience and rapid activity reopening
 - higher demand for goods vs. services
 - weather disruptions
 - energy transition policies
 - trade protectionism
 - geopolitical tensions

(*) Freight cost: world composite indicator. Gas price: Duct natural gas future.
Source: BBVA Research based on data by Bloomberg.

Vaccination has reduced the economic impact of the new contagion waves, but the Delta variant remains a concern, particularly in China and the US

WORLD: DAILY CODIV-19 CASES, POPULATION VACCINATED AND MOBILITY RESTRAINT INDEX (*)

(THOUSANDS OF CONTAGIONS, 7-DAY MOVING AVERAGE; SHARE OF THE POPULATION WITH AT LEAST ONE DOSE OF THE ANTI-COVID VACCINES; MOBILITY RESTRAINT: 7-DAY MOVING AVERAGE)



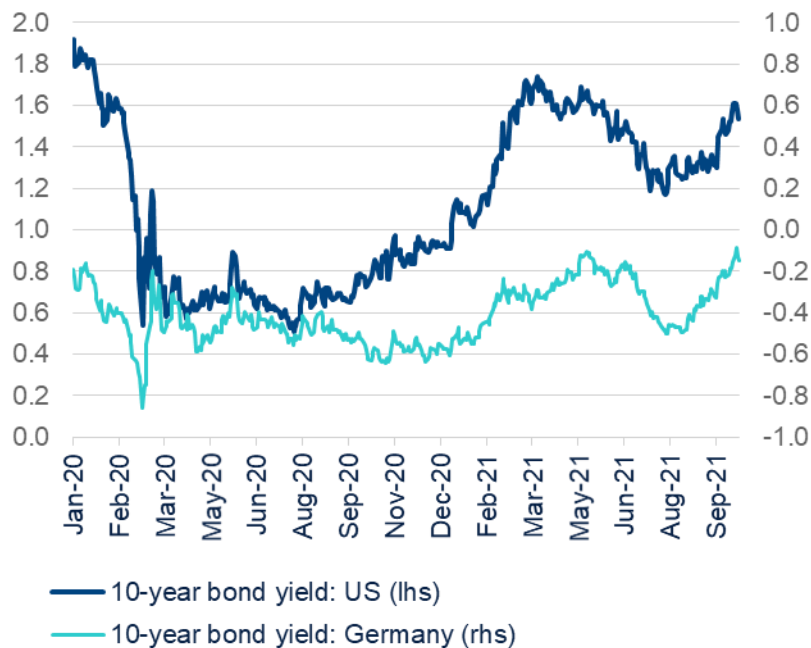
(*) The mobility restraint index reflects changes with respect to the period of reference (January 3 to February 6 2020). Higher values represent lower mobility.

Source: BBVA Research based on data by John Hopkins University, Google and Our World in Data.

The announcement by the Fed that the tapering will start in 2021 puts pressures on bond yields and supports the dollar

10-YEAR BOND YIELDS

(%)



- **US bond yields have increased** due to the prospect that the Fed will begin to withdraw stimulus somewhat earlier than expected and also on higher inflation expectations.
- **Bond yields have also risen in the Eurozone**, with the ECB reducing the PEPP purchases.
- **The dollar has** appreciated against the euro and emerging currencies.
- **Capital flows** to emerging markets have eased.
- **Financial volatility has been limited**, despite the concerns about the debt crisis of the **Evergrande** real estate group in China.

The recovery will continue, but will lose momentum due to the ongoing supply shocks, which will temporarily pressure inflation and central banks

MAIN FEATURES OF BBVA RESEARCH'S GLOBAL ECONOMIC SCENARIO

Bottlenecks



Larger impact than expected on activity (to the downside) and inflation (to the upside); negative effects expected until around mid-2022.

Economic policies



Expansionary fiscal and monetary policies in the G3 despite the gradual withdrawal of stimuli (Fed: tapering in 4Q21 and starting rate hikes in 4Q22).

Pandemic



Convergence towards "normality"; eventual new waves will have a lower impact on activity.

Growth and inflation



Robust growth, although somewhat weaker than previously estimated; relatively high inflation, though losing strength from 2022 onwards.

Financial markets



Risk assets pressured by the withdrawal of monetary stimulus by the Fed; a US dollar somewhat more appreciated than expected.

Emerging economies



Complex environment: lagged exit from the pandemic, inflation pressures on CBs, declining global liquidity (capital flows); positive commodity prices for exporters.

Risks

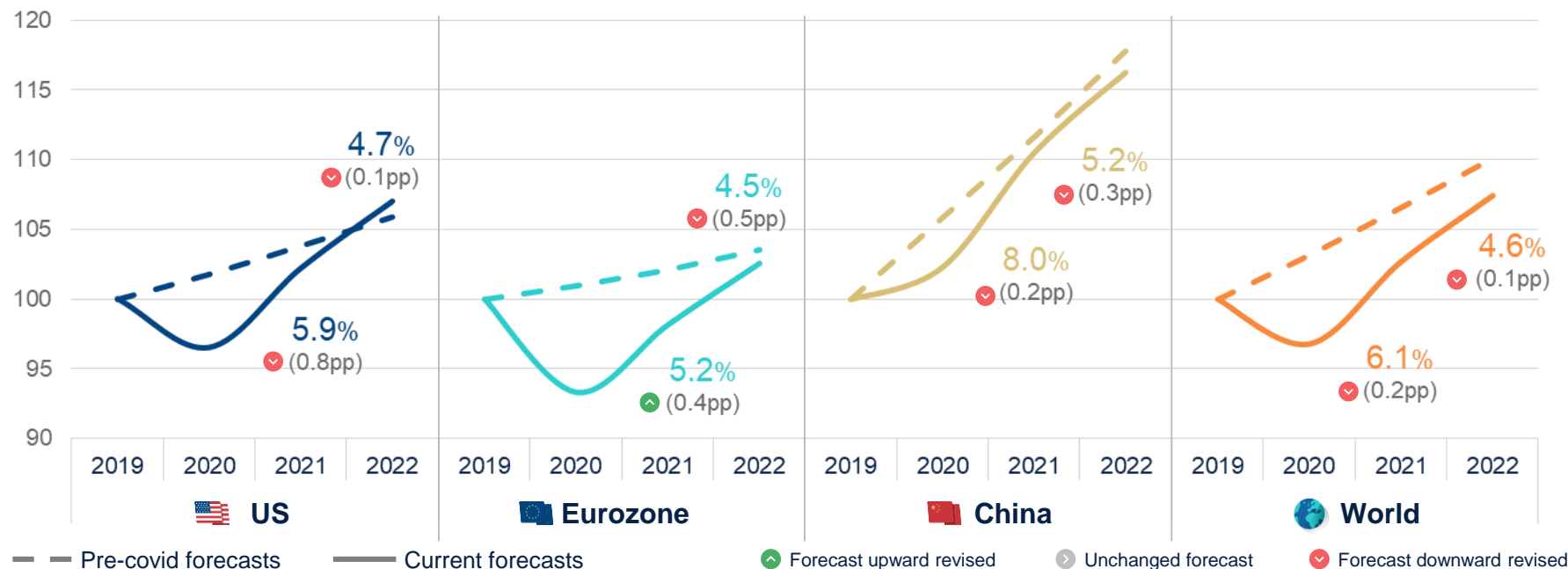


Mostly negative: persistence of supply shocks, stimulus withdrawal, slowdown in China, pandemic (new strains, incomplete vaccination), etc..

Global growth will be less robust than anticipated, mainly due to the supply shocks and the somewhat faster slowdown in China

REAL GDP

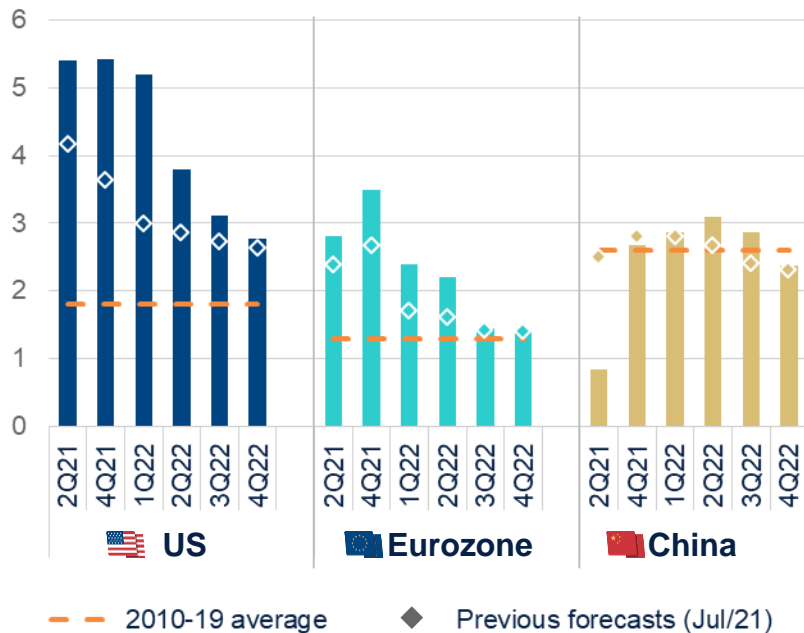
(LINES: GDP LEVEL 2019=100, FIGURES: FORECASTS AND CHANGES WITH RESPECT TO THE PREVIOUS ONES)



Inflation will remain higher than previously expected and above previous decade's levels, but will gradually slow down in 2022

INFLATION: CPI

(Y/Y %, PERIOD AVERAGE)

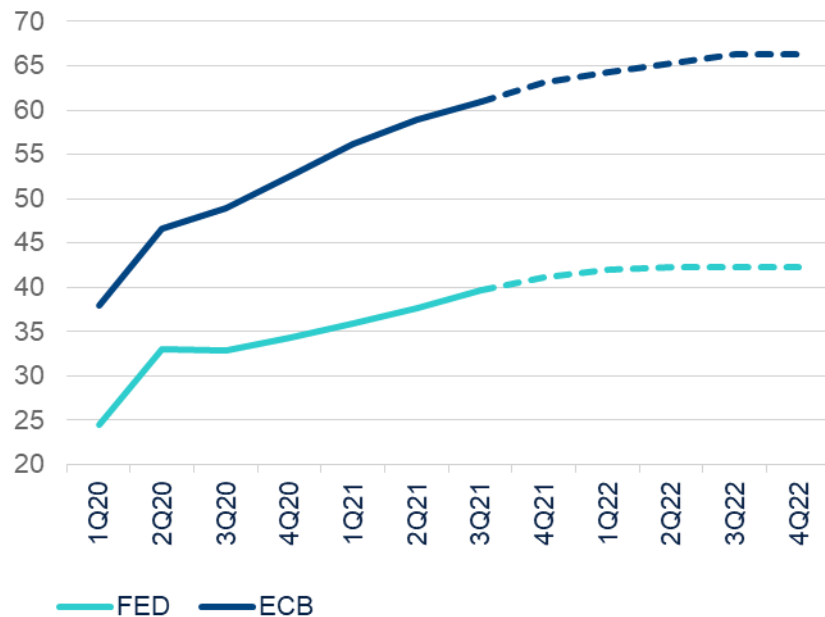


- Inflation forecasts in the US and the Eurozone have been revised upwards.
- More favorable base effects, the transitory nature of most supply shocks and the absence of generalized wage pressures should allow **inflation to moderate from 2022 onwards**.
- **Risks are biased to the upside**; anchoring expectations is key.
- **Inflation in China** remains low due to positive base effects, but rising production costs and energy prices will create upward pressure in the coming quarters.

The Fed will soon begin withdrawing monetary stimulus; the ECB will be more patient and the PBoC will adopt additional measures to support activity

FED AND ECB BALANCE SHEETS

(SHARE OF GDP)



US

- Fed expected to start the withdrawal of stimulus earlier than expected: tapering in Q4 and increases in rates in one year.
- New investment-focused **fiscal stimulus** (7% of GDP), despite political uncertainty.



Europe

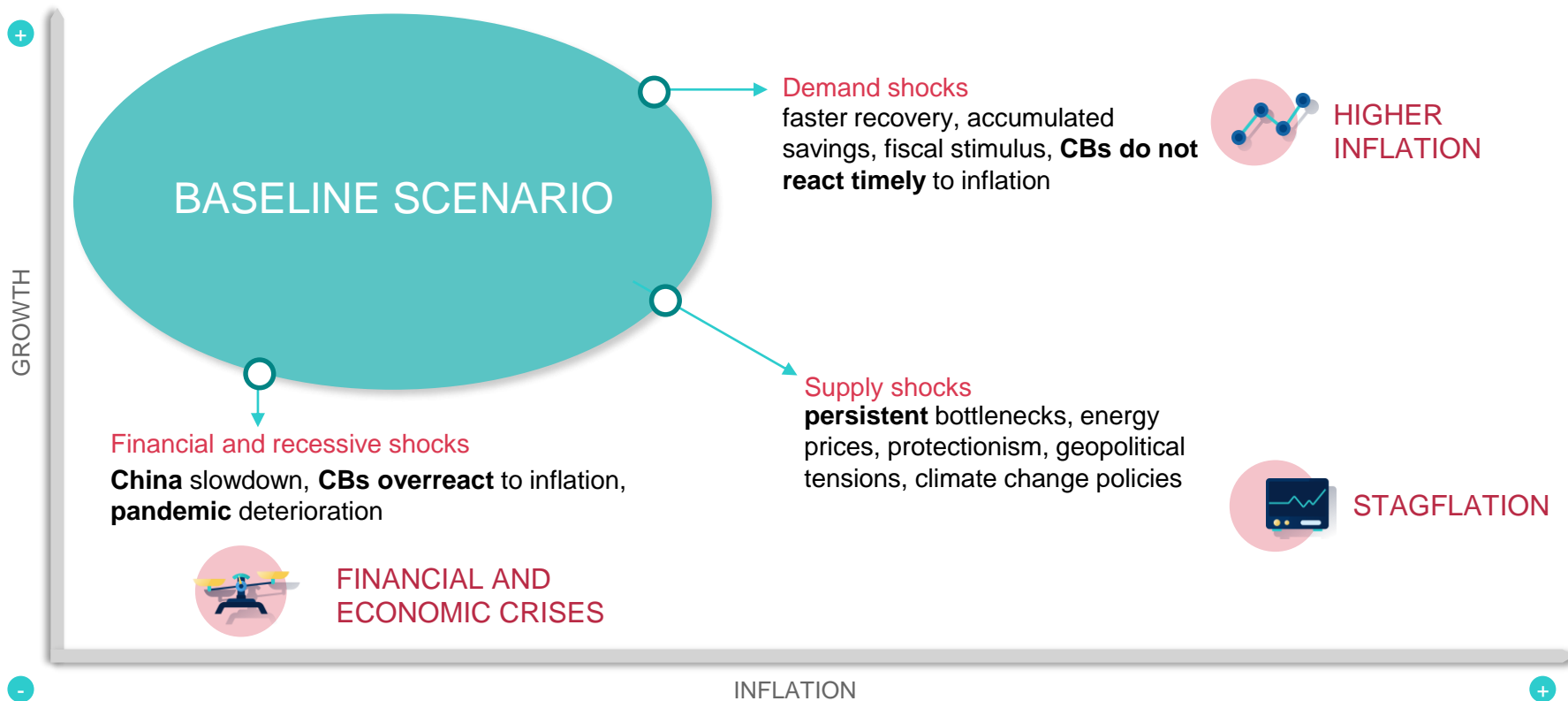
- The **ECB** is closer to ending the PEPP, but will remain patient with inflation and rates.
- Implementation of **NGEU** funds and support measures to offset energy rises.



China

- **new stimulus** to reduce the effect of regulatory measures (in real estate and financial sector) and supply shortages.

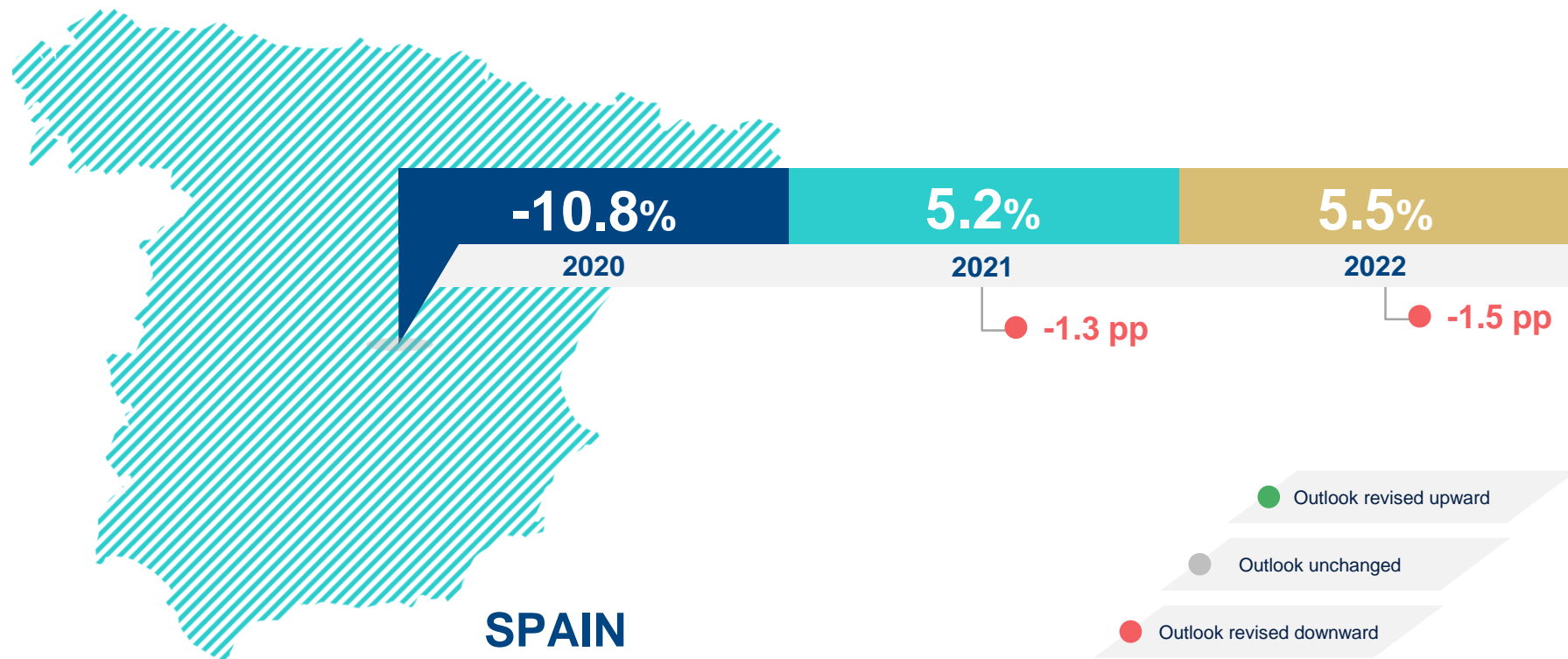
Risks: supply shocks, the withdrawal of stimuli, the slowdown in China, among other factors, could generate more negative global scenarios



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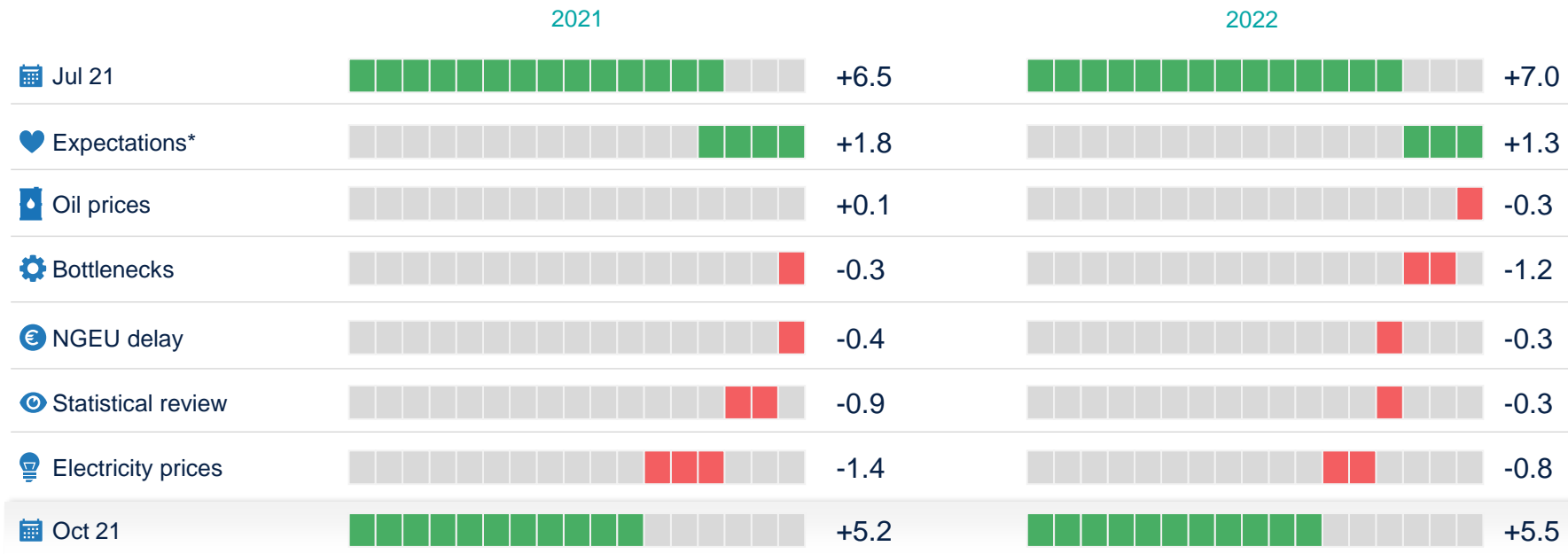
Spain Economic Outlook 4Q21

2021 and 2022 growth is revised downward



2021 and 2022 economic growth is revised downward

BREAKDOWN OF GDP GROWTH REVISION (PERCENTAGE POINTS)



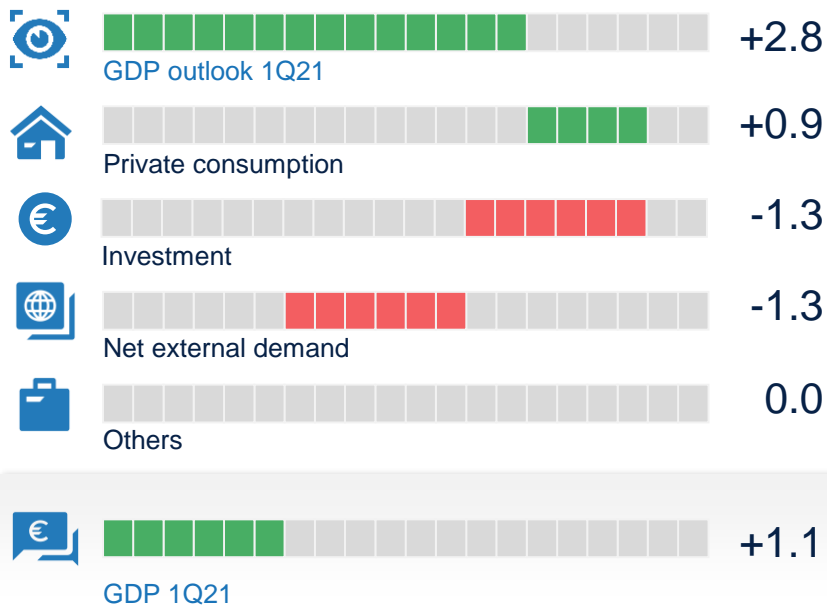
(*) The term "Expectations" includes aspects such as the good performance seen in private consumption in 2Q21 and 3Q21, the expected upward correction of productivity per hour worked in 3Q21 and better expectations on domestic demand due to the evolution of the labor market. The negative factors have also caused the downward revision of growth in Europe, presented above.

Source: BBVA Research based on INE data.

GDP growth in 2021 is revised downward to 5.2%.

This downturn is explained by lower-than-expected dynamism in 2Q21

CONTRIBUTION TO OUTLOOK ERROR FOR QUARTERLY GROWTH OF GDP IN 2Q21 (PERCENTAGE POINTS)



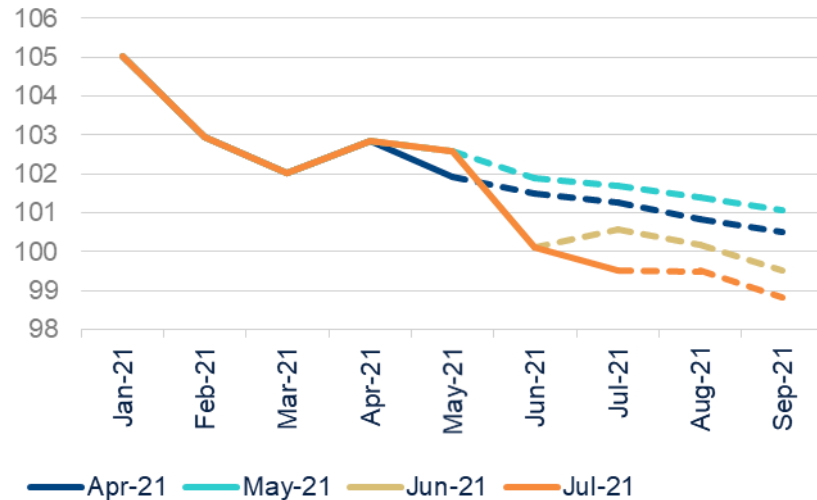
- Household consumption growth was substantial (+4.6% quarter-on-quarter), although somewhat higher than expected (+3.0%). The composition of this expenditure was not as "virtuous" as expected.
- Investment fell unexpectedly (-2.2% quarter-on-quarter), especially in capital goods and housing. The former was affected by bottlenecks in value chains, increased costs and possibly by the delay in the implementation of the NGEU.
- Imports grew strongly (+4.2% quarter-on-quarter) despite the sluggishness of goods exports (+0.9% q/q), as well as the fall in investment.

GDP growth in 2021 is revised downward to 5.2%.

Investment indicators worsened as the quarter progressed

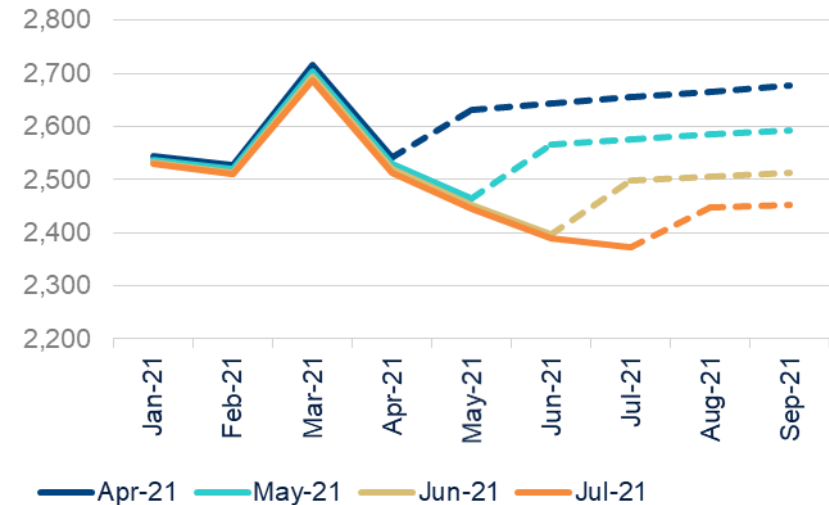
IPI CAPITAL GOODS

(OBSERVED DATA AND FORECASTS TSW)



CAPITAL GOODS IMPORTS

(OBSERVED DATA AND FORECASTS TSW)



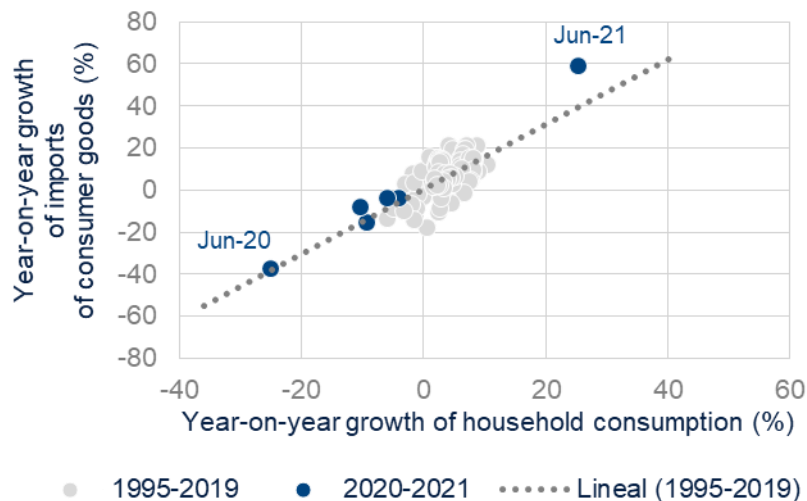
Source: BBVA Research based on INE data.

There appear to be several factors behind the fall in investment, the impact of which has been greater than expected: 1) bottlenecks in value chains; 2) increased energy prices, increased transportation costs, etc.; and 3) weak implementation of the NGEU.

GDP growth in 2021 is revised downward to 5.2%.

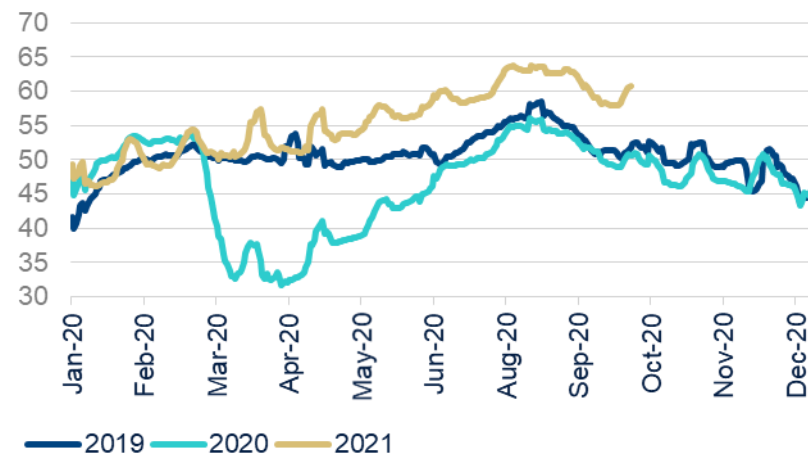
Factors to be reversed: increase in imports and expenditure composition

IMPORTS OF CONSUMER GOODS AND HOUSEHOLD CONSUMER EXPENDITURE (CURRENT PRICES)



Source: BBVA Research based on INE data.

EXPENDITURE WITH SPANISH CARDS* ON SERVICES (% TOTAL EXPENDITURE)



*Spending with BBVA-issued cards plus spending by non-customers at BBVA POS terminals. A purchase is classified as goods or services based on the business activity, not the product purchased. It is therefore only an approximation of the expenditure structure.

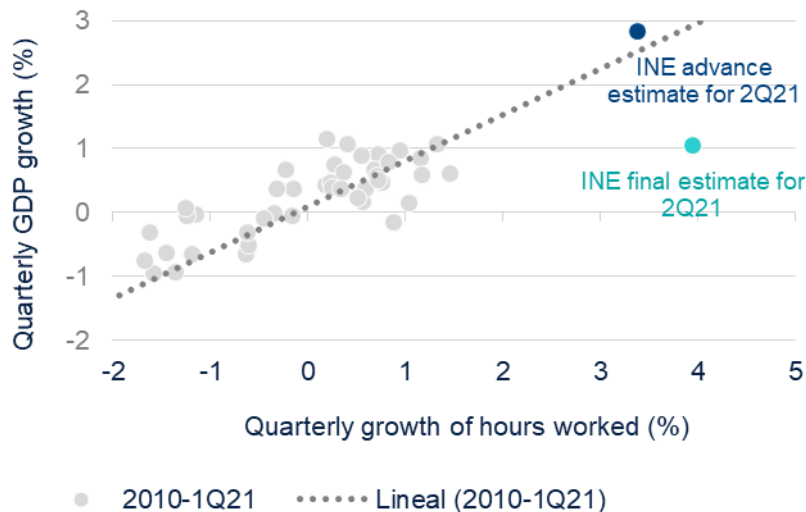
Source: BBVA Research based on BBVA data.

Trade balance and national accounting data show an abnormally high increase in consumer imports. The increase that has been observed in the share of services in total expenditure makes it unlikely that this situation will continue.

GDP growth in 2021 is revised downward to 5.2%.

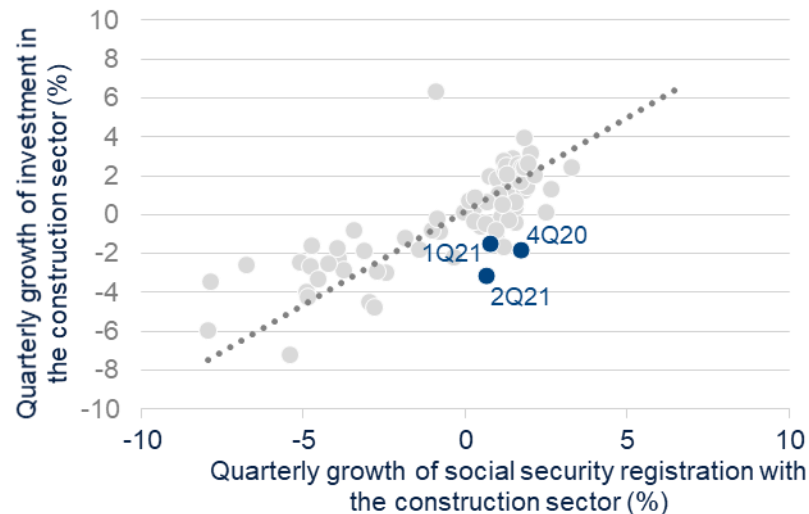
Reversing factors: employment performance and macroeconomic aggregates

GDP AND HOURS WORKED



Source: BBVA Research based on INE data.

CONSTRUCTION INVESTMENT AND CONSTRUCTION SOCIAL SECURITY REGISTRATIONS(% Q/Q)



Source: BBVA Research based on INE and MISSM data.

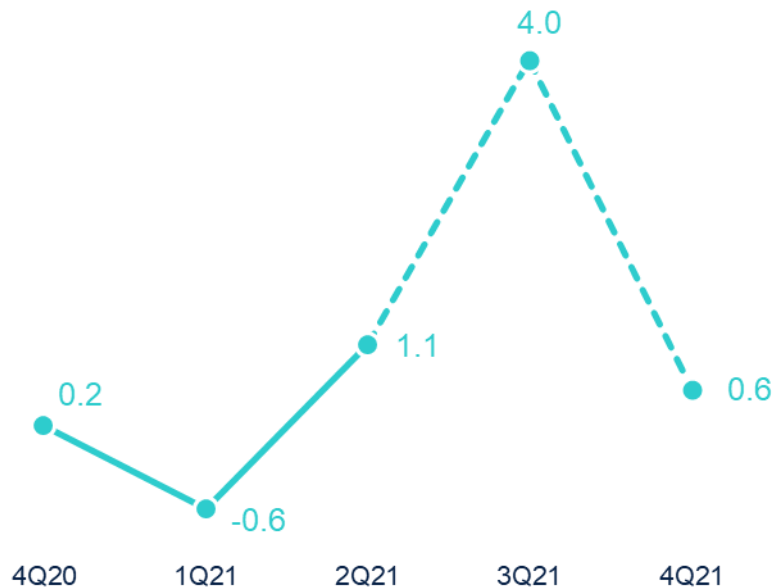
The reinstatement of activity since the Temporary Redundancy Plans (ERTEs), as well as the increase in hours worked that this implies, together with the increase in employment in some sectors, seems inconsistent with several aggregates of expenditure and activity. Particularly noteworthy were the decline in productivity in 2Q21 and in construction investment in the last three quarters.

GDP growth in 2021 is revised downward to 5.2%

Rebound in 2H21: recovery in productivity and improvement in consumption and exports

GDP VARIATION

(%, Q/Q)



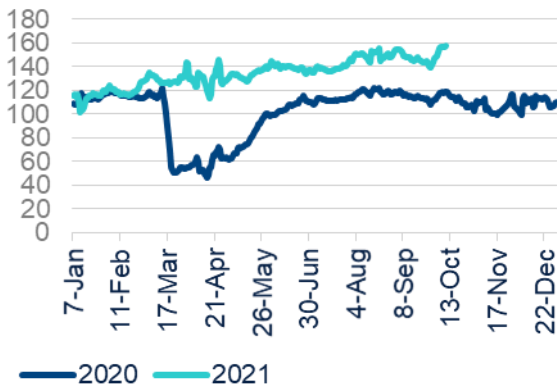
- The decline in productivity recorded in 2Q21 is **expected to reverse**, which should boost the economy beyond what the economic data suggests.
- **Household consumption remains strong, mainly in services.** The increase in tourism expenditure, both domestic and foreign, together with the advance in goods exports, should drive the rebound in GDP.
- **Imports should see slower growth**, more in-line with the composition of household expenditure.

GDP growth in 2021 is revised down to 5.2%

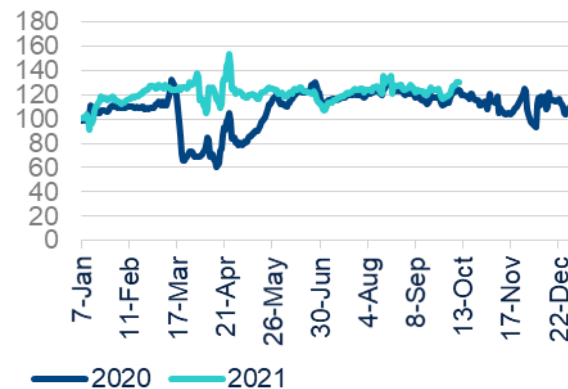
Rebound in 2H21 driven by strong consumer expenditure, especially in services

COMPOSITION OF EXPENDITURE WITH SPANISH CARDS* (SAME WEEK OF 2019 = 100)

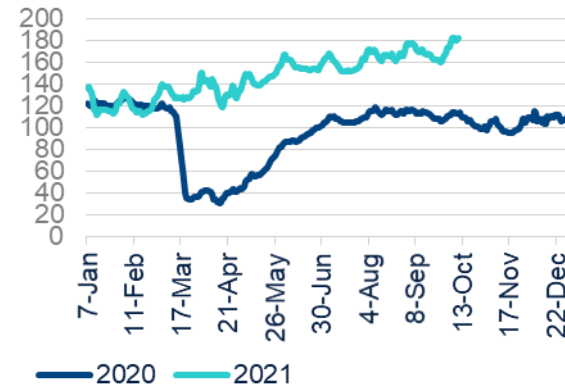
TOTAL



GOODS



SERVICES



*Spending with BBVA-issued cards plus spending by non-customers at BBVA POS terminals.

A purchase is classified as goods or services based on the business activity, not the product purchased. It is therefore only an approximation of the expenditure structure.

For more information, see [The COVID-19 impact on consumption in Spain in real time and high definition in Sept 21](#).

Source: BBVA Research based on BBVA data.

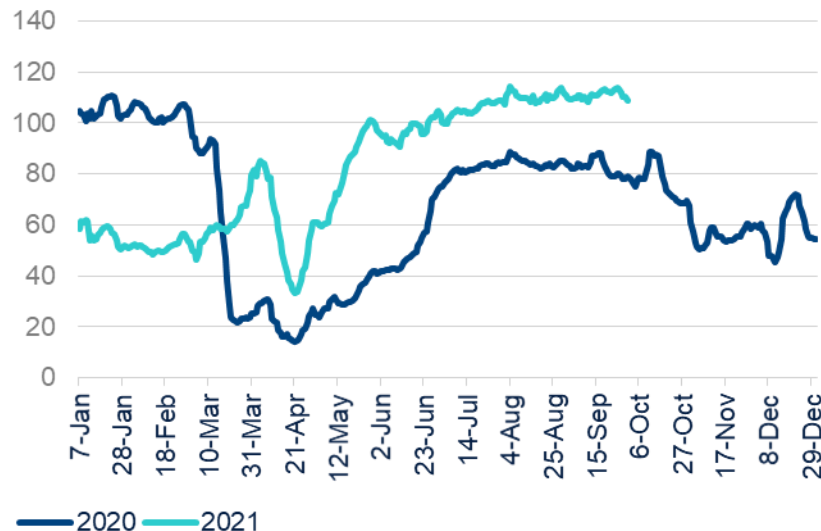
In addition to the easing of restrictions and the increased security to spend in social environments, the increase in consumption is explained by a reduction in savings and an improvement in employment, which has particularly benefited bars and restaurants, accommodation, transport and leisure.

GDP growth in 2021 is revised down to 5.2%

Rebound in 2H21 driven by strong consumer expenditure, especially in services

IN-PERSON EXPENDITURE WITH CARD OCCURRING OUTSIDE THE USUAL PROVINCE OF RESIDENCE*

(COMPARED TO SAME WEEK IN 2019 = 100)



- The removal of restrictions and the end of the state of alarm have **increased people's expenditure outside their usual province of residence.**
- Reduced uncertainty regarding health indicators has allowed **expenditure by domestic tourists to exceed levels observed the previous year.**
- In addition, international travel restrictions, particularly in the Eurozone, are **redirecting resources toward domestic tourism.**

*Spending with BBVA-issued cards. Includes spending abroad by Spanish residents.

Easter dates: 2019: Apr 13–21; 2020: Apr. 4–12; 2021: Mar 27–Apr 4.

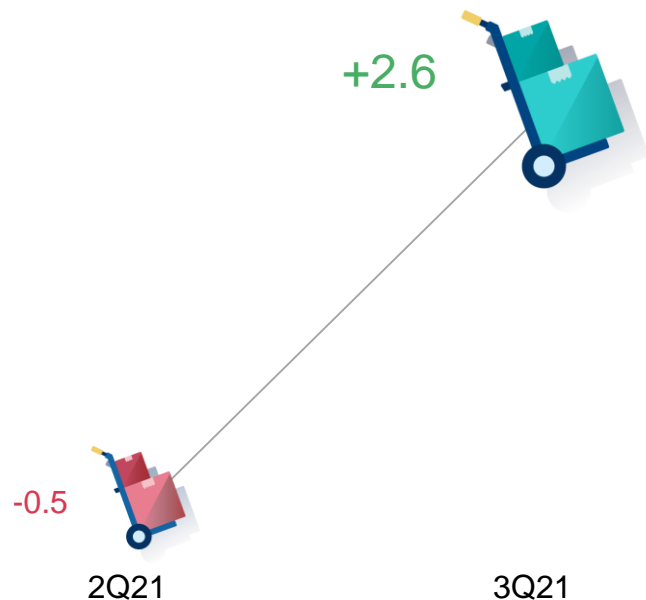
For more information, see [Analysis of domestic tourism flows in real time in Sept 21](#).

Source: BBVA Research based on BBVA data.

GDP growth in 2021 is revised downward to 5.2%

Rebound in 2H21: goods exports contribute positively to growth

VARIATION IN EXPORTS (% Q/Q)



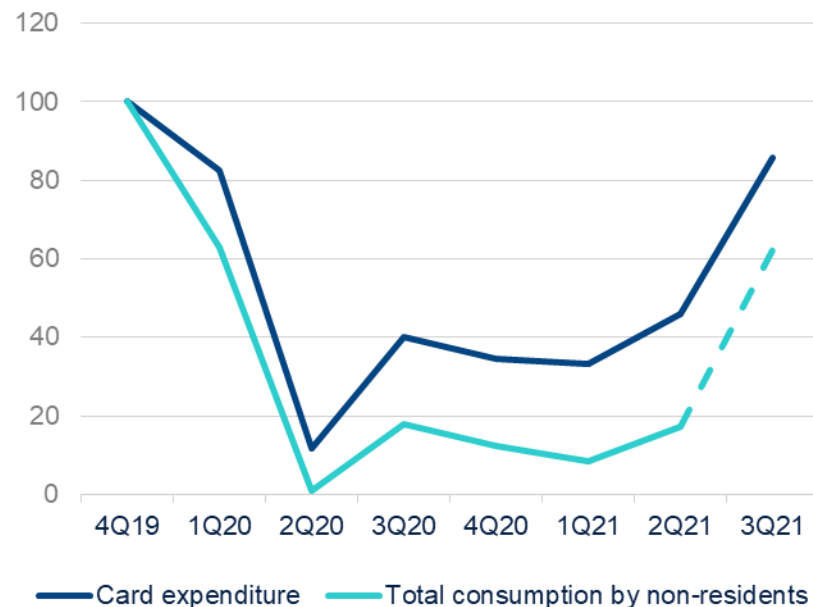
- After declining in June, goods exports grew in July...
- ... in line with the improvement in economic activity of its main trading partners (the Eurozone, United Kingdom and the rest of Europe).
- By type of goods, exports of intermediate and capital goods increased, while consumer goods exports remained weak.

GDP growth in 2021 is revised downward to 5.2%

Rebound in 2H21 due to recovery in the export of services

IN-PERSON EXPENDITURE WITH FOREIGN CARDS AND NON-RESIDENT CONSUMPTION

(SAME QUARTER IN 2019 = 100)



Note: purchases with foreign-issued cards at BBVA POS terminals.

Source: BBVA Research, based on BBVA and INE figures.

- Progress in controlling the pandemic in Spain and in tourists' countries of origin, the increase in international travel and improvement of the European economy are driving the recovery of foreign-tourist expenditure, especially in the regions that depend most on it.
- In any case, this recovery is from a low starting point: purchases with cards issued by foreign entities grew in 3Q21 to around 80% of the level observed in the same quarter of 2019.

Going forward, resolving uncertainties will be key

Investment affected by higher price of inputs...

IMPACT OF THE UPWARD REVISION OF OIL PRICES ON GDP GROWTH

(DEVIATION FROM BASELINE SCENARIO IN PP)



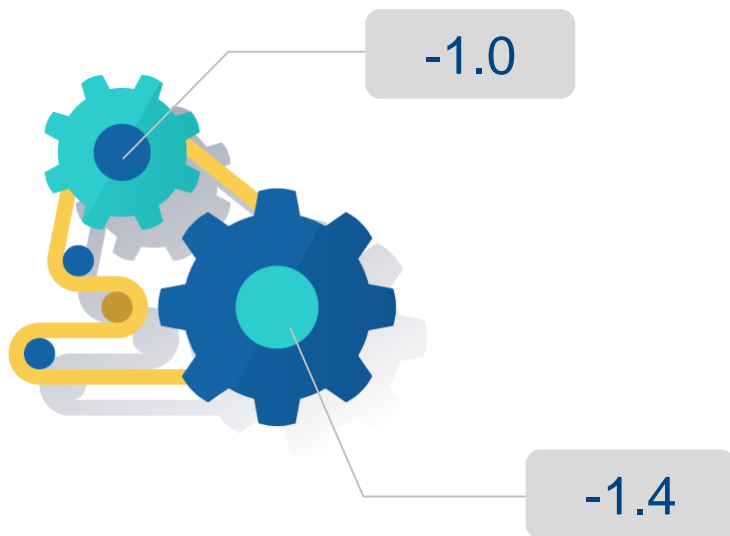
- The increase in oil prices is a response to the improvement in demand, but also to an insufficient response on the supply side.
- Estimates indicate that, given Spain's energy dependence, **the increase in oil prices** in the last quarter compared to our forecasts **will subtract 0.1 pp from growth in 2021 and 0.3 pp in 2022.**

Going forward, resolving uncertainties will be key

Investment affected by bottlenecks...

IMPACT OF BOTTLENECKS ON GDP GROWTH IN 2022

(PP OF GDP)



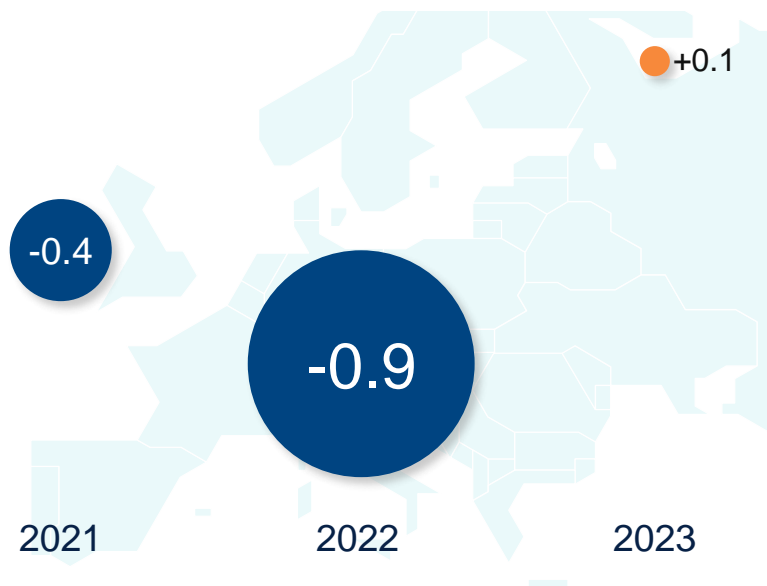
- Bottlenecks affecting global value chains are conditioning manufacturing output and increasing industrial prices.
- Indicators suggest that supply problems have increased during 3Q21, and it cannot be ruled out that the containment of margins is limiting their impact on activity.
- They are expected to persist during 1H22, which will have a negative impact on growth in 2022 (between 1.0 and 1.4 pp of GDP)...
- ... and a limited impact on inflation.

Going forward, resolving uncertainties will be key

Investment affected by the downturn in the international environment...

IMPACT OF THE CHANGE IN THE EUROPEAN SCENARIO ON EXPORTS

(PP OF ANNUAL GROWTH RATE)



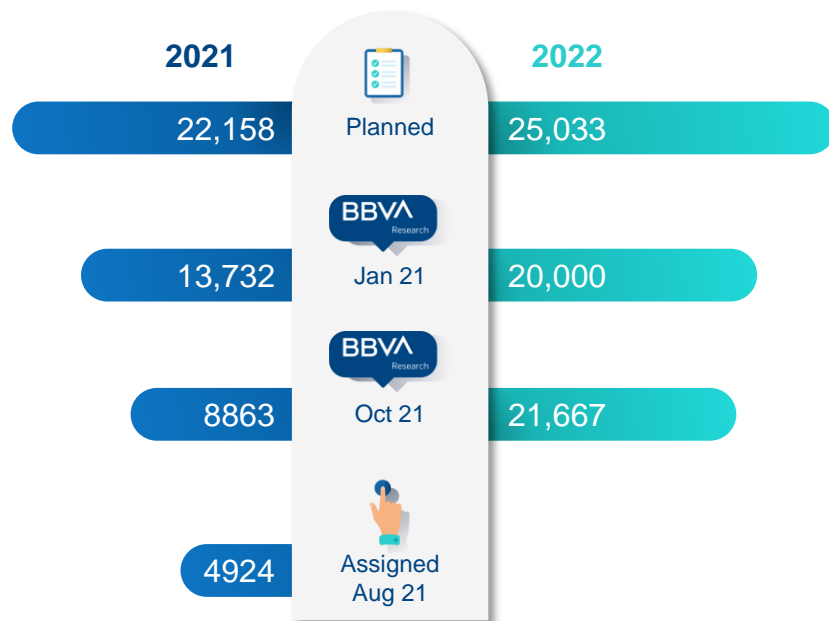
- The effect of bottlenecks and rising input prices is also **slowing down the global economy**.
- The data available so far points to a **greater moderation in GDP growth** than expected three months ago in Europe.
- This **negative inertia** in the Eurozone will slow the growth of sales of goods and services worldwide.

Going forward, resolving uncertainties will be key

Investment affected by the delay in the implementation of the NGEU

RECOVERY PLAN: ABSORPTION OF EXPENDITURE

(BILLIONS OF EUROS)

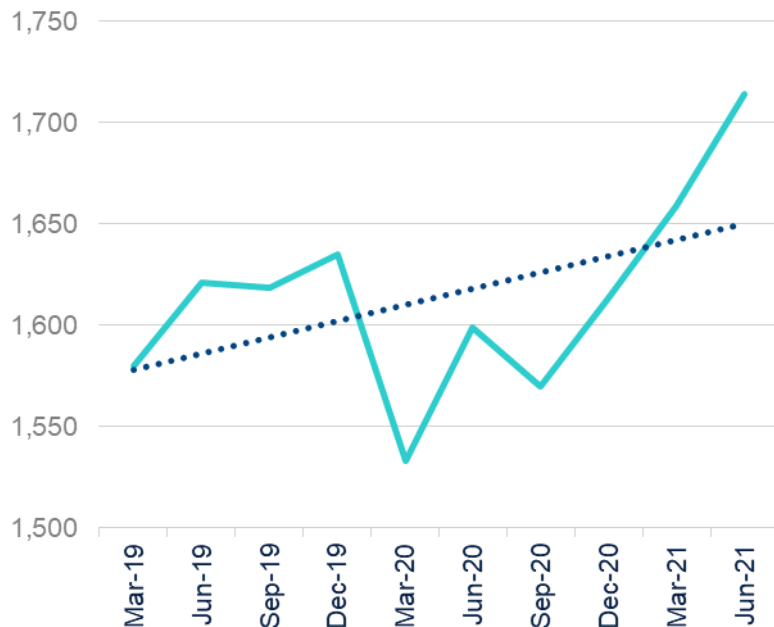


- The release of NGEU funds is slower than expected, which could be weighing down investment growth.
- Based on current information, as of August 2021 the central government had made disbursements under the Spanish's Recovery and Resilience Plan for an amount equivalent to 22% of the total scheduled for 2021.
- At the beginning of the year, it was estimated that only EUR 10–15 billion would be executed. It is now considered unlikely that the lower end of that estimate will be reached.
- The delay in the expenditure of funds in 2021 should boost implementation in 2022 and 2023.

In 2022, GDP will grow 5.5%

Significant accumulated savings could boost consumption

SPAIN: NET FINANCIAL WEALTH OF HOUSEHOLDS (BILLIONS OF EUROS)



Source: BBVA Research based on INE data

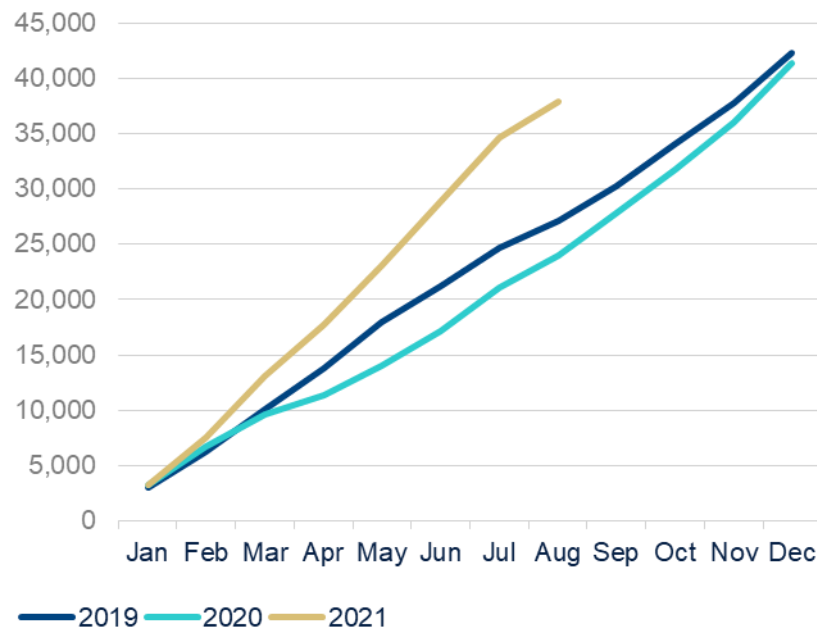
- Although savings have declined, they remain above the values observed on average over the last 20 years.
- In addition, there is a pool of accumulated financial wealth available that can be used to support expenditure, both on consumption and home purchases.
- The uncertainty regarding the pension system, the possible tax reform, the profile of those who concentrate wealth are factors that point to the fact that the saving rate will not fall below historical average levels in the short term.

In 2022, GDP will grow by 5.5%

Home sales have recovered their pre-pandemic performance.

NEW MORTGAGE LOANS

(ANNUAL ACCUMULATED, MILLIONS OF EUROS)



- The low return on risk-free assets and changes in household preferences would redirect part of accumulated savings to residential investment.
- Between January and August 2021, the mortgages showed the best start to the year since 2010. Meanwhile, the sale of single-family homes increased 57% y/y in the first eight months of 2021.
- The fundamentals of the sector are better than in the past: the price adjustment has been lower than in other recessions, there are no imbalances, while companies and households are in a more comfortable financial position.

In 2022, GDP will grow by 5.5%

Main economic policy decisions that support growth

Extension of ERTes



Extension of ERTes conditioned to training: in line with BBVA Research recommendations, this generates certainty for workers in the coming months and facilitates the transition between sectors.

Energy prices



Measures to contain the rise in energy prices: these will provide temporary relief for households and companies. However, they represent a source of legal uncertainty in the sector.

Recapitalization funds



Change in the conditions for accessing company recapitalization funds and the foreseeable extension of the extraordinary period of direct aid under European regulations: this facilitates the arrival of resources to companies that have increased their indebtedness beyond what is desired.

Public policies



Creation of a public policy evaluation office within the Independent Authority for Fiscal Responsibility (AIReF): it should contribute to improving the effectiveness and efficiency of economic policies.

In 2022, GDP will grow by 5.5%

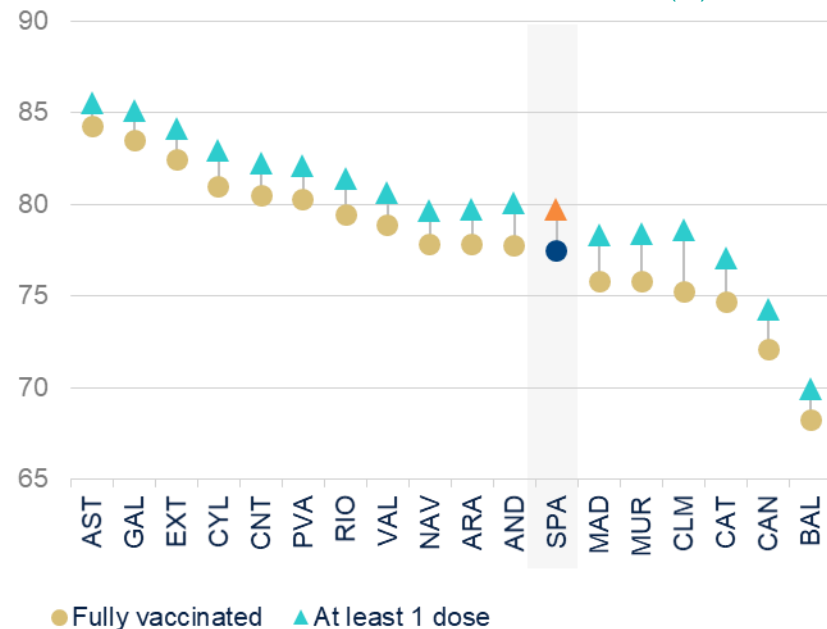
National Budget 2022

- The draft National Budget for 2022 continues with the expansionary fiscal policy initiated with the previous budgets and maintains an expenditure ceiling at historic highs. This is reasonable, using the space allowed by the suspension of fiscal rules in Europe and the cyclical situation of the economy.
- Revenue projections are optimistic using BBVA Research economic scenarios. In any case, revenue collection has been surprisingly positive since the beginning of the crisis.
- Increases in taxes or in the maximum Social Security contribution bases do not provide certainty in an environment where the pre-pandemic level of activity has not yet recovered and add an additional cost to companies.
- The indexation of pensions to the CPI and the repeal of the sustainability factor, without the approval of an intergenerational equity mechanism, pose a risk to the sustainability of the system. The reduction of incentives to save through pension plans is also not a positive factor.
- Indexing public wages to the CPI may contaminate private wage bargaining. Since most inflation is explained by the increase in the price of a single component (electricity), this would be a further downward pressure on company margins.

Risks

With most of the population vaccinated, the risk comes from the outside.

SPAIN AND THE AUTONOMOUS COMMUNITIES: FULLY VACCINATED POPULATION AND POPULATION WITH AT LEAST ONE DOSE (%)



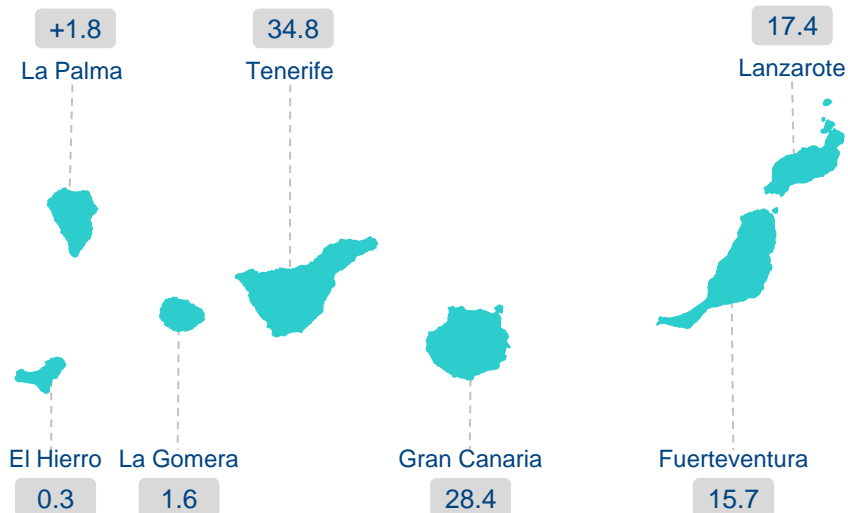
- Spain has set an example in the progress of vaccination, but there are concerns about immunity on a global scale, since...
- ... it reduces demand for Spanish goods and services and keeps the likelihood of disruptions in value chains high.
- There may be mutations of the virus that are more contagious or for which the vaccines developed are not effective, reason why a global effort to vaccinate the entire population as soon as possible is necessary.

Risks

Volcano on the island of La Palma

HOTEL VACANCIES IN THE CANARY ISLANDS

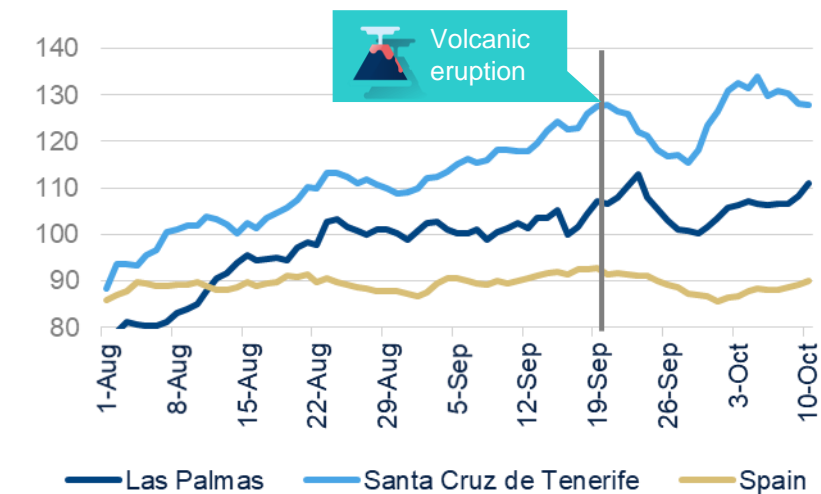
(% TOTAL, AVERAGE 2021)



Source: BBVA Research based on INE data.

WEEKLY IN-PERSON EXPENDITURE WITH FOREIGN CARDS BY DESTINATION

(SAME WEEK IN 2019 = 100)



(*) Card expenditure at BBVA POS terminals

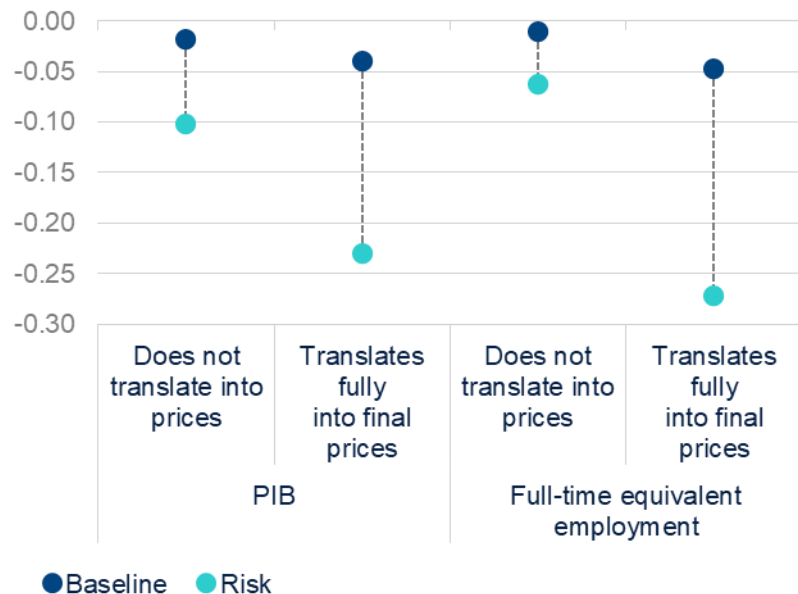
Source: BBVA Research based on BBVA data.

The eruption of the volcano on La Palma poses a risk to the perception of security offered by Spain more than the relevance of the island in the tourism sector. So far, no negative impact has been observed on card expenditure in the Canary Islands by foreigners as a result of these factors.

Risks

Price pressures will continue, although they are not expected to persist

ESTIMATED IMPACT OF THE NMW INCREASE IN OCT 21 (DEVIATION OF THE LEVEL FROM THE SCENARIO WITHOUT NMW INCREASE IN PP AFTER 4 QUARTERS)



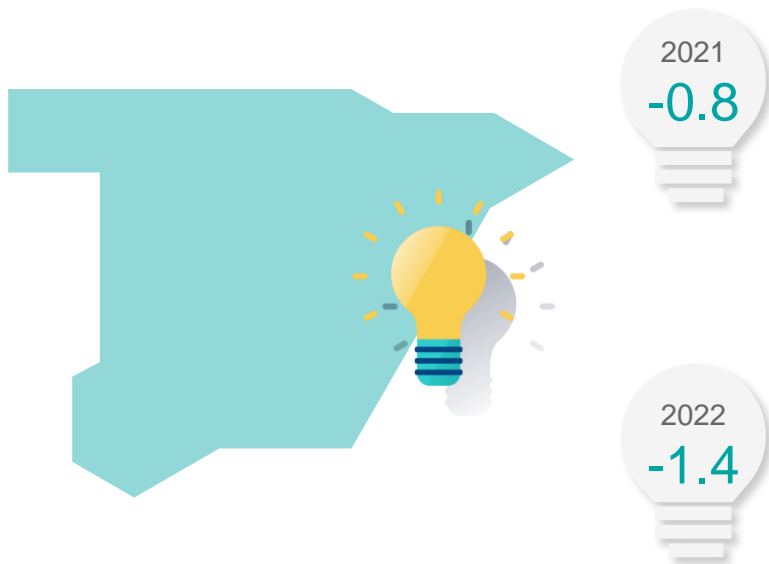
Source: BBVA Research based on INE data.

- The 1.6% increase in the national minimum wage (NMW) in 2021 will have little impact on activity and employment, except if companies pass it on to final prices and it affects the rest of the wage distribution.
- The increases in wage costs following the sharp fall in productivity in Q2, together with the increase in the input price and transport costs, is being absorbed, for the time being, by companies' margins.
- However, the indexation of public wages and other income sources may contaminate collective bargaining and lead to more negative scenarios.

Risks

Price pressures will continue, although they are not expected to persist

ESTIMATED IMPACT OF ELECTRICITY PRICE INCREASE (PP OF ANNUAL GROWTH)

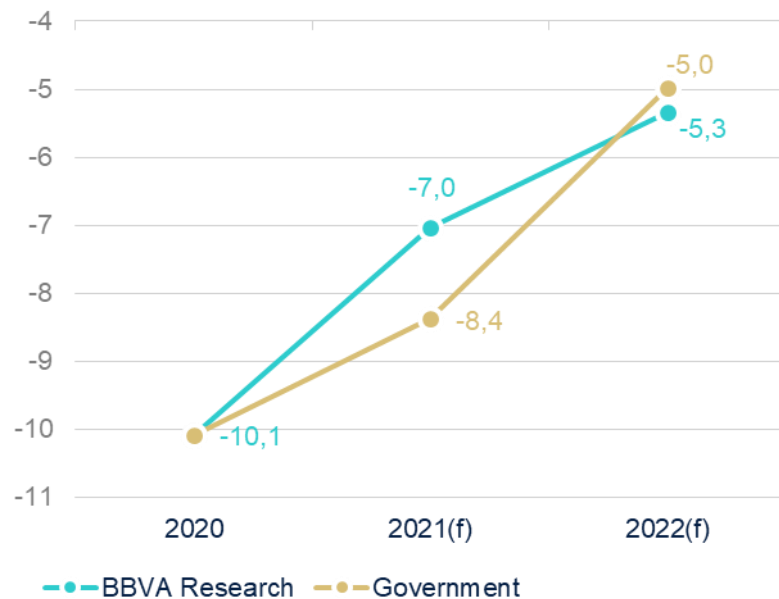


- The increase in CO2 emission costs and the increase in the price of gas have had a significant impact on the price of electricity.
- Despite the measures implemented by the Government, which have managed to contain part of the bill increase for households and businesses, uncertainty remains.
- BBVA Research estimates indicate that, in the absence of the upturns observed to date, GDP could grow by 1.4 pp more in 2021 (+0.8 pp in 2022).

Risks

With the suspension of tax rules, the public deficit will remain high

SPAIN: PUBLIC ADMINISTRATION DEFICIT (% GDP)

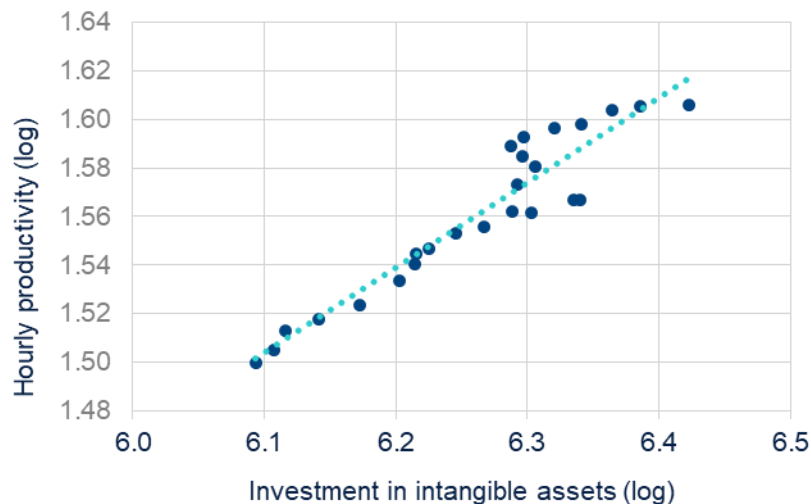


- The Government's public deficit and debt forecasts are somewhat more pessimistic in 2021 and more optimistic in 2022 than those of BBVA Research.
- With an optimistic macroeconomic scenario, reaching the deficit expected by the Government in 2022 would require an effort to contain expenditure that is not observed in the draft 2022 General State Budget.
- The "structural" primary (non-interest bearing) deficit, which remains high at around 3% of GDP and a level of indebtedness above 117% of GDP contribute to the fragility of the situation.

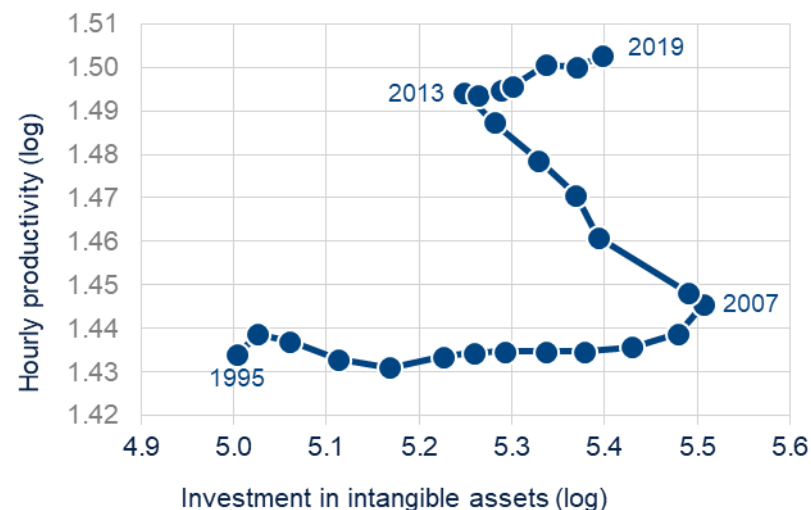
Risks

The importance of the NGEU in transforming the Spanish economy

EUROZONE: PRODUCTIVITY AND INTANGIBLE ASSETS



PRODUCTIVITY AND INVESTMENT IN INTANGIBLE ASSETS



More detail can be found in the report [Growth constraints: role of entrepreneurship, a key component](#).
Source: BBVA Research based on Eurostar and EU-Klems data.

The slow pace with which the funds relating to the NGEU program have been implemented is concerning. Over the coming months, the impact of these funds needs to increase and accelerate the achievement of their objectives. Among these, increasing productivity through digitalization should be a priority.

Risks

Not addressing the necessary measures



REFORM AGENDA

The government must continue to **make progress in fulfilling its commitments**, with ambitious reforms in accordance with the recommendations of the European Commission.



THERE IS A LOT AT STAKE IN SPAIN

Firstly, because it is in its own interest to seize this opportunity to create the conditions for a **more vigorous and sustainable recovery**.



CREDIBILITY AT STAKE

The ECB's intention to prevent the fragmentation of sovereign-debt markets may be disputed if any member of the monetary union fails to meet its **commitments**.

Spain Economic Outlook

4Q21

Going forward, resolving uncertainties will be key

Investment affected by bottlenecks...

Bottlenecks (1): SVAR identified using signs (differentiated by goods according to destination).

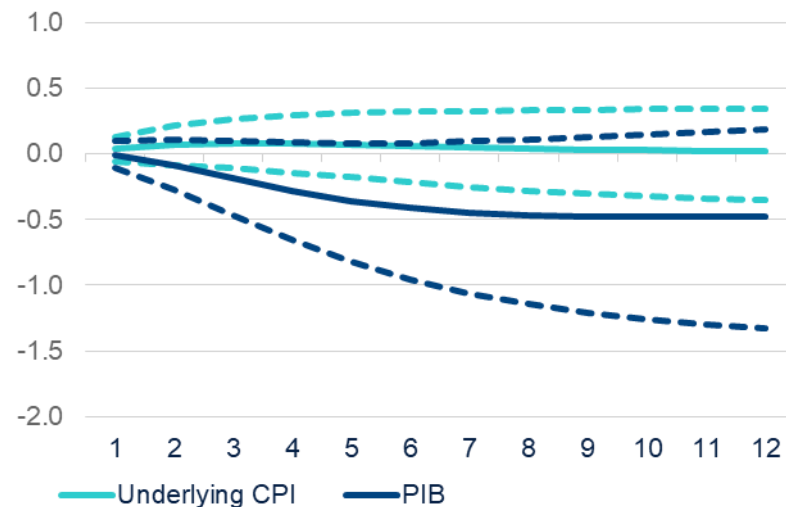
IDENTIFICATION VARIABLES AND CONSTRAINTS

VARIABLE	RESTRICTION
Industrial output of capital goods or intermediate goods	(-)
Capital goods or intermediate goods imports	(-)
Industrial prices of capital goods or intermediate goods	(+)
Capital limiting factors in manufacturing (survey)	(+)
Labor limiting factors in manufacturing (survey)	Not restricted
GDP	Not restricted
Core inflation	Not restricted

Source: BBVA Research

IMPULSE RESPONSE FUNCTION

(DEV. ON PP LEVEL)



Empirical evidence suggests that bottlenecks in output chains can have a significant impact on activity, both in Spain and in the Eurozone as a whole.

Going forward, resolving uncertainties will be key

Investment affected by bottlenecks...

Bottlenecks (2): SVAR identified using signs (total manufacturing sector)

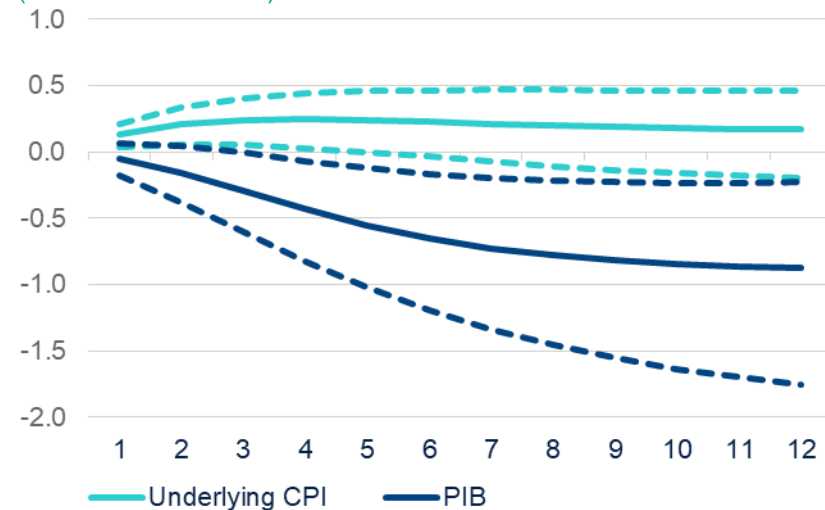
IDENTIFICATION VARIABLES AND CONSTRAINTS

VARIABLE	RESTRICTION
Industrial output	(-)
Goods imports	(-)
Industrial prices	(+)
Labor limiting factors in manufacturing (surveys)	(+)
Labor limiting factors in manufacturing (survey)	Not restricted
GDP	Not restricted
Core inflation	Not restricted

Source: BBVA Research

IMPULSE RESPONSE FUNCTION

(DEV. ON PP LEVEL)



Higher risk scenarios: the results may be more severe if we consider that the bottlenecks are generalized to the entire manufacturing sector.