Monetary policy at a crossroads

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Letter from the Editors

The recovery continues to gain traction in the EU and the outlook remains positive, despite lingering supply chain bottlenecks. The ECB has accordingly revised upwards its forecasts for both growth and inflation. Outside the EU, recent trends have been less favourable than anticipated due to the expansion of the Delta variant and intensification of labour shortages in the US and UK.

Under current perspectives, the main advanced economy central banks continue to see the spike in inflation as a transitory phenomenon underpinned by reversible factors such as the growth in semiconductor prices and tightening caused by the sharp turnaround of the global economy. The monetary authorities do not foresee significant changes in the factors underpinning low rates of inflation seen in recent years. Hence, the moves by the ECB and the Fed to become more flexible around their inflation targets so as to accommodate *ad-hoc* spikes. That said, although they are maintaining their positions, there is growing pressure for the main central banks to initiate tapering and a normalization of interest rates due to the increase in inflation.

Within this context, the September issue of *Spanish and International Economic & Financial Outlook (SEFO)* sheds some light on the recent increase in inflation and its impact. Specifically, we analyse the outcome of the ECB's recent monetary policy strategy review, as well as the Fed's new monetary policy strategy, announced last summer. In the case of the latter, we focus on possible repercussions for financial stability.

Annual inflation has been on an upward trajectory since the beginning of the year, with Spanish CPI increasing from negative readings in February to 3.3% in August. Rising input costs and the abrupt nature of the global recovery are primarily responsible for this trend. However, the pandemic has also accelerated nascent structural transformations, such as digitalisation and the green energy transition, entailing significant relative price changes. While energy costs have sharply risen, core inflation has remained more subdued, suggesting price growth is so far limited to imported goods, with many analysts viewing the rise in inflation as largely temporary. However, this outlook is based on three considerations relating to, first, the duration of supply chain bottlenecks and of the external cost shock, second, the possibility of second-round effects, and third, the evolution of inflation expectations. More broadly, rising inflation poses challenges for central banks. While their use of unconventional monetary policies helped reduce the impact of the crisis, it may have also constrained their ability to respond to a sustained period of inflation. Importantly, if markets perceive any weakening of central bank independence from governments' fiscal

policies, this could undermine the credibility of central banks and make it more difficult to maintain the low interest rate environment.

In the case of Europe, the ECB announced the results of its monetary policy strategy review in July. Significantly, the Governing Council has adopted a 2% symmetric inflation target. However, the way monetary policy makers push back against any deviation from their target is not symmetrical. The new strategy also envisions the eventual inclusion of owner-occupied housing in its inflation calculations, though this will not take effect immediately. The strategy introduces three constraints on the Governing Council's room for manoeuvre. One stems from the 'proportionality of its decisions and potential side effects'. The second is the need to preserve the function of the monetary transmission mechanism while the third relates to the need to maintain financial stability. Lastly, the new monetary strategy places the spotlight on monetary policy interest rates, while saying less about the use of other less conventional policy instruments, like direct asset purchases or TLTROs. The distinction between these instruments matters because the logic behind any recalibration can differ and because of their role in determining the proportionality of monetary action. Lagarde may have delivered on her promise to transform how the ECB makes monetary policy, however, she will face her first major test as the ECB seeks to unwind its unconventional monetary policy instruments.

In the US, last year, the Federal Reserve amended its monetary policy to provide it with greater flexibility in accommodating its dual mandate of price and financial stability, while also increasing symmetry around the inflation target. In analysing the possible effects of the change in the Federal Reserve's strategy, the trend in sovereign bonds is key. Since the Federal Reserve announced the change in its strategy in August 2020, the yield on 10-year Treasuries has increased by a little over 50 basis points, with medium-term bond yields widening by a little less. Analysis shows that nearly 83% of the movement in the bond yield until May is attributed to the shift in inflation expectations. In addition,

the term premium and real rate of interest have also exerted a structural upward impact on yields. Since the new strategy was announced, the US inflation figures have come in higher than expected while other factors (expansionary fiscal plans, vaccine announcements, *etc.*) make it hard to isolate the effect of the strategy shift on inflation expectations. Looking forward, it is likely that the new monetary policy environment will result in the 10-year US Treasury rising to a moderately high range of 2.25%-2.60%, which is unlikely to undermine financial stability.

The September *SEFO* then shifts attention over to the financial sector, in particular to the outcome of the European authorities' traditional stress tests on the European banking system, as well as provides some insights as to the debut of the ECB's climate stress tests scheduled for next year. On a related note, we assess possible explanations behind the phenomenon across banks of scant use of capital buffers during the pandemic, despite regulators' and supervisors' encouragement to do so.

This summer's European stress tests occurred at a time of shifting expectations for the European banking sector, including the return of dividend payments and a challenging monetary environment. The tests, which covered 75% of European banking assets, used the banks' common equity tier 1 (CET1) ratio as of year-end 2020 as their baseline and examined the period of 2021 to 2023. The regulators concluded that European banks have enough capital to withstand an adverse economic scenario. Banks' average CET1 ratio fell 5.2 percentage points under the adverse scenario, with credit risk, market risk, and income generation capacity the main drivers of capital depletion. The starting CET1 levels for the Spanish banks is generally lower, but capital depletion in the adverse scenario is also lower. This indicates that although the Spanish banks continue to present slightly below average capital ratios, they are more resilient than the average European bank. Importantly, the results of these tests will influence Pillar 2 Guidance and the Supervisory Review and Evaluation Process. On top of these pressures, banks will have to contend

with an uneven regulatory environment with FinTechs and growing sensitivity surrounding ESG-related issues.

The ECB's first round of climate stress tests in 2022 will consider two classes of risks stemming from climate change – physical risks and transition risks. To the extent that climate risks impact banks' ability to meet their capital requirements and execute their strategic plans, it is necessary to assess banks' resilience to different climate change scenarios. Importantly, these tests differ in several ways from the conventional biannual stress tests. Firstly, the ECB and not the EBA will design the tests, engage with banks and report the results. The climate tests will provide the supervisor with an initial assessment of the state of play in the banking system and an idea of its capital sufficiency in the event of adverse climate scenarios. Although the climate tests will apply to all significant institutions, there will be some variation. Notable changes are also anticipated, mainly affecting the banks' ability to identify relevant information related with the climate impact of their investment portfolios. Lastly, the scenario used will be determined by the Network for Greening the Financial System (NGFS). Given the novelty of the tests, coupled with data insufficiency and heterogeneity, it is likely that the results for the banks tested will vary widely based both on geographical location and sectors. Looking forward, the future integration of climate risks into the mainstream stress tests is a distinct possibility.

One of the fundamental new aspects of Basel III compared to its previous iterations is the introduction of capital buffer requirements. While most capital buffers are set either as a fixed amount or established during the supervisory cycle, the countercyclical buffer can be adjusted in a discretionary manner depending on economic trends. Due to the unprecedented nature of the COVID-19 crisis, regulators and supervisors permitted banks to utilise their capital buffers, including the countercyclical buffer. Despite also curbing dividend payments and committing to a generous timeframe to allow banks to replenish their initial capital positions, banks have not taken advantage of the more flexible treatment of capital buffers. Results from econometric analysis show a reduction in an entity's capital ratio is penalised by the market, confirming the hypothesis of a 'stigma effect'. However, if it is accompanied by a reduction in regulatory capital and the entities continue to hold the same margin over the minimum required, that penalty is mitigated. These findings suggest regulators should consider fine-tuning the current buffer system to increase releasability.

Finally, we analyse the impact of COVID-19 on Spain's external sector, particularly the extent to which the COVID-19 crisis has shifted the Spanish economy's international competitiveness, creating new opportunities for Spanish businesses. While the drop in Spanish imports and exports post-COVID-19 (close to 40% year-on-year) was comparable to the contraction sustained in the wake of the Global Financial Crisis of 2008, the rebound, with year-on-year growth in exports of over 70% in April 2021, has been far more dynamic. This raises the question of whether Spain is simply catching-up after trade flows were interrupted in 2020 or whether this is the beginning of a significant structural change in Spanish trading patterns. Although it is still too soon to provide a clear answer to that question, initial data point to a structural shift. Spain's long-standing non-energy trade deficit turned into a surplus in the first half of 2021. Additionally, the food industry was the sector which made the biggest contribution to the recovery in exports, fuelled mainly by non-EU markets. The fact that the food sector is a core component of Spain's export effort, and has a history of robust export oriented productive capacity, is a possible indicator of a structural improvement in the Spanish economy's international positioning.

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What´s Ahead (Next Month)

Month	Day	Indicator / Event
October	4	Social Security registrants and official unemployment (September)
	4	Tourists arrivals (August)
	4	Eurogroup meeting
	6	Industrial production index (August)
	11	Financial Accounts Institutional Sectors (2nd. quarter)
	14	CPI (September)
	19	Foreign trade report (August)
	21-22	European Council meeting
	28	Labour Force Survey (3rd.quarter)
	28	Preliminary CPI (October)
	28	ECB monetary policy meeting
	29	Retail trade (September)
	29	Non-financial accounts: Central Government, Regional Governments and Social Security (August)
	29	Non-financial accounts, State (September)
	29	Balance of payments monthly (August)
	29	GDP 3rd. quarter, advance estimate
November	3	Social Security registrants and official unemployment (October)
	3	Tourists arrivals (September)
	5	Industrial production index (September)
	8	Eurogroup meeting
	12	CPI (October)
	22	Foreign trade report (September)
	29	Preliminary CPI (November)
	29	Non-financial accounts: Central Government, Regional Governments and Social Security (September)
	29	Non-financial accounts, State (October)
	30	Retail trade (October)
	30	Balance of payments monthly (September)

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What Matters

33 Stress tests and other challenges for Spanish banks

The stress tests carried out by the European authorities showed that the Spanish banking sector looks highly resilient to adverse scenarios, despite the fact that the scenario modelled for Spain was among the toughest in the eurozone. Nevertheless, transition towards an even more stringent regulatory environment in terms of capital adequacy suggests that Spanish banks will have to continue to bolster their own funds over the coming years.

Santiago Carbó Valverde and Francisco Rodríguez Fernández

39 Banks poised for the ECB's debut climate risk stress tests

The ECB's climate stress tests slated for 2022 will differ from traditional stress tests in terms of governance, objective, methodology, scenarios and scope. Nevertheless, the ECB's deep engagement with this issue suggests a high probability that climate risks will be integrated into conventional stress tests in the future.

Ángel Berges and Jesús Morales, A.F.I.

49 Scant use of capital buffers during the pandemic: Potential stigma effect

In order to alleviate the pressure wrought by COVID-19 on the banking sector, regulators and supervisors permitted banks to utilise capital buffers prescribed under Basel III, including the so-called countercyclical buffer and the capital conservation buffer. Econometric analysis shows that the 'stigma effect' most likely explains banks' hesitancy to take advantage of this flexibility.

Javier Restoy and Ángel Berges, A.F.I.

57 **An analysis of Spanish exports post-COVID-19: An opportunity in times of change?**

Following the drop in international trade caused by COVID-19, Spain saw a strong rebound in exports. While it is too soon to say whether this marks a turning point for Spanish exporters, some early data point to a structural shift in Spain's trading patterns.

Ramon Xifré

Regulation and Economic Outlook

Key Facts

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The spike in Spain's inflation and its impact

The upward trend in Spanish inflation has been driven by rising input costs, the abrupt nature of the global recovery and nascent structural transformations accelerated by the pandemic. While the immediate effect is a slowdown in the pace of recovery, further ahead, if global inflation becomes sustained, the perception of central bank independence will be key.

Raymond Torres

Abstract: Annual inflation has been on an upward trajectory since the beginning of the year, with Spanish CPI increasing from negative readings in February to 3.3% in August. Rising input costs and the abrupt nature of the global recovery are primarily responsible for this trend. However, the pandemic has also accelerated nascent structural transformations, such as digitalisation and the green energy transition, entailing significant relative price changes. While energy costs have sharply risen, core inflation has remained more subdued, suggesting price growth is so far limited to imported goods, with many analysts viewing the rise in inflation as largely temporary. However, this outlook is based on three considerations relating to, first, the duration of supply chain bottlenecks and of the external cost shock, second, the possibility of second-round effects, and third, the evolution of inflation expectations. More broadly, rising inflation poses challenges for central banks. Although they are maintaining their positions,

" In Spain, CPI has gone from negative readings in February to 3.3% in August, a slightly more pronounced trend than in the rest of the eurozone. "

there is growing pressure for the main central banks to initiate tapering and a normalization of interest rates due to the increase in inflation. Moreover, while their use of unconventional monetary policies helped reduce the impact of the crisis, it may have also constrained their ability to respond to a sustained period of inflation. Importantly, if markets perceive any weakening of central bank independence from governments' fiscal policies, this could undermine the credibility of central banks and make it more difficult to maintain the low interest rate environment.

Introduction

Since early this year, prices have been rising sharply in Spain as in most advanced economies. The consumer price index has gone from registering negative rates throughout the pandemic to surpassing the targets set by central banks. Moreover, there has been a shift in expectations driven by

the acceleration in electricity prices and the worsening of supply chain bottlenecks. As a result, some prominent forecasters are even talking about the return of inflation as a major economic policy challenge and a threat to the period of moderation observed so far this century.

The purpose of this paper is, following a brief overview of the factors behind the run-up in prices so far, to examine the macroeconomic impact and the implications for economic policy, with a specific focus on Spain.

The prevailing inflation spike

The year-on-year rate of change in the consumer price index (CPI) has been on an upward trajectory since the beginning of this year. In Spain, CPI has gone from negative readings in February to 3.3% in August (Exhibit 1). The trend in the rest of the eurozone has been broadly similar. In

Exhibit 1   **CPI**

Year-on-year rate of change
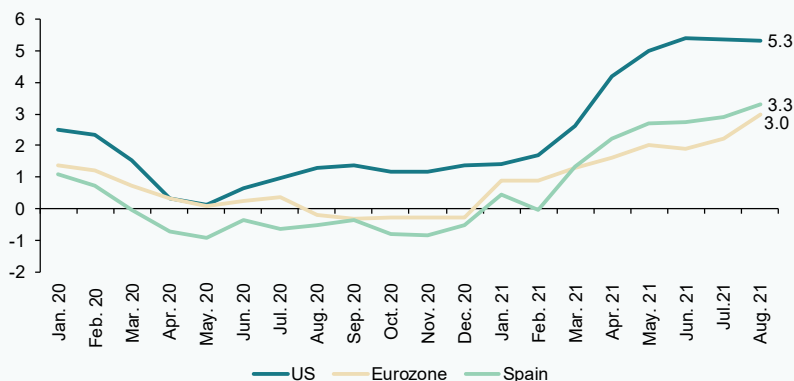
Sources: ECB and national statistics offices.

> " What is exceptional about this situation is the combination of growing price pressure with ongoing short-term rates at close to zero or even in negative territory. "

Germany, for example, year-on-year CPI is running at close to 4% according to the latest available data. And in the US, headline inflation is above 5%.

The current readings are still moderate with respect to the heady inflation of the 1970s (in Spain, CPI peaked at 28.4% in August 1977). They are also slightly below the inflation rates observed during the period of growth that culminated in the financial crisis. However, what is exceptional about this situation is the combination of growing price pressure with ongoing short-term rates at close to zero or even in negative territory (Table 1). [1]

Supply-side factors are behind this trend, specifically the rising costs for all manner of natural resources and supplies because of the pandemic. The international metals index has increased by 26% year-to-date, while the food price index is up 14.4%. Energy prices have also shot up by 35%, with gas prices having doubled (Exhibit 2).

The driving force of these price jumps is the abrupt nature of the global recovery. During the "hard" lockdown, supply contracted in key sectors such as technology parts. In the case of natural resources, the downward trend in productive capacity due to underinvestment was exacerbated by the pandemic. In such a context of limited supply, the sudden rebound in global demand for goods from the first quarter of 2020, spearheaded initially by China and followed later by the US, has generated supply frictions and delays in international shipping. All of which has made the price of imported supplies more expensive.

Additionally, the pandemic has accelerated pre-crisis structural transformations, such as digitalisation and the green energy transition. The alteration of consumption patterns and working arrangements (surge in online commerce, teleworking, *etc.*) spurred sharp growth in demand for digital products. By the same token, the stimulus measures, in tandem with growing awareness of the consequences

Table 1 **Interest rates during periods of inflationary stress**

	2003-2007 average	Jul. 2008	Nov. 2011	Aug. 2021
Spain				
Interest rate	4.0	5.9	4.0	1.4
CPI	3.2	5.3	3.5	3.2
Difference	0.8	0.6	0.5	-1.8
Eurozone				
Interest rate	4.4	5.5	4.0	1.3
CPI	2.1	3.9	3.0	3.0
Difference	2.3	1.6	1.0	-1.7

Note: The interest rate refers to loans to the non-financial private sector with a maturity of more than one year.
Sources: ECB and Funcas.

Exhibit 2

Global price of natural resources (2010=100) and of CO$_2$ in the EU
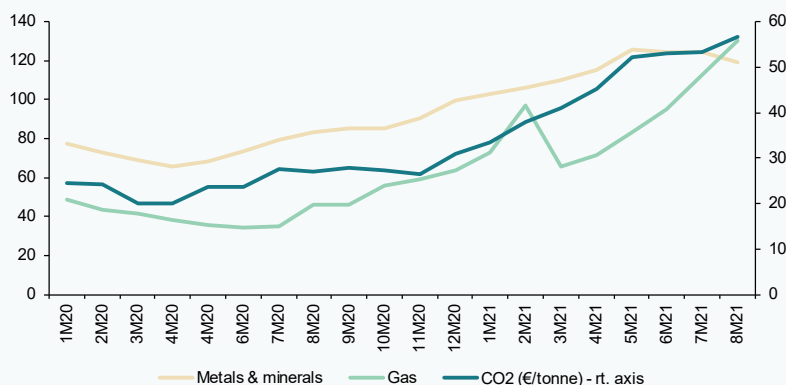
Sources: World Bank and EMBER.

of climate change, have shone the spotlight on renewable energies and the need to decarbonise. The price of CO$_2$ has doubled so far this year (Exhibit 2). The green transition is also responsible for the increased demand for metals such as copper, cobalt, magnesium and lithium.

Stress in the markets for natural resources, energy products and technological parts has spilt over to production costs (Exhibit 2). According to the purchasing managers survey for Spain, the industrial production cost indicator, which was in negative territory at the end of 2020, is under increasing pressure (the industrial purchase price PMI reached 80 in May, close to the series' high). In the case of services, purchaser prices are also heading north, albeit with somewhat of a lag compared to industrial prices (PMI of 61). Industrial prices, meanwhile, continue to climb higher. In August, energy prices registered year-on-year growth of 41.6%, while non-energy

industrial prices rose by 8.4% -the fastest pace since 1985.

The impact on core inflation and the economic recovery

The upward trend in production costs is spilling over to the CPI, but only partially, for now. The energy component of the CPI index is registering sharper growth. Stripping out the step effect, shaped by the anomalous price depression that characterised the lockdown, the trend remains ascendant. Since January, the energy CPI has been rising at an average monthly rate of close to 1%.

The other components of the index, however, have barely moved (Exhibit 3). Excluding energy products, CPI is still at under 1% per annum, just 0.2 percentage points above the year-end 2020 level. The goods CPI is at even lower levels, suggesting that producers are not passing along the increase in costs to their customers, assuming margin compression

" Excluding energy products, CPI is still at under 1% per annum, just 0.2 percentage points above the year-end 2020 level. "

Exhibit 3   **Core inflation**

Year-on-year rate of change
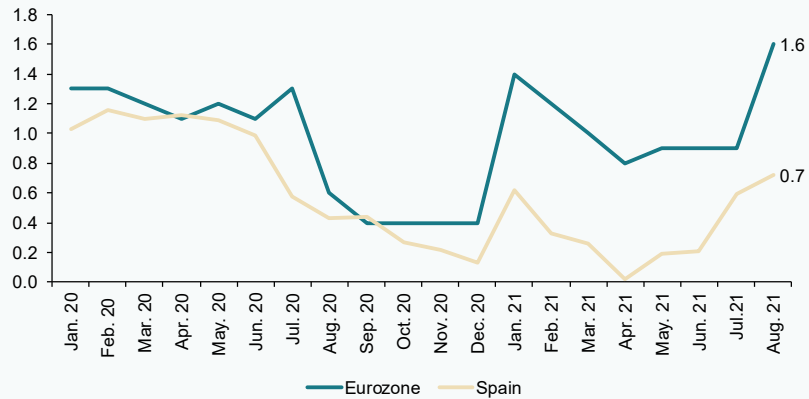
Sources: INE and Eurostat.

instead. Nor are services showing any clear signs of inflation.

Other indicators also point to limited passing on of the rise in external costs to internal prices. For example, the GDP deflator extended its path of muted growth of around 1% per annum (with data until the second quarter).

Wage growth is similarly moderate. The wage cost index and the collective bargaining agreements negotiated since the start of the year reveal slower growth than observed during the period of zero inflation. The result

is a loss of purchasing power, especially for less affluent households, where the incidence of energy and food spending is higher.

It is therefore too soon to talk about an inflationary process in Spain or the rest of the eurozone; rather we are seeing growth in the prices of essentially commodities and imported goods. This is akin to an external shock, which erodes the real income of enterprises, by squeezing their margins, and of households, by eating into their purchasing power. That is why most analysts are predicting that the inflation shock will

Table 2   **Impact of spike in CPI in 2021**

	Before the spike in CPI	After the spike in CPI	Difference (billions of euros)
Households			
Real disposable income (change in %)	1.8	0.9	-7.5
Pent-up savings (% of 2020 GDI)	8.2	8.0	-0.6
Non-financial corporates			
Energy costs (% of GVA)	5.9	6.4	11.3

Note: Refer to the text for the methodology.
Source: Funcas.

prove transient. The situation is different on the other side of the Atlantic, where there are more tangible signs of core inflationary dynamics. In some segments of the US labour market there are concerning shortages as well as an uptick in labour costs that depict a risk of a more protracted bout in inflation than in Europe.

Either way, the inflationary pressures are having an adverse impact on the recovery. The energy price shock is undermining households' purchasing power while eroding the real value of the surplus savings built up during the pandemic. In Spain, the loss of household purchasing power is estimated at close to 7.5 billion euros (Table 2). [2] On the corporate side, the effect is bigger, due to the significant impact of rising input costs on margins. The non-financial corporations are expected to forego at least 11.3 billion euros of profits as a result of the price shock. Naturally,

companies can increase their sales prices to offset the margin contraction. However, that would only exacerbate the loss of purchasing power in the household segment.

Outlook for inflation and economic policy challenges

Although core inflation remains relatively low for now, the outlook hinges on three considerations. Firstly, the external cost shock could last for longer than currently anticipated. The green energy transition requires adjustments that will take time, intensifying the scarcity of certain inputs and putting upward pressure on energy prices. Funcas estimates that Spanish CPI will continue to climb higher, reaching 4% this autumn, before starting to trend lower as prices soften. However, if the energy markets are less benevolent, the impact would be significantly higher (Exhibit 4). ECB projections for the eurozone also assume

Exhibit 4   **Projected CPI with and without persistent increases in electricity prices**

Percentage
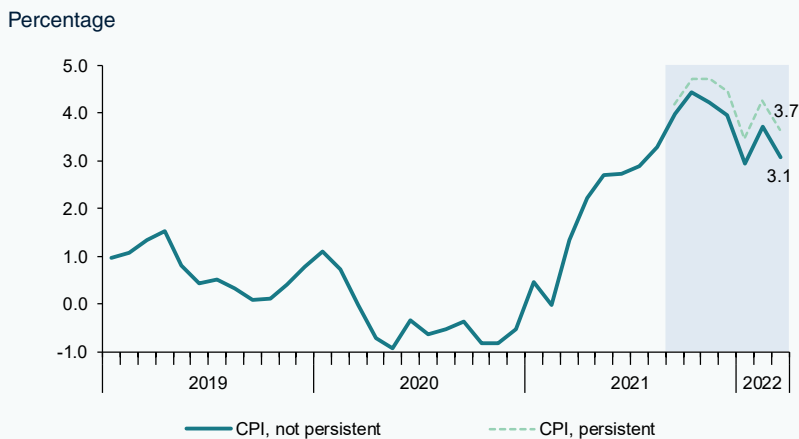
Note: The 'not persistent' scenario is based on the assumption that electricity will fall back by 15% between now and year-end. The other scenario assumes electricity prices remain constant at current levels.

Source: Funcas.

> " In Spain, where unemployment is still above 16%, the prospect of greater wage pressure is improbable for the labour market as a whole. "

the inflationary impact will be transient. The consensus forecast, too, is that inflation will fall below the ECB's target in 2022. However, those forecasts are predicated on the belief that the pressure on production costs will ease.

Elsewhere, the bottlenecks in the semi-conductor sector could linger, at least until the recent incentives to support capacity growth take effect. These incentives include the US sector recovery plan estimated at $30 billion, plans to set up a manufacturing facility in Germany, and new investments in existing factories in Asia.

Secondly, much depends on second-round effects. So far, although businesses could also offset the increase in their costs by hiking their sales prices, the current competitive environment is keeping a lid on things. However, if competing firms were to simultaneously raise prices, this could unleash a spiral of price hikes.

Similarly, wage-earners could demand compensation for the loss of purchasing power. A lot depends on their bargaining power vis-à-vis the companies. In Spain, where unemployment is still above 16%, the prospect of greater wage pressure is improbable for the labour market as a whole. However, the situation is different in other countries within the eurozone. In Germany and France, for example, some hospitality firms are finding it hard to hire skilled labour, while in construction, one of the sectors benefitting the most from the recovery, there is a chronic shortage of tradespersons. These pressures could spill over to the entire eurozone. Likewise, in the US, such demands could prevail in the high-tech and services sectors where labour is scarce. For now, unemployment and/or inactivity are still above pre-pandemic levels, evidencing considerable slack productive capacity. But hysteresis effects and rapid changes in the demand for certain skills could change the picture in low-unemployment economies.

Thirdly, expectations play a vital role and are as important, if not more so, than supply supply-side factors. According to the Bank of International Settlements (BIS), agents take their price and salary decisions based on the expectation that inflation will be low. [3] Those expectations are the result of monetary policy credibility, earned during the 1980s battle against the high inflation 'regime'. However, if expectations were to become unanchored, inflation could come out of its long hibernation and get stuck around levels that are far higher than those observed in recent decades.

In this regard, it is important to remember that a key facet of advanced economies' deflationary policies during the 1980s was the decoupling of monetary policy from fiscal policy. Previously, it had been fairly common for governments to raise financing directly by means of cash advances and other liquidity injections from the central banks. However, in the 1980s, central banks switched their focus to their financial stability mission, leaving governments to finance themselves via the financial markets, mainly by issuing public debt securities. Thanks to the strict separation of monetary policy from fiscal policy, the central banks gained credibility, facilitating the unwinding of inflation expectations. The flip side of the coin was the abrupt increase in interest rates during the years of transition towards low inflation, weighing on output and employment.

Nowadays, legal requirements protect central banks' autonomy. For example, the treaty establishing the ECB limits the scope for monetising the public deficit. In practice, however, the policy mix has changed following the use of unconventional monetary measures (such as the buyback of

public bonds in the secondary markets and keeping rates at negative levels) during the financial crisis. While those instruments are compatible with the legal framework that safeguards the ECB's autonomy, their use for such a protracted period of time may have had unintended effects that curtail the effectiveness of monetary policy. These include the emergence of zombie firms kept alive by ultra-low rates, and weaker incentives for balanced budgets. It has also interfered with the interest rate structure, making it hard to allocate funds to the more productive sectors. The pandemic crisis has forced the authorities to intensify their use of quantitative easing to support governments' financing of business support measures.

Greater coordination between monetary and fiscal policies has been the right decision given the severity of the crisis. However, it has reduced the margin for monetary policy manoeuvre in the hypothetical event

of an inflationary episode (Exhibit 5). In the eurozone, for example, tighter monetary conditions would increase the cost of public debt and force governments, particularly the more indebted ones, to make significant fiscal adjustments that would certainly end up hurting the recovery. Zombie firms, on the other hand, would disappear in relatively short order, hurting the banks' asset quality. Lastly, the rolling back of the debt purchase programme and other quantitative easing measures would bring the monetary union's shortcomings to light. That union remains incomplete, despite long-promised reforms such as the European deposit insurance scheme. The Next Generation EU plan, focused on transforming the European economy, will not be able to replace a more accommodative monetary policy or play a sufficiently stabilising role. The risk of financial fragmentation, therefore, would increase and, with it, the risk premiums weighing on the more indebted economies, such as Spain.

Exhibit 5   **ECB consolidated balance sheet**

Millions of euros
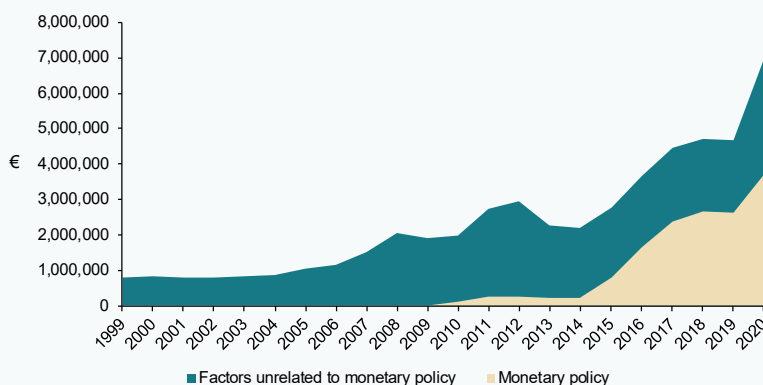
Source: ECB.

> " For now, the rise in production costs is not generating an inflationary cycle in internal prices and wages in Spain or in the rest of the eurozone. "

Central banks would therefore be in a bit of a bind if inflation proved long-lasting. They would undoubtedly react with moderation, as much of the economy depends on rates remaining low. However, central banks also have to stick to their monetary stability commitments, which include independence with respect to fiscal policy, so as to not unanchor expectations.

There are few signs that markets have priced in the risk of fiscal dominance. Yields on public debt have increased, as have the inflation expectations implicit in swap rates, but the adjustment looks small, no doubt thanks to the credibility of central banks built up over the years.

In short, the developed world's main central banks believe the current bout of inflation will prove transient and will not require a shift in their current monetary policy direction. [4] It is true that the rise in the CPI in recent months essentially reflects the higher cost of natural resources, energy products and technological supplies as a result of the sudden and simultaneous global recovery. For now, therefore, the rise in those production costs is not generating an inflationary cycle in internal prices and wages in Spain or in the rest of the eurozone. Looking forward, however, the unanchoring of inflation expectations cannot be ruled out: it all depends on how long the current episode of higher costs last and, above all, on the markets' perception of the central banks' level of dependence with respect to the various states' fiscal policies. Perceived excessive fiscal dominance would undermine the credibility of the financial stability target and make it hard to control inflation in the face of external cost shocks, such as those currently playing out. All of which highlights the need for the central banks to build buffers and embark on a gradual reversal of

their crisis-related monetary measures as the recovery gains traction.

Conclusion

The spike in prices is attributable to external factors that have not yet unleashed an inflationary process, neither in Europe nor in Spain, where high unemployment and idle capacity are acting as countervailing forces. A slowdown in the recovery pace, however, seems unavoidable. Looking forward, the duration of the prevailing episode of higher costs and the credibility of central banks' independence will be key to preventing the unanchoring of inflation expectations.

Notes

[1] Refer to Borio, C. (2021).

[2] This estimate is derived from the difference in CPI between the start of the year and September, applied to disposable household income (flow effect) and the savings built up during the crisis (shock effect).

[3] Refer to BIS (2021).

[4] ECB (2021).

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The ECB's new look

The results of the ECB's monetary strategy review announced in July suggest Christine Lagarde has succeeded in her promise to transform how the ECB works and how it communicates with the outside world. However, her first real test will come as the Bank begins to unwind its unconventional monetary policy instruments.

Erik Jones

Abstract: The ECB announced the results of its monetary policy strategy review in July. Significantly, the Governing Council has adopted a 2% symmetric inflation target. However, the way monetary policy makers push back against any deviation from their target is not symmetrical. The new strategy also envisions the eventual inclusion of owner-occupied housing in its inflation calculations, though this will not take effect immediately. The strategy introduces three constraints on the Governing Council's room for manoeuvre. One stems from the 'proportionality of its decisions and potential side effects'. The second is the need to preserve the function of the monetary transmission mechanism while the third relates to the need to maintain financial stability. Lastly, the new monetary strategy places the spotlight on monetary policy interest rates, while saying less about the use of other less conventional policy instruments, like direct asset purchases or TLTROs. The distinction between these instruments matters because the logic behind any recalibration can differ and because of their role in determining the proportionality of monetary action. Lagarde may have delivered on her promise to transform how the ECB makes monetary policy, however, she will face her first major test as the ECB seeks to unwind its unconventional monetary policy instruments.

Introduction

When Christine Lagarde was named to succeed Mario Draghi as European Central

Bank (ECB) President in September 2019, she promised to transform how the ECB works and how it communicates with the outside world. That promise took almost two years to deliver, thanks largely to the COVID-19 pandemic. By summer 2021, however, Lagarde was ready to unveil the ECB's new look. The results of the strategic review came out on July 8th; [1] the first meeting of the Governing Council to apply the new rules took place less than two weeks later.

For most ECB watchers, however, the extent of the change became apparent during the press conference held on July 22nd to announce the monetary policy decisions. [2] As Lagarde outlined the results of the Governing Council meeting, she did so in a language and format that was a sharp break from tradition. In the discussion that followed, journalists struggled to pin down the implications of what she said despite Lagarde expressing her hope that the message she delivered was clear. By the September 9th press conference, the new pattern of communication was less unfamiliar. [3] Nevertheless, it was obvious that Lagarde's ECB is now very different.

Three elements are distinctive in the ECB's new way of making and communicating monetary policy. The first is the identification of price stability and the approach monetary policymakers should take in trying to achieve that objective. The second is the link between interest rates and bond purchases or between conventional and more unconventional monetary policy instruments and settings. The third lies in the structure of forward guidance, meaning both assertions about how economic data inform policy actions and the language with which those assertions are made. By implication, this element also relates to the control over the messaging coming from the ECB President and other members of the Governing Council.

When you add these elements together, they suggest that Lagarde's new look ECB is likely to be more transparent and accountable, but also more predictable and slower moving. In her July 22nd press conference, Lagarde summarized the new approach as 'steady hands' and 'patience in order to gain confidence'. [4] What remains to be seen is whether such an approach will be flexible enough to respond to what could be rapidly changing circumstances. Given the potential for central bank liquidity created during the global economic and financial crisis, the European sovereign debt crisis, and the COVID-19 pandemic to translate into accelerating price and wage inflation, the test of this new policy framework may be close at hand.

Fulfilling the mandate

The monetary strategy announced on July 8th contains several innovations. [5] The Governing Council will have a symmetrical target of expected inflation over the medium-term of two percent per annum, instead of the old asymmetrical target that defined price stability as being below but close to two

percent. The distinction here is subtle. This new target does not define price stability as a two percent annual rate of inflation, or as two percent plus or minus a fixed variation, up or down. Instead, it describes the conditions within which 'price stability' as a policy objective will be achieved. By implication, the actual measure of inflation is not a measure of the success of the policy. Actual inflation may turn out to be above or below two percent per annum depending upon the circumstances. So long as expected inflation is close to the target, then the Governing Council will be fulfilling its mandate.

The target is symmetrical. That means the Governing Council should worry as much about inflation that is too low as inflation that is too high. The reason is to ensure that price inflation has a positive buffer. Rates of inflation that are too low put downward pressure on wages. They also put downward pressure on interest rates which limits monetary policymakers' room for manoeuvre. At the same time, excessively high interest rates tend to accelerate as they fold into wage negotiations and price setting. This symmetry of concern explains how a forward-looking target connects to price stability. So long as economic actors anticipate that the inflation buffer will remain positive and consistent, they will leave enough room for actors to respond to any deviation in the private sector and for monetary authorities to push back against any excesses.

The way monetary policy makers push back against any deviation from their target is not symmetrical, however. On the contrary, the approach to that target is sensitive to the challenges monetary policymakers face when their main policy rates are close to zero, and so allows for some overshooting when responding to inflation rates that are systematically too low. The idea is that monetary policymakers will need to be more aggressive when their instruments are less effective. Once they have restored the positive inflation buffer, however, they can recalibrate their approach to focus more tightly on the target. In this sense overshooting from below is better than overshooting from above, because the ability for monetary policymakers to correct

course is stronger when inflation is higher than when it is lower.

The new strategy also changes the measure of inflation. Eventually, the statistics will include price changes for owner-occupied housing. The objective is to make the index for consumer prices more representative of the impact on households. In this way, the goal of price stability will be more consistent with the lived experience of consumers. That should make the actions of the Governing Council more transparent. Nevertheless, such transparency will always be limited. The new index will still reflect aggregate conditions across the monetary union. No household lives in that aggregate, and there will continue to be variation in performance around the mean. What the change will do is take some of the structural bias out of that variance so that households in countries with consistently higher price increases in owner-occupied housing feel less systematically disadvantages by the common monetary policy.

The new strategy took effect as soon as it was announced. Even so, not every aspect became operational at the same time. The change in the target and the approach have immediate effect; the change in the price bundle will have to wait until European and national statistical authorities are able to compile standardized measures to feed into the harmonized index. Lagarde made it clear in her July 22nd press conference that this statistical adjustment is a policy priority both for the ECB and for the European Commission, which houses the European statistical agency, Eurostat. [6] Designing, collecting, and testing the new data will nevertheless take time. In the interim, the Governing Council will look at separate indexes for house price inflation as one source of information among many for how prices in the euro area are developing.

The strategy introduces three constraints on the Governing Council's room for manoeuvre. One stems from the 'proportionality of its decisions and potential side effects'. [7] The idea is that the pursuit of price stability should not do unnecessary damage to the real economy, meaning growth and employment; it should not impose undue financial costs on savers

or investors either. This is a soft constraint insofar as such analysis is routinely baked into monetary policymaking; it is even softer when the judgments around the necessity of specific policy actions must be made.

The other two constraints are more rigid. The first of these is the need to preserve the function of the 'monetary transmission mechanism', which is the collection of financial channels through which monetary policy decisions translate into economic activity. The ECB cannot use its instruments to steer the economy if this transmission mechanism is broken. The second more rigid constraint is the need to maintain financial stability. The new strategy underscores that 'financial stability is a precondition for price stability'. [8] This is true not only because there is no monetary transmission mechanism when the financial system is at risk of collapse, but also because a collapse in the financial system tends to propagate quickly through the real economy. Hence, the Governing Council can only fulfil its mandate if the financial system is stable, and the monetary transmission mechanism is functioning.

Calibrating the instruments

The new monetary strategy places the spotlight on the monetary policy interest rates. This includes the deposit rate paid to banks for holding excess reserves with their central bank, the main refinancing rate charged to commercial banks when they borrow money from their central bank to meet their liquidity maintenance requirements, and the marginal lending rate charged to commercial banks when they need to borrow additional funds to meet their requirements during the liquidity maintenance period. These are the standard instruments of monetary policy that central bankers use in normal times to steer the economy, raising or lowering the deposit rate to change the incentives for commercial banks to hold excess liquidity and moving the lending rates to influence the cost of borrowing and therefore the cost banks pass on when lending.

Currently, these instruments are set in non-standard ways. The deposit rate is negative, thereby acting as a tax on excess reserves rather than a form of remuneration. The main refinancing rate is zero yet banks rarely if ever access that rate because they can get liquidity more cheaply from one another as banks with

Table 1   **Key ECB interest rates**

Interest rate on	Percent
Deposit facility	-0.50
Main refinancing operations	0.00
Marginal lending facility	0.25
Date of last interest rate adjustment	**18 September 2019**

Source: ECB.

excess liquidity seek to pay a lower tax on their holdings. Although the marginal lending facility remains positive, it is accessed even less frequently (Table 1).

The question is when the Governing Council will begin to raise its policy rates to bring them into something that looks more normal. This would involve a deposit rate that is either zero or positive with the two lending rates significantly above zero. Under the new strategy, that recalibration can only begin to take place once there are clear signs that inflation rates are accelerating consistently enough to rise above the two percent target over the medium- term. Explaining what that looks like is a matter for forward guidance and not policy calibration – it tells market participants how to anticipate a policy change rather than telling policymakers how much to alter the settings on their instruments. By implication, the actual decision to reset the instruments lies somewhere in the future. When the Governing Council debated this point during the July monetary policy meeting, the main questions surrounded whether and how policymakers would recognize when it was time to act.

The new strategy says less about the use of other policy instruments, like direct asset purchases or targeted long-term refinancing operations (TLTROs). These are the instruments the Governing Council developed as interest rates approached the zero lower bound. Their goal is to address the constraints within which monetary policymakers operate. The longer-term refinancing operations were created initially to underpin financial stability. The direct asset purchases served the same goal but also ensured the continued operation of the monetary transmission mechanism. The use of these instruments expanded during the pandemic as policymakers struggled to contain the economic consequences of societal lockdowns and prolonged social distancing requirements. The use of these instruments has been dramatic, amounting to more than € 4 trillion in direct purchases since 2015 (Table 2).

The distinction between standard and less conventional instruments is important in the new strategy because the logic behind any recalibration of those instruments can be different. For example, a lift-off in interest rates will depend upon achieving the Governing Council's price stability objective. Conversely, a recalibration of asset purchases under the 'pandemic emergency purchase program' (PEPP) reflects an end to the pandemic emergency due to the success of the vaccination program. This distinction was central to the September monetary policy decisions, where the Governing Council announced that it would scale back its purchases under the PEPP during the fourth quarter of 2021, while at the same time admitting that it remained far from achieving its mandate. [9]

The distinction between standard and non-standard instruments is also important to

| Table 2 | **Eurosystem holdings under the asset purchase programs** |

Holdings as of August 2021	*€ billions*
Asset purchase program (of which)	3,038.6
Asset-backed securities	28.3
Covered bonds	293.8
Corporate securities	287.2
Public sector securities (including sovereign debt)	2,429.3
Pandemic emergency purchase program	1,341.8
Total asset purchases (APP plus PEPP)	**4,380.4**

Source: ECB.

interpret the proportionality of monetary actions. At her July press conference, Lagarde was asked how she would defend the ECB against the charge that its asset purchases during the pandemic constitute monetary financing. Her response was to reject the premise of the question; given the scale of the economic crisis, 'we had to do what we had to do'. [10] The safeguards against monetary financing can apply once the crisis is past. The 'proportionality' of the Governing Council's actions swings both ways in that sense.

The challenge of having monetary instruments deployed for different reasons is to ensure coherence in any monetary accommodation or tightening. The PEPP may be intended to respond to the unique circumstances created by the pandemic, but those additional asset purchases are nevertheless having an impact on market expectations of inflation. Consequently, withdrawing those purchases will have a reverse impact. The Governing Council may see the scale down announced in September as a 'recalibration', in Lagarde's formulation, but market participants will still see it as a (modest) monetary tightening.

Explaining the separate logic behind the decision is also a challenge. Already in July, journalists were quizzing Lagarde about the Governing Council's 'knowledge of pandemics'; [11] when the question came up again in September, Lagarde pivoted to focus on when 'the economy will have recovered in such a way that the downward impact of the pandemic on our inflation outlook has been resorbed.' [12] She then admitted that the real questions surrounding the PEPP will be addressed only in December. That is also when the Governing Council will debate the future of the more general 'asset purchase program', and the TLTROs. In other words, where the July Governing Council focused narrowly on the new strategy for interest rates, the December Governing Council will focus on those more unconventional instruments.

Managing expectations and controlling the message

The ECB's communication with markets is another tool for monetary policy insofar as it plays a crucial role in shaping market expectations. The new strategy complicates that communication in subtle ways. The problem is not the identification of the numerical target but in connecting that target to macroeconomic data and explaining how changes in those data inform changes in the policy instruments. Consider three illustrations, all related to the use of monetary policy interest rates: the identification of the 'medium-term'; the assessment of changes in expectations; and the tolerance of 'overshooting', particularly when monetary policy makers start with interest rates close to the zero lower bound.

The identification of the medium-term is complicated because it involves official forecasts, surveys of professional forecasters, and market indicators. When the Governing Council deliberated about how to communicate this notion to the market in its July 2021 policy meeting, the Chief Economist, Philip Lane, came up with a three-fold test: inflation should reach the target well before the end of the official forecast period, that inflation should be 'durable', and that inflation should be reflected in underlying movements of the most stable parts of the price index (meaning those that exclude energy and food). The members of the Governing Council broadly accepted this formulation. Nevertheless, they were divided on whether the focus for attention should lie closer to the present, on actual inflation rates, or further into the future, on longer-term expected rates. The problem is that focusing on the present risks introducing

> " The challenge of having monetary instruments deployed for different reasons is to ensure coherence in any monetary accommodation or tightening. "

> " The problem is that focusing on the present risks introducing too much volatility into the policy, which in turn undermines the policy's medium-term orientation. "

too much volatility into the policy, which in turn undermines the policy's medium-term orientation. However, focusing on the future threatens to mitigate responsiveness, thereby damaging the policy's credibility. [13]

Pegging the medium-term on the forecast period offers a compromise between the shorter and longer-term positions. Even that compromise introduced ambiguity, however. When Lagarde set out Lane's three-fold test during the July press conference, the journalists immediately pressed her on what the Governing Council means by the length of the forecast period and how long before that end inflation should converge on the target. At that point, Lagarde had to admit (in response to two different questions) that the forecast period has different lengths depending upon the time of the year. At the start and end of the calendar year, the forecast period looks three years ahead; in the middle of the calendar year, it looks ahead only two-and-a-half years. [14] By implication, it is more reasonable to expect policy changes in response to the December projections –which add a year to the forecast period– than at one of those meetings that falls between forecasts, like October. This prompted one journalist to ask what the Governing Council will discuss when it meets then. [15]

The way in which the bank will assess inflation expectations and the tolerance of overshooting were other areas of ambiguity. Although the Governing Council has a new strategy, it remains bound to the same data for capturing market sentiments. When journalists confronted Lagarde at her September press conference with movements in specific indicators, including one that had been identified by former ECB President, Mario Draghi, as particularly important in August 2014, Lagarde responded that 'we are data-dependent in our policy determination, but we want to have a look at a whole range of such data'. [16] She made a similar point about 'looking through' currently high rates of inflation, both across the euro area and in some of the larger euro area member states (Table 3).

The latest projections show that actual inflation is already overshooting the target. Nevertheless, core inflation remains subdued. Lagarde set out several reasons why the current pace of price increases is likely to slow over the next two years. These arguments are

Table 3   **ECB staff projections for inflation**

Annual percentage change	Harmonized Index of Consumer Prices (HIPC)		HICP less energy, food and changes in indirect taxes	
	September 2021	June 2021	September 2021	June 2021
2021	2.2	1.9	1.2	0.9
2022	1.7	1.5	1.4	1.2
2023	1.5	1.4	1.5	1.4

Source: ECB.

> **"** Lagarde's new look ECB appears to be more confident in its ability to explain and defend its monetary strategy. **"**

not universally accepted. We know from the monetary policy account for the July meeting, for example, that there are members of the Governing Council who worry that inflation could accelerate rapidly.

Lagarde refused to be drawn into the debate. Instead, she admitted that perceptions may be different from the arguments she put forward: 'it is the case that in many countries in the euro area, people are seeing prices increase and they can feel it.' [17] She also admitted that the Governing Council should prepare to adjust should the circumstances change. This is a standard line of argument, but it rests on top of a greater openness to disagreement both within the Governing Council and outside. At the July press conference, Lagarde admitted that there were dissenting voices. Toward the end of the meeting, she even invited journalists to seek them out and report what they had to say. That happened in the run up to the September meeting. With Lagarde's new communication strategy, it is not clear that these voices of dissent made much of a difference.

'The lady's not for tapering'

Lagarde's new look ECB appears to be more confident in its ability to explain and defend its monetary strategy. The quip she used in response to questions at the September 9th press conference was more important for its allusion to Margaret Thatcher's politics of conviction than for what it told us about the future of asset purchase. Lagarde also appears to be more effective in communicating that strategy despite the inevitable ambiguities. However, it is still early days. The message about interest rates is clear, but the future of asset purchases and other more unconventional instruments is less certain. The big questions will be decided at the December 2021 monetary policy meeting. Lagarde has delivered on her promise to transform how the ECB makes monetary policy. As she looks ahead to

unwinding those unconventional monetary policy instruments, her new strategy will face its first major test.

Notes

[1] You can find the press conference announcing the new strategy here: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.sp210708~ab68c3bd9d.en.html

[2] You can find the July 22nd 2021 monetary press conference here: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210722~13e7f5e795.en.html

[3] You can find the September 9th 2021 monetary press conference here: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210909~b2d882f724.en.html

[4] See: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210722~13e7f5e795.en.html

[5] You can find the official statement of the new monetary policy strategy here: https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html

[6] See: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210722~13e7f5e795.en.html

[7] This language is taken from the official statement: https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html

[8] The language in quotations in this paragraph is taken from the official statement: https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html

[9] See: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210909~b2d882f724.en.html

[10] See: https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.is210722~13e7f5e795.en.html

[11] See: https://www.ecb.europa.eu/press/pressconf/ 2021/html/ecb.is210722~13e7f5e795.en.html

[12] See: https://www.ecb.europa.eu/press/pressconf/ 2021/html/ecb.is210909~b2d882f724. en.html

[13] The 'account' or minutes of the July 2021 meeting can be found here: https://www.ecb. europa.eu/press/accounts/2021/html/ecb. mg210826~16a0691c87.en.html

[14] See the July 22nd press conference: https:// www.ecb.europa.eu/press/pressconf/2021/ html/ecb.is210722~13e7f5e795.en.html

[15] See the September 9th press conference: https://www.ecb.europa.eu/press/ pressconf/2021/html/ecb.is210909 ~b2d882f724.en.html

[16] See: https://www.ecb.europa.eu/press/pressconf/ 2021/html/ecb.is210909~b2d882f724. en.html

[17] See: https://www.ecb.europa.eu/press/pressconf/ 2021/html/ecb.is210909~b2d882f724. en.html

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The Fed's new monetary policy strategy: Could added flexibility impair financial stability?

The new monetary policy strategy adopted by the Federal Reserve last year has impacted both inflation expectations and the risk premia. However, analysis suggests it is unlikely to push yields high enough to threaten financial stability.

José Ramón Díez Guijarro

Abstract: Last year, the Federal Reserve amended its monetary policy to provide it with greater flexibility in accommodating its dual mandate of price and financial stability, while also increasing symmetry around the inflation target. In analysing the possible effects of the change in the Federal Reserve's strategy, the trend in sovereign bonds is key. Since the Federal Reserve announced the change in its strategy in August 2020, the yield on 10-year Treasuries has increased by a little over 50 basis points, with medium-term bond yields widening by a little less. Analysis shows that nearly 83% of the movement in the bond yield until May is attributed to the shift in inflation expectations. In addition, the term premium and real rate of interest have also exerted a structural upward impact on yields. Since the new strategy was announced, the US inflation figures have come in higher than expected while other factors (expansionary fiscal plans, vaccine announcements, *etc.*) make it hard to isolate the effect of the strategy shift on inflation expectations. Looking forward,

> " Sovereign bond prices act as a benchmark for price formation for other financial assets and are therefore an important element in ensuring financial market stability. "

it is likely that the new monetary policy environment will result in the 10-year US Treasury rising to a moderately high range of 2.25%-2.60%, which is unlikely to undermine financial stability.

Introduction

In the last year, the Federal Reserve (Fed) and the European Central Bank (ECB) have revised their monetary policy strategies to tailor their objectives and toolkits to the structural changes that have emerged in the past two decades. That metamorphosis has translated into greater flexibility in terms of accommodating the dual mandate of price and financial stability and increasing symmetry around the inflation target. The idea is to signal to financial markets that the authorities will tolerate deviations around that target in either direction and boost central banks' room for manoeuvre in handling the complex process of monetary

policy normalisation. However, monetary policy flexibility nearly always ends up being reflected in the premia investors demand to protect themselves against unexpected increases in inflation, such as those observed on both sides of the Atlantic in recent months. Against that backdrop, it is worth considering how American financial markets reacted to the strategy changes announced by the Fed last year and whether there are signs of any risks to financial stability.

Trend in the debt markets since August 2020

In analysing the possible effects of the change in the Federal Reserve's strategy, the trend in sovereign bonds is key. Sovereign debt is the asset most sensitive to monetary policy. The sovereign bond market is also one of the most liquid and efficient at pricing in changes to economic prospects. Additionally, sovereign bond prices act as a benchmark for price

Exhibit 1   **10 Yr Treasury yields**

Percentage
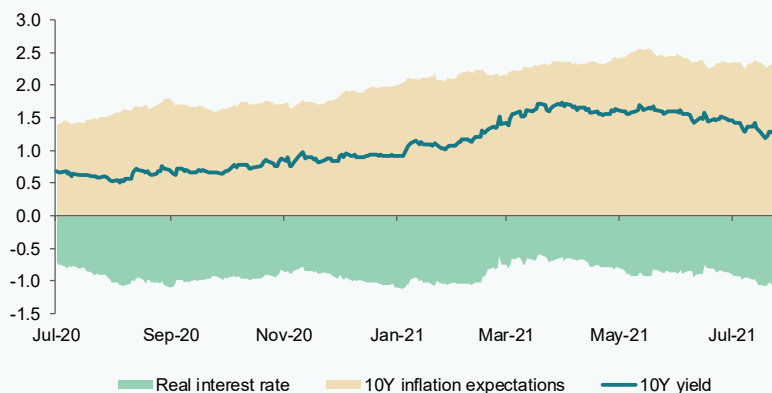
Source: Bloomberg.

formation for other financial assets (*e.g.,* corporate bonds, equities, *etc.*) and are therefore an important element in ensuring financial market stability.

It is thus necessary to analyse the channels through which this change in monetary strategy could affect the sovereign bond market and the broader financial market. This paper will examine how the public debt market has responded a year after the policy change and its influence on financial markets.

Since the Federal Reserve announced the change in its strategy in August 2020, the yield on 10-year Treasuries has increased by a little over 50 basis points, with medium-term bond yields widening by a little less (the 5-year Treasury yield has widened by 40 basis points). The widening on Treasury yields peaked in May at around one percentage point. The uptick in yields was primarily driven by higher inflation expectations, as evidenced by the fact that the inflation rate priced in by the 10-year bond peaked at 2.57%, up from 1.75% previously. The bond yield, in real terms, also widened during the period analysed, albeit by considerably less (from -1.0% to -0.83%). In short, nearly 83% of the movement in the bond yield until May is attributed to the shift in inflation expectations. If we extend the horizon to September, virtually all of the increase in yields is explained by inflation expectations as the real rate of interest narrowed by around 10 basis points between August 2020 and September 2021, using the price of inflation-linked bonds as a proxy for the real yield.

How has the change in monetary strategy affected the increase in yields?

Within the yield increase observed in the past year, it is harder to determine which part of the shift in outlook for inflation is due to the change in monetary policy strategy. Multiple factors are likely to have shaped inflation expectations in recent months, from surprises in the inflation figures to the fiscal plans announced with potentially expansionary effects on aggregate demand.

In order to tackle this challenge, it is necessary to first break down the components that comprise the nominal Treasury rate. There are two main components:

$$I_t = \pi_t + R_t \qquad [1]$$

Where:

I_t is the nominal interest rate at t.

π_t is the inflation expected at t.

R_t is the real interest rate at t.

However, the inflation rate priced in by the market and real interest rates do not simply reflect prevailing expectations for inflation or growth and market liquidity conditions. These variables also discount a premium by way of compensation for the risks associated with the future trends in those variables (one might say a premium for forecasting errors). The above equation could therefore be reformulated as follows:

$$I_t = (\pi_t + P_{\pi t}) + (R_t + P_{RT}) \qquad [2]$$

Where:

$P_{\pi t}$: the inflation risk premium.

P_{RT}: the real risk premium.

The sum of the premia for these two components of the nominal interest rate is

> " Multiple factors are likely to have shaped inflation expectations in recent months, from surprises in the inflation figures to the fiscal plans announced with potentially expansionary effects on aggregate demand. "

what is known as the term premium. The above equation can be rewritten as follows:

$$I_t = \pi_t + R_t + (P_{\pi t} + P_{RT})$$

$$I_t = \pi_t + R_t + \text{Term premium} \qquad [3]$$

Regarding the first component (the inflation breakeven rate), it would be logical to expect that the change in the Federal Reserve's strategy would have a clearly upward structural impact on the nominal bond yield, underpinned by the authority's tolerance for inflation above the target of 2%. However, since the new strategy was announced, US inflation figures have taken the market by surprise, coming in higher than expected (particularly during the second quarter of 2021), although other factors (expansionary fiscal plans, vaccine announcements, *etc.*)

make it hard to isolate the effect of the strategy shift on inflation expectations. The period of lowest volatility since the Fed announced its change of strategy occurred between August and November 2020. Focusing on that time interval, and using a long-term measure such as the rate of inflation expected by the market in nine years' time, we see an initial sharp reaction in expected inflation to levels more aligned with those observed between 2015 and the end of 2017 (Exhibit 2). Based on this evidence, the Fed is reversing the downward trend in the outlook for long-term inflation.

Other factors also suggest the change of strategy may already have had an impact on consumer, business and investor expectations. The various economic agent surveys carried out by the Federal Reserve point to an outlook for higher inflation in the medium- term. This

Exhibit 2 **Annual inflation priced in for 9 years' time**

Percentage

Source: Author's own elaboration based on Bloomberg data.

Exhibit 3   **Consumer expectations for inflation in 3 years' time**

Percentage
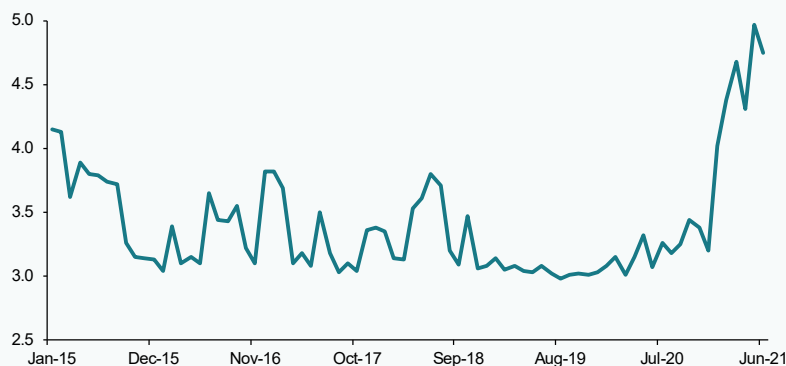
Source: New York Federal Reserve.

is due to the unexpected acceleration of price growth in recent months, which has pushed inflation to over 5%.

The second component with an upward impact on the bond yield is the term premium. It is conceivable that the price paid by the central bank in exchange for a more flexible monetary policy strategy will be an increase in perceived uncertainty.

The inflation target in the Fed's new policy framework is based on an analysis of the rates actually reported (data dependent), rather than a more preventative track articulated around forecasts. This, in addition to a lack of specifics about the benchmark period used to calculate average inflation and verify compliance with the new target, could increase uncertainty about the future shape of monetary policy. Thus, by achieving greater flexibility, the Fed has raised the market's

perception of risk, which should imply an increase in the term premium required to hold bonds.

Since the Federal Reserve approved its new strategy, the term premium [1] on the 10-year Treasury bond has widened, from -0.45 percentage points to over 0.7 percentage points at one point during the second quarter (around 0.35 percentage points as of mid -September).

In April, the IMF (Adrian *et al.,* 2021) published an article analysing the reason for the increase in the nominal yield on Treasury bonds through March in which it found that the increase in implied inflation in 5 years' time reflected increases, of nearly equal magnitude, in both expected inflation and the inflation risk premia. In other words, the increase in the term premium has had a lot to do with the increase in yields observed

> " By achieving greater flexibility, the Fed has raised the market's perception of risk, which should imply an increase in the term premium required to hold bonds. "

10 Yr Treasury term premium

Percentage

Change in Fed strategy announced

Jan-18   Jun-18   Nov-18   Apr-19   Sep-19   Feb-20   Jul-20   Dec-20   May-21

Source: San Francisco Federal Reserve.

in the first few months of this year. Clearly, that may be attributable to the complex and volatile economic situation but also has to do with the heightened uncertainty that always comes with a move towards a more flexible monetary policy strategy, at least for as long as the markets are digesting those changes.

The third component is the real interest rate. Here it is less clear what impact the new strategy will ultimately have on bond prices. On the one hand, it should translate into higher expected economic growth, which would push the real rate of interest higher. However, numerous factors have exerted clear downward pressure on equilibrium interest rates in recent years, including population ageing, higher overall savings and scant public and private investment levels.

The last time real interest rates were close to or within negative territory was at the end of 2012. This was upended by the market's so-called 'taper tantrum', triggered by remarks

by then Fed Chairman Ben Bernanke, regarding the 'tapering' of the Fed's asset repurchase programme in the near future and the prospect of rate tightening. The upshot was that both nominal and real long-term rates widened significantly in 2013 (Exhibit 5). Specifically, real yields climbed back above 0% and, more importantly, stayed in positive territory (averaging 0.5%) almost continuously for the next six years.

Today's situation is somewhat different. At the Jackson Hole meeting in August, Fed Chairman Jerome Powell suggested the Fed would begin to taper its asset purchase program at the end of this year or early next year but said that he did not perceive the need for short-term rate hikes until the job market had fully recovered. Nevertheless, the 2012 episode shows that when the economy is moving toward positive rates of growth and inflation and the central back rolls back its stimulus measures, real interest rates should move into positive territory. A return to average

" The increase in the term premium has had a lot to do with the increase in yields observed in the first few months of this year. "

Exhibit 5   **10 Yr Treasury yields**

Percentage
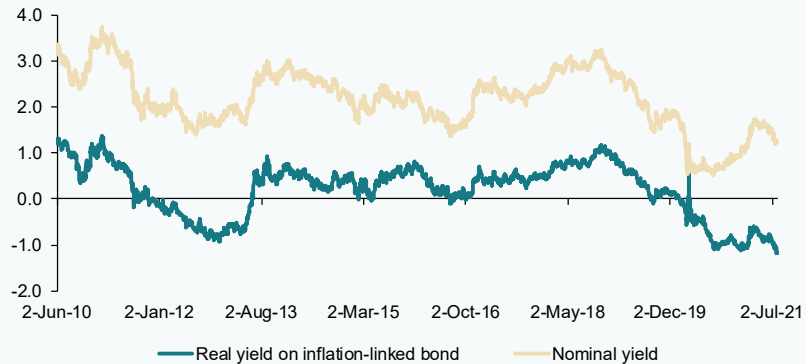
Source: Bloomberg.

levels of 0.5%-0.6%, as seen in the wake of the financial crisis, would be reasonable. However, the trend in recent months, coupled with the fact that monetary policy will likely remain markedly accommodative, makes it probable that any upward pressure on real rates will not be as pronounced as in the past. It is therefore likely that real rates will rise in the coming months, driven by the economic recovery and anticipated normalisation of monetary policy rather than the Fed's new policy direction.

In sum, the three factors outlined – inflation expectations, the term premium and the real rate of interest – will have a structural upward impact on yields, particularly at the longer tenors. Although it is too soon to anticipate what portion of the anticipated rise in the Treasury yields will be attributable to the shift in monetary policy, data for the last 12 months already point to an upward impact in the term premium and in expected long-term inflation.

In this emerging environment, characterised by a new framework for intervention by the Fed that should have upward ramifications for Treasury yields, it is worth considering where they might settle by calculating the rate at which the 10-year US Treasury reaches fair value or its point of equilibrium. This is one way of checking whether financial stability could be at risk.

To do that, we use a traditional model, based on the capitalisation of expectations for short-term rates for the next 10 years plus an estimated term premium. The rates implied by the call money swap curve currently discount an average Fed rate for the next 10 years by 1%. Logic holds that once nerves settle, that rate will move towards 2% (a conservative estimate considering that the Fed estimates a long-run Fed funds rate of 2.5%). As for the term premium, it is also reasonable to assume an increase to at least 0.6%, for those same reasons. Based on these assumptions,

> " The fair value of the 10-year yield would fall within a range of 2.25%–2.60%, well above current levels, but not by any means a level that could significantly undermine financial stability. "

Table 1 Estimated equilibrium interest rate on the 10 Yr Treasury bond

Percentage

	Term premium										
	-0.10	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
2.50	2.40	2.50	2.60	2.70	2.80	2.90	3.00	3.10	3.20	3.30	3.40
2.25	2.15	2.25	2.35	2.45	2.55	2.65	2.75	2.85	2.95	3.05	3.15
2.00	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90
1.75	1.65	1.75	1.85	1.95	2.05	2.15	2.25	2.35	2.45	2.55	2.65
1.50	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40
1.25	1.15	1.25	1.35	1.45	1.55	1.65	1.75	1.85	1.95	2.05	2.15
1.00	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90
0.75	0.65	0.75	0.85	0.95	1.05	1.15	1.25	1.35	1.45	1.55	1.65
0.50	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40
0.25	0.15	0.25	0.35	0.45	0.55	0.65	0.75	0.85	0.95	1.05	1.15
0.00	-0.10	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90

(Left axis label: Average Fed funds rate next 10 years)

Source: Author's own elaboration.

as shown in Table 1, the fair value of the 10-year yield would fall within a range of 2.25%-2.60%, well above current levels, but not by any means a level that could significantly undermine financial stability.

Conclusions

Our analysis of the trend in the US bond market since the summer of 2020 indicates that the change in US monetary policy is beginning to have an impact on inflation expectations and the term premium. That, coupled with the rise in real interest rates, explains the upward shift in nominal yields on US public debt in recent months. That movement is happening in an orderly fashion and, therefore, suggests that the added flexibility in monetary policy, if combined with clear messaging, can facilitate delivery of the inflation target and help escape the liquidity trap without having to pay too high a price in terms of financial stability.

Notes

[1] The Jens H. E. Christensen and Glenn D. Rudebusch (CR) model used to calculate the term premium in Treasury bond yields deconstructs the nominal yield curve into three components: future short-term interest rate expectations; a term premium that measures bond investor aversion to the risk of holding longer-maturity bonds; and, a model residual.

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José Ramón Díez Guijarro. Caixabank Research and CUNEF

Stress tests and other challenges for Spanish banks

The stress tests carried out by the European authorities showed that the Spanish banking sector looks highly resilient to adverse scenarios, despite the fact that the scenario modelled for Spain was among the toughest in the eurozone. Nevertheless, transition towards an even more stringent regulatory environment in terms of capital adequacy suggests that Spanish banks will have to continue to bolster their own funds over the coming years.

Santiago Carbó Valverde and Francisco Rodríguez Fernández

Abstract: This summer's European stress tests occurred at a time of shifting expectations for the European banking sector, including the return of dividend payments and a challenging monetary environment. The tests, which covered 75% of European banking assets, used the banks' common equity tier 1 (CET1) ratio as of year-end 2020 as their baseline and examined the period of 2021 to 2023. The regulators concluded that European banks have enough capital to withstand an adverse economic scenario. Banks' average CET1 ratio fell 5.2 percentage points under the adverse scenario, with credit risk, market risk, and income generation capacity the main drivers of capital depletion. The starting CET1 levels for the Spanish banks is generally lower, but capital depletion in the adverse scenario is also lower. This indicates that although the Spanish banks continue to present slightly below-average capital ratios, they are more resilient than the average European bank. Importantly, the results of these tests will influence Pillar 2 Guidance and the Supervisory Review and

" By modelling the worst case scenarios, the stress tests show whether specific entities need to take measures to reinforce their capital. "

Evaluation Process. On top of these pressures, banks will have to contend with an uneven regulatory environment with FinTechs and growing sensitivity surrounding ESG-related issues.

Introduction

The challenging economic and financial environment coupled with the increasing digitalisation of retail banking service mean banks are forced to pursue multiple simultaneous strategies. (Exhibit 1 provides a snapshot of the key forces shaping the banking business today.) Against this backdrop, European banks underwent stress tests this past summer. Although initially scheduled for 2020, the limited visibility as to the impact of the health crisis convinced regulators to postpone the tests until 2021. The purpose of these tests is to analyse banks' resilience in solvency terms to adverse macroeconomic shocks.

The 2021 stress tests were performed using adverse macroeconomic shocks, with the baseline scenario assuming a successful vaccination campaign would lead to an economic recovery during the latter half of the year. By modelling the worst case scenarios, the tests show whether specific entities need to take measures to reinforce their capital. Importantly, the tests took place at a time of shifting expectations for the European banking sector, including the return of dividend payments.

At the end of July, both the single supervisor and the Bank of Spain indicated that the projections for 2021-2023 pointed to an economic recovery, prompting them to eliminate the restrictions imposed on the distribution of earnings from September 30th, 2021. Nevertheless, in its press release, the European Central Bank cautioned banks to "remain prudent when deciding on dividends and share buy-backs, carefully considering the sustainability of their business model."

Exhibit 1 **Market environment and strategic challenges for the banks following the 2021 stress tests**

Low interest rates	Need to bolster capital	Economic recovery and NPL management
Pressure on margins	Stress tests	Dividend distribution
Technological change	Business model transformation	Market value recovery
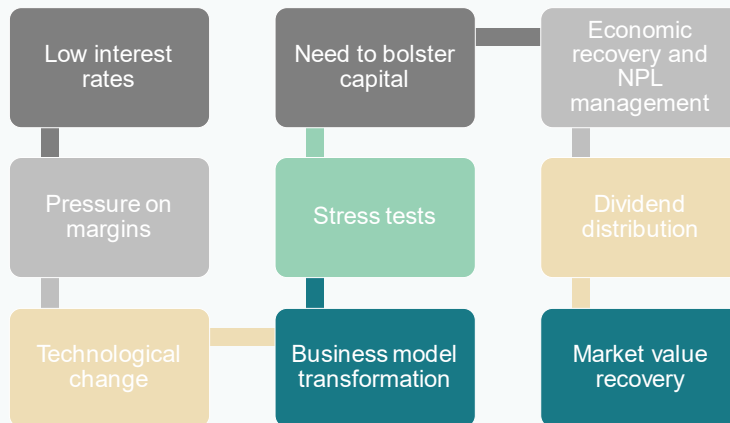
Source: Authors' own elaboration.

> " Under an adverse scenario, European banks' average CET1 ratio would fall from 15.1% to 9.9% over the three year period. "

The ECB expanded its decision to all global systemically important banks from July 23rd and the Bank of Spain then extended it to all other systemically important banks in Spain. Spanish banks' share prices appear to have benefitted from the decision. Following years of stock market turbulence, the Ibex Banks stock index gained over 80% between August 2020 and August 2021.

The monetary environment, however, is murkier. While the Federal Reserve appears to be headed for the gradual withdrawal of monetary stimulus in the near-term (as endorsed at the Jackson Hole Symposium at the end of August), the ECB will find it more difficult to claw back its bond buying program. Although the ECB has adopted a more flexible approach to the relationship between monetary policy decisions and inflation, the economic rebound and inflationary concerns are more subdued in the eurozone. As a result, the European monetary authority expects rates will remain ultra-low or even negative until at least 2022.

While the liquidity facilities provide the banks with a stable source of financing, benchmark interest rates continue to exert downward pressure on the banks' net interest margins. On the upside, the recovery could foster growth in lending. However, banks will have to manage the spike in non-performance expected once COVID-19 business support measures expire.

General takeaways from the stress tests

The results of the stress tests were published on July 30th, 2021. They were managed by the European Banking Authority (EBA), which ran the tests for Europe's 38 biggest banks, and the ECB, which performed them for 51 medium-sized institutions, covering 75% of total eurozone banking sector assets. The

starting point was the banks' common equity tier 1 (CET1) ratio as of year-end 2020. The tests cover the period of 2021 to 2023. The regulators concluded that that European banks have enough capital to withstand an adverse economic scenario. Under an adverse scenario, banks' average CET1 ratio would fall from 15.1% to 9.9% over the three year period. That puts capital depletion at 5.2 percentage points.

According to the EBA and the ECB, the "main drivers of capital depletion are credit risk, market risk and income-generation capacity". Compared to prior rounds of stress tests, it is worth noting that although the banks were in better shape at the start of the exercise (CET1 as of December 2020) compared to three years ago, capital depletion at the system level was higher. This reflects two trends in supervisory practices. Firstly, the banks have been required to hold higher capital buffers in the context of the gradual rollout of the Minimum Requirement for own funds and Eligible Liabilities (MREL). Secondly, the scenario modelled by the supervisory authorities was more severe than in the 2018 tests. The adverse scenarios vary depending on the economic forecasts for each country, with Spain assigned one of the harshest scenarios.

Broken down by size, the 38 largest banks tested by the EBA saw their CET1 ratio fall from 14.7% to 9.7% (5.2 percentage points) in the adverse scenario, while the 51 medium-sized banks' capital decreased from 18.1% to 11.3% (6.8 percentage points). As indicated in the ECB's press release, "the medium-sized banks are more affected by lower net interest income, lower net fee and commission income and lower trading income over the three-year horizon."

The first key driver of banks' capital depletion was credit risk. This is due to loan losses

from the adverse scenario's economic shock. Specifically, the EBA calculates that the 38 larger banks would incur credit losses of 308 billion euros in the adverse scenario. By comparison, potential market risk and operational risk losses are estimated at 74 billion euros and 49 billion euros, respectively.

How the Spanish banks fared

The adverse scenario modelled for the Spanish banks simulated contractions in GDP of 0.9% in 2021 and 2.8% in 2022, followed by growth of 0.5% in 2023. These scenarios also incorporated a hypothetical unemployment rate of 21.9%. While these scenarios are highly unlikely, their purpose is to understand how the banks would respond to the unexpected.

Four Spanish banking groups participated in the tests coordinated by the EBA: Santander, BBVA, Sabadell and Bankinter. Note that the EBA decided to exclude Caixabank and BFA Bankia as they were in the process of merging at the time. Table 1 provides the CET1 ratios

Table 1 **Results of the EBA stress tests for the larger Spanish banks**

Percentage

SANTANDER

	2020	Baseline scenario			Adverse scenario		
		2021	2022	2023	2021	2022	2023
Transitional CET1 ratio	12.34	13.18	14.13	14.94	10.25	10.40	9.93
Fully-loaded CET1 ratio	11.89	12.99	14.06	14.94	8.65	9.24	9.31

BBVA

	2020	Baseline scenario			Adverse scenario		
		2021	2022	2023	2021	2022	2023
Transitional CET1 ratio	12.15	12.37	12.70	13.07	10.01	9.30	8.96
Fully-loaded CET1 ratio	11.72	12.02	12.52	13.00	8.79	8.71	8.69

SABADELL

	2020	Baseline scenario			Adverse scenario		
		2021	2022	2023	2021	2022	2023
Transitional CET1 ratio	12.57	12.65	12.90	12.91	9.27	7.90	7.07
Fully-loaded CET1 ratio	12.02	12.06	12.55	12.75	7.45	6.89	6.54

BANKINTER

	2020	Baseline scenario			Adverse scenario		
		2021	2022	2023	2021	2022	2023
Transitional CET1 ratio	12.29	13.51	14.11	14.64	11.18	11.06	11.25
Fully-loaded CET1 ratio	12.29	13.51	14.11	14.64	11.18	11.06	11.25

Source: EBA and authors' own elaboration.

Table 2   **Results of the ECB stress tests for the medium-sized Spanish banks**

Bank	Impact of the adverse scenario on fully-loaded CET1 (basis points: bps)	Minimum fully-loaded CET1 ratio in adverse scenario (%)
ABANCA	300 to 599	8 ≤ CET1 < 11
Banco de Crédito Social Cooperativo (Cajamar)	300 to 599	CET1 < 8
Ibercaja Banco	300 to 599	8 ≤ CET1 < 11
Kutxabank	300 to 599	11 ≤ CET1 < 14

Source: EBA and authors' own elaboration.

on a transitional (*i.e.,* under prevailing requirements) and fully loaded basis (*i.e.,* as if all the regulatory requirements due to be implemented by 2022 were already in effect). At first glance, we observe a significant difference between the Spanish banks and the European average. The starting CET1 levels for the Spanish banks is generally lower, but capital depletion in the adverse scenario is also lower. This indicates that although the Spanish banks continue to present slightly below-average capital ratios, they are more resilient that the average European bank. This relative resiliency is attributed to the strength of the system's retail model and client base, as well as the benefits of its substantial geographic diversification.

Comparing the banks' fully-loaded CET1 ratios in 2020 with those estimated for 2023, capital depletion in the adverse scenario is estimated at 2.58 percentage points at Santander, 3.03 percentage points at BBVA, and 5.48 percentage points at Sabadell. Capital depletion at Bankinter was 1.04 percentage points. Notably, Bankinter has fully adopted all new regulatory requirements such that its fully loaded CET1 ratio coincides with its transitional ratio in the table.

With respect to the medium-sized Spanish banks, the results are provided in ranges and evidence a notable degree of resilience (Table 2). The four banks analysed (Abanca, Banco Social de Crédito Cooperativo-Cajamar, Ibercaja Banco and Kutxabank) are expected to sustain fully-loaded CET1 capital depletion

of between 300 and 599 basis points in the adverse scenario. Banco Social de Crédito Cooperativo's CET1 ratio would end up a little below 8% in 2023, capital at Abanca and Ibercaja would fall between 8% and 11%, with Kutxabank coming in between 11% and 14%. Although the impact of the adverse scenario on the medium-sized banks is somewhat greater, these results show higher capital ratios than the European average, which translates into a stronger solvency position at the end of the projection period.

The aftermath of the tests: More capital, greater transformation and an emphasis on banks' social role

The analysis provided in this paper shows that those Spanish banks that participated in the EBA and ECB stress tests are capable of withstanding adverse scenarios with satisfactory capital ratios, despite the relatively greater severity of the macroeconomic assumptions modelled. As in prior tests, no threshold was set to define the failure or success of the banks. It is important to highlight that the quantitative impact of the adverse stress test scenario is a key input for determining the level of Pillar 2 Guidance (P2G). Furthermore, some qualitative outcomes from the stress test exercise will be taken into account in the annual Supervisory Review and Evaluation Process (SREP). It is therefore worth considering the future direction of European stress tests and what the current and planned changes reveal in terms of the supervisory approach to the sector.

" The results of the stress tests are likely to be linked more closely to the Pillar 2 requirements and the banks' capital buffers will have to be a bit bigger. "

On account of the pandemic, the European supervisors continue to allow the banks to use capital buffers to absorb losses. The changes contemplated in the Pillar 2 solvency requirements, which address the management of expected losses, will not take effect until the end of 2022. The results of the stress tests are likely to be linked more closely to the Pillar 2 requirements and the banks' capital buffers will have to be a bit bigger. Spanish banks have operated with somewhat tighter capital buffers and will therefore have to shore up their capital if they are to remain in a comfortable position in 2022. In a note published on July 29th, 2021, the Bank of Spain reported on its annual identification of so-called other systemically important institutions (O-SIIs), setting their capital buffers for 2022. Specifically, it set a 2022 capital buffer of 1% of risk-weighted assets (RWA) for Banco Santander and of 0.75% for BBVA. For Caixabank, following the merger with Bankia, it assigned a buffer of 0.375% of RWA for 2022, rising to 0.5% in 2023. Lastly, Banco Sabadell's buffer was set at 0.25%.

Future stress tests will include requirements in relation to money laundering and fraud and will gradually incorporate sustainable financing. On top of these pressures, the monetary environment remains extraordinarily lax, eroding banking margins. We are also seeing growing competition from non-financial FinTech providers. Despite increased regulatory scrutiny, the playing field remains uneven, with established banks and FinTech firms subject to different sets of rules for similar functions.

Lastly, the general pace of technological change and growing social sensitivity are forcing the banks to take action to protect and nurture their corporate social responsibility. As a result, banks are placing a greater emphasis on ESG-related criteria.

Additionally, banks are actively expanding the provision of traditional banking services to segments of the population that are less digitally savvy, including the elderly and those located in sparsely populated rural areas.

Santiago Carbó Valverde and Francisco Rodríguez Fernández. University of Granada and Funcas

Banks poised for the ECB's debut climate risk stress tests

The ECB's climate stress tests slated for 2022 will differ from traditional stress tests in terms of governance, objective, methodology, scenarios and scope. Nevertheless, the ECB's deep engagement with this issue suggests a high probability that climate risks will be integrated into conventional stress tests in the future.

Ángel Berges and Jesús Morales

Abstract: The ECB's first round of climate stress tests in 2022 will consider two classes of risks stemming from climate change – physical risks and transition risks. To the extent that climate risks impact banks' ability to meet their capital requirements and execute their strategic plans, it is necessary to assess banks' resilience to different climate change scenarios. Importantly, these tests differ in several ways from the conventional biannual stress tests. Firstly, the ECB and not the EBA will design the tests, engage with banks and report the results. The climate tests will provide the supervisor with an initial assessment of the state of play in the banking system and an idea of its capital sufficiency in the event of adverse climate scenarios. Although the climate tests will apply to all significant institutions, there will be some variation. Notable changes are also anticipated, mainly affecting the banks' ability to identify relevant information related with the climate impact of their investment portfolios. Lastly, the scenario used will be determined by the Network for Greening the Financial System (NGFS). Given the novelty of the tests, coupled with data insufficiency and heterogeneity, it is likely that the results for the banks tested will vary widely based both on geographical location and sectors. Looking forward, the future integration of climate risks into the mainstream stress tests is a distinct possibility.

Introduction

In 2022, the European Central Bank (ECB) will spearhead the design and launch of the first set of climate risk stress tests for the banking union's significant institutions.

The tests mark a fresh challenge for financial institutions. European banks will have to identify their climate risks and integrate them into their stress tests, while also developing methodologies that meet the supervisor's requirements.

In this paper, we analyse: (i) the nature of the cross-cutting climate risks as they trickle down via the existing Basel III risk categories; (ii) access to counterparty information, the construction of databases and the generation of adequate proxies when explicit data are not available; (iii) the ECB's initial estimate of the stress tests' impact on European banks; and, (iv) the role climate risks could play in the conventional stress tests going forward, particularly in the context of ongoing discussions regarding the reform of existing methodology.

Climate risks in banking: Definitions and transmission channels

Environmental sustainability has a real and quantifiable impact on lenders and the financial markets. Consequently, banks must take a holistic approach, aligned with their risk appetite frameworks, when measuring and managing their environmental, social and governance (ESG) risks.

The European Banking Authority (EBA) [1] defines ESG factors as *"environmental, social or governance characteristics that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual"*. And it defines ESG risks as "the negative materialisation of ESG factors" *i.e.*, the risk of any negative financial impact (on financial performance or solvency) to an institution stemming from the current or prospective impacts of ESG factors on its counterparties.

Without underestimating the social and governance aspects, it is the environmental dimension, particularly climate change, that has fuelled the most progress in ESG conceptualisation and analysis for the banks' risk management efforts and the work of banking regulators and supervisors.

Key to those developments was the wake-up call sounded by the Financial Stability Board in 2015 when it acknowledged that the risks associated with climate change could have very adverse consequences for financial stability. In the wake of that warning, the Basel Committee, specifically the Network for Greening the Financial System (NGFS), made up of over 100 central banks and supervisors, has provided inputs for climate scenario analysis and, most importantly, uniform guidelines for supervisors in different jurisdictions.

The regulators and supervisors have agreed on the existence of two classes of risks stemming from climate change:

- Physical risks: The probability of incurring losses as a result of adverse climate phenomena, including the most frequent environmental events (*e.g.*, floods and droughts) and gradual changes in climate.

- Transition risks: The probability of incurring losses as a result of the shift towards a low-carbon and more environmentally-sustainable economy.

> " ESG factors are environmental, social or governance characteristics that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual. "

Exhibit 1   Transmission channels: Climate risks to the financial system

Financial system contagion

Financial risks

Credit risk
- Defaults by businesses and households
- Collateral depreciation

Market risk
- Repricing of equities, fixed income, commodities, *etc.*

Underwriting risk
- Increased insured losses
- Increased insurance gap

Operational risk
- Supply chain disruption
- Forced facility closure

Liquidity risk
- Increased demand for liquidity
- Refinancing risk

Economic transmission channels

Micro
Affecting individual businesses and households

Businesses
- Property damage and business disruption from severe weather
- Stranded assets and new capital expenditure due to transition
- Changing demand and costs
- Legal liability (from failure to mitigate or adapt)

Households
- Loss of income (from weather disruption and health impacts, labour market frictions)
- Property damage (from severe weather) or restrictions (from low-carbon policies) increasing costs and affeting valuations

Macro
Aggregate impacts on the macroeconomy

Physical risks
- Capital depreciation and increased investment
- Shifts in prices (from structural changes, supply shocks)
- Productivity changes (from severe heat, diversion of investment to mitigation and adaptation, higher risk aversion)
- Labour market frictions (from physical and transition risks)
- Socioeconomic changes (from changing consumption patterns, migration, conflict)
- Other impacts on international trade, government revenues, fiscal space, output, interest rates and exchange rates

Climate risks

Transition risk
- Policy and regulation
- Technology develoment
- Consumer preferences

Physical risks
- Chronic (*e.g.* temperature, precipitation, agricultural productivity, sea levels)
- Acute (*e.g.* heatwaves, floods, cyclones and wildfires)

Economy and financial system feedback effects

Climate and economy feedback effects

Source: NGFS climate scenarios for central banks and supervisors (2021).

The Basel Committee on Banking Supervision expanded this line of thinking in April 2021 when it published "Climate-Related Risk Drivers and Their Transmission Channels", in which it concluded that climate risks are cross-cutting risks that intertwine with traditional banking risks (on- and off-balance sheet) through a number of transmission channels. In that same vein, the NGFS, framed by its commitment to disseminating best practices in the management and oversight of climate risks in the financial sector, has created a table itemising the financial contagion transmission channels (Exhibit 1).

The transmission channels explain how climate risks impact economic activities which, in turn, affect the financial system: (i) directly, by undermining profitability or asset value; or, (ii) indirectly, via aggregate impacts on the macroeconomic situation.

To the extent that climate risks are cross-cutting risks, thereby impacting banks' ability to meet their capital requirements and execute their strategic plans, it is necessary to assess banks' resilience to scenarios in which such risks could materialise. Such analysis should also consider how these risks are intertwined.

The stress tests therefore serve as a toolkit to diagnose vulnerabilities using a forward-looking approach. Indeed, several central banks, including the French and Dutch monetary authorities, have already conducted their first stress tests, while the European Central Bank and the supervisors in Australia, Canada, the UK and Singapore have announced forthcoming environmental stress tests under the basis of their financial stability protection mandates.

The eurozone's maiden climate risk stress tests: Methodological challenges

On July 8th, 2021, in tandem with the review of monetary policy strategy in the eurozone, Christine Lagarde, President of the ECB, announced the launch of the first stress tests designed to assess the climate change risks facing the euro area's banking system. The tests, proposed and designed by the ECB, mark a paradigm shift with respect to the stress tests undertaken bi-annually since 2014 to assess European banks' resilience vis-à-vis adverse events. The main changes with respect to the conventional stress tests include:

i. *Governance*: The EBA will not lead the design of climate change stress-testing methodology. Rather, the ECB has been tasked with sizing and rolling out the tests, engaging with the entities and reporting the results. As discussed later, it is conceivable we will see a growing interplay and, eventually, full integration of the climate risks tests within the regular stress testing dynamic as an addition to the oversight toolkit (as part of the Basel Pillar 2 requirements).

Elsewhere, the ECB is expected to recycle many of the rules used to measure credit, market, operational and reputational risks, with an eye to adapting those rules that require greater flexibility to generate a realistic estimate of the banks' climate risks, *e.g.*, the need to estimate long-term transition risks using dynamic balance sheet assumptions currently not contemplated in the EBA methodology.

ii. *Objective*: While the results of the conventional stress tests are used as an input for the Supervisory Review and Evaluation Process (SREP) for the

> " To the extent that climate risks are cross-cutting risks, it is necessary to assess banks' resilience to scenarios in which such risks could materialise. "

banking union's significant institutions, the intention is not for the climate risk tests to directly impact banks' capital requirements. The climate tests will provide the supervisor with an initial assessment of the state of play in the banking system and an idea of its capital sufficiency in the event of adverse climate scenarios.

iii. *Scope*: Since 2014, all entities supervised directly by the Single Supervisory Mechanism (SSM) have had to submit to stress tests, with the odd exception (*e.g.*, during ongoing M&A processes that make it harder to gather information and compare results). The climate tests will similarly apply to all the significant banks under the scope of the SSM, with some variation. Only those institutions that, in the opinion of the supervisor, can adequately certify their ability to generate projections based on their internal models will be allowed to present their own estimates using a bottom-up approach. The remainder will simply report their starting points while the ECB generates the projections, taking a top-down approach.

iv. *Methodology*: As already noted, the goal of the climate tests is to assess the banks' ability to withstand the consequences of transition and physical risks beyond the scope of the traditional stress test methodology. Important changes are therefore anticipated, mainly affecting the banks' ability to identify relevant information related with the climate impact of their investment portfolios.

It will also be essential for banks to identify the location and business sector (for corporate loan exposures) of their counterparties to map the impact of certain

environmental scenarios, as defined by the NGFS, that vary by geography and industry. By the same token, it will be essential to include information about greenhouse gas emissions, or, if that is not possible, use proxy variables to generate robust statistical models for determining borrower risk parameters, which depend on variables related with their carbon footprints.

The Dutch central bank, which pioneered the performance of climate stress tests, flagged limitations related with the availability and granularity of climate information as the main data quality shortcoming, a factor that is more important the greater the level of detail sought by asset type and geography; it also noted the importance of developing tools for modelling vulnerability factors based on GHGs and for capturing second-round effects.

v. *Scenarios*: In the conventional stress tests, the adverse scenarios are provided to the EBA by the European Systemic Risk Board (ESRB) and are characterised by the materialisation of plausible but unlikely episodes of stress in key macroeconomic parameters (GDP, unemployment, inflation), the financial markets (interest rates, yields, share prices, currencies, commodity prices) and the property market.

In contrast, the ECB's climate tests will be fed by the scenarios defined by the NGFS in an attempt to model two key effects: (i) the impact of environmental catastrophes (physical risks) on the value of real estate collateral and the productive capacity of the sectors hit hardest by such episodes; and, (ii) the impact of a potentially disorderly execution of the plans for transition to a

> " It will be essential for banks to identify the location and business sector of their counterparties to map the impact of certain environmental scenarios by geography and industry. "

NGFS climate scenarios

NGFS scenarios Framework

Positioning of scenarios is approximate, based
on an assessment of physical and transition
risk out to 2100
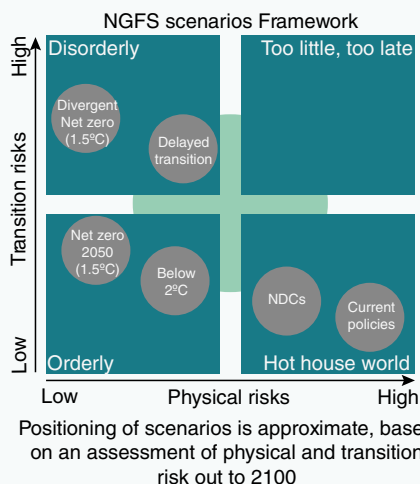
Source: NGFS climate scenarios for central banks and supervisors (2021).

low-GHG economy (transition risks) on macroeconomic, financial and environmental variables (emissions).

Specifically, the NGFS has defined three climate scenarios (one baseline scenario and two adverse scenarios, the latter somewhat contradictory to each other) that depend on the ambition of governmental measures and the ability to implement them, the level of carbon emissions and the pace of technological change:

➢ *Orderly transition*: Assumes climate policies are introduced early and become gradually more stringent; physical and transition risks are relatively low.

➢ *Disorderly transition*: Assumes late climate action, potentially uneven across different countries and sectors, resulting in higher transition risk.

➢ *Hot house world*: Assumes climate policies are introduced in some jurisdictions only and global efforts are insufficient to halt global warming. Physical risks are severe and include irreversible changes, such as sea level rise.

What the ECB's top-down tests might reveal

Given the novelty of the tests, coupled with data insufficiency and heterogeneity, it is likely that the results for the banks tested will vary

“ Given the novelty of the tests, coupled with data insufficiency and heterogeneity, it is likely that the results for the banks tested will vary widely. ”

widely. Because of uncertainty surrounding these tests, it is worth considering the ECB's initial assessment of climate change risk for the sector as a whole as those results provide a firm-level snapshot of climate vulnerability by sector and geography.

In March, the ECB published the results of a pilot test for its appraisal of the resilience of the economy as a whole to climate change. In generating its projections, the European supervisor used a deep financial and climate dataset comprising over four million companies worldwide and over 2,000 banks, modelling a time horizon of 30 years and a range of environmental scenarios (those designed by the NGFS), making them the most ambitious tests conducted in the eurozone to date.

As supervised entities did not participate, the tests are not a real self-assessment. However, the ECB's stress test, which encompasses banks and non-financial corporates, is the frontrunner for the climate stress tests slated for 2022. As such it provides initial insight into the scenarios' design, assumptions and assessment of the impact of climate risks on the financial system.

The results published by the ECB show that in the absence of early political action to mitigate the effects of climate change, the probability of default (PDs) by counterparties will be higher due to the expected increase in the frequency and magnitude of natural hazards. Climate risk is, therefore, ultimately a systemic risk and it is a higher risk for the banks with greater exposure to potentially vulnerable sectors and markets.

The ECB clearly distinguishes regions that are more exposed to physical risks, such as the risk of more frequent heatwaves and wildfires in southern Europe and the risk of flooding in central and northern Europe. Its assessment of transition risk is similarly discretionary with carbon-intensive industries, such as mining, energy generation and manufacturing, highly exposed to carbon-cutting policies, particularly if the transition to a green economy is more disorderly.

Similar divergences are also displayed in the analysis of banks' corporate counterparties' probabilities of default under different climate scenarios. While the probability of default increases initially in the orderly transition scenario as a result of the costs of adapting to green policies, that increase is

Exhibit 3 **Innovative components of the ECB climate stress test**

Top-down exercise
30 yr horizon based on NGFS *outputs,* transition + physical

Climate scenarios

Rich climate data worldwide

Counterparty level analysis
~4m firms Worldwide: financials, emissions, physical risk score (geolocated)
~2,000 consolidated banks

Climate specific models:
- Damages to physical capital
- Impact of energy prices/efficiency and technology substitutions
- Mitigants and amplifiers: insurance, insurance premia

New models to assess climate risks

Climate stress lest of non-financial and financial institutions

Source: Shining a light on climate risks: The ECB's economy-wide climate stress test (2021).

offset in the medium- and long- term by a substantial reduction in the costs of physical risks (in disorderly transition scenarios: destruction of physical capital and increase in insurance premiums). Elsewhere, the use of new technologies is expected to lead to more efficient and sustainable production that, in the long term, will translate into cost savings that boost business profitability and creditworthiness.

Exhibit 4 depicts the smaller increase in counterparty firms' default probabilities by sector in the orderly transition scenario

versus the adverse scenarios. It reveals that in all sectors the impact of a disorderly transition is negative and leads to higher credit impairment. This should be more pronounced in carbon-intensive industries and, above all, in the hot house world scenario, where, in the absence of green policies, the physical risks are more severe.

Across sectors, exposure to climate risks varies considerably, with scope for PDs to increase by up to four times for the average firm over the next 30 years for those companies with the highest physical risk scores (95th percentile).

Map 1   **Mapping of physical risk: Forward-looking physical risk score of euro area firms**
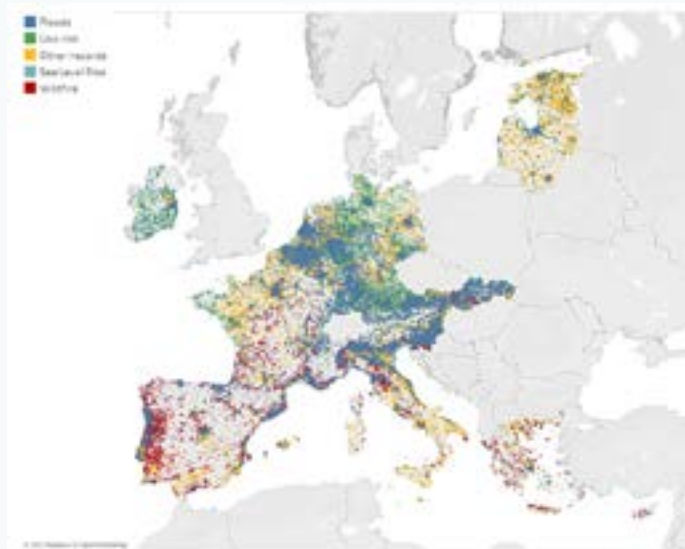
Source: Shining a light on climate risks: The ECB's economy-wide climate stress test (2021).

Exhibit 4 **Differences in firms' default probabilities in the two adverse scenarios with respect to the orderly transition scenario, by sector and group of firms**

Percentage
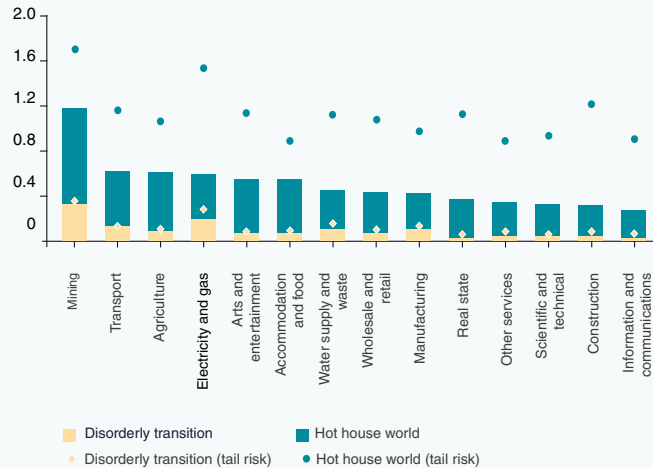
Note: The bars represent the median changes in default probabilities over the next 30 years; the dots report the changes in default probabilities when considering the firms that are most exposed to physical risk (95th percentile based on firms' physical risk score).

Source: Shining a light on climate risks: The ECB's economy-wide climate stress test (2021).

The future is green for the European stress tests

The ECB's top-down assessment of climate risks in the banking union is more than just an intellectual exercise. The implications for banks (including for the less significant institutions judging by the strategy being taken by some of the national central banks, including the Bank of Spain) are irreversible and are framed by the supervisory authorities' commitment to contributing to the delivery of climate change targets within the context of financial stability.

This analysis comes at an inflexion point for the European stress tests. Already debate is underway within the EBA about the future of the tests. This debate is focused on a paper published in 2020 whose conclusions and, ultimately, adjustment mechanisms, will inform the 2023 stress tests.

Some of the criticisms of exercise that the EBA will address include: (i) their ability to predict bank resolution episodes; (ii) the representativeness of certain assumptions underpinning the methodology, specifically the static balance sheet approach, which fails to factor in decision-making in situations of stress and the second-round effects that exacerbate crises and make the whole simulation more realistic; (iii) the use of the stress tests as a strategic planning and management tool (particularly by investment committees and for lending policy-setting purposes); (iv) the operational difficulties posed by templates, generating projections and engaging with the supervisors; and, (v) coverage of all of the risks and scenarios likely to compromise bank solvency.

Against that backdrop, the future integration of climate risks into the mainstream stress

> **"** In an economy increasingly committed to environmental sustainability, the future of bank management requires assessing the banks' ability to withstand the worst consequences of climate change and to adapt their strategies accordingly. **"**

tests is a distinct possibility. Such integration could be tackled in one of the following ways:

■ On an *ad-hoc* basis, such as those tests the ECB will conduct in 2022, isolated in time, and following procedures designed by the EBA bi-annually using a relatively similar forecasting methodology to facilitate entities' understanding and use of their internal models.

■ Layering climate risks into integrated stress tests, presumably from 2023. This is in line with the debate sparked by the EBA and would assess entities' vulnerability to stressed macroeconomic and financial scenarios as well as environmental scenarios in the best case scenario, identifying potential spillover effects.

In our opinion, the second option is the more advisable route. It would bolster the stress tests' value as an input for calculating the minimum amount of capital required by the supervisor as part of the SREP exercise by considering all relevant vulnerabilities, including environmental exposure, and factoring in the interplay between risks. It would also facilitate the entities' and supervisors' work by requiring a single procedure with common rules. Admittedly this would necessitate some variability to integrate longer-term scenarios into the climate risk assessment, irrespective of the frequency with which the tests are ultimately performed.

The fact that it is the EBA that has sparked the debate about the tests' weaknesses is grounds for optimism. The tests are vital to supervision and should be an increasingly fundamental tool for bank management. In that context, and in an economy increasingly committed to environmental sustainability, the future

of bank management requires assessing the banks' ability to withstand the worst consequences of climate change and to adapt their strategies accordingly. The stress tests are, without a doubt, essential to facilitating that analysis.

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[1] *EBA Discussion Paper* on the management and supervision of ESG risks.

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Scant use of capital buffers during the pandemic: Potential stigma effect

In order to alleviate the pressure wrought by COVID-19 on the banking sector, regulators and supervisors permitted banks to utilise capital buffers prescribed under Basel III, including the so-called countercyclical buffer and the capital conservation buffer. Econometric analysis shows that the 'stigma effect' most likely explains banks' hesitancy to take advantage of this flexibility.

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Abstract: One of the fundamental new aspects of Basel III compared to its previous iterations is the introduction of capital buffer requirements. While most capital buffers are set either as a fixed amount or established during the supervisory cycle, the countercyclical buffer can be adjusted in a discretionary manner depending on economic trends. Due to the unprecedented nature of the COVID-19 crisis, regulators and supervisors permitted banks to utilise their capital buffers, including the countercyclical buffer. Despite also

curbing dividend payments and committing to a generous timeframe to allow banks to replenish their initial capital positions, banks have not taken advantage of the more flexible treatment of capital buffers. Results from econometric analysis show a reduction in an entity's capital ratio is penalised by the market, confirming the hypothesis of a 'stigma effect'. However, if it is accompanied by a reduction in regulatory capital and the entities continue to hold the same margin over the minimum required, that penalty is

mitigated. These findings suggest regulators should consider fine-tuning the current buffer system to increase releasability.

Introduction

An important aspect of the new risk-based regulatory framework articulated in the wake of the financial crisis of 2008-2012 was the introduction of capital buffers. These buffers safeguard the minimum level of solvency required to ensure business continuity in adverse cyclical conditions (microprudential function) and mitigate the incentives to pare back the supply of credit under those same circumstances (macroprudential function).

The Basel III capital buffer system consists of a releasable component that kicks in depending on cyclical conditions. These include the countercyclical capital buffer (CCyB) and other buffers, such as the capital conservation buffer (CCoB), whose size does not depend directly on the state of the economy. In the case of the latter, the regulator permits the banks, on certain conditions and in adverse circumstances, to temporarily breach that capital requirement. In short, these constitute *usable* buffers.

Because the countercyclical capital buffer was at or near zero at the start of the crisis, its impact has been diminished. Consequently, regulators have urged the banks to deplete those usable buffers if needed to keep credit flowing to the real economy (BCBS, 2020a and b). However, the banks have proven reluctant to use their capital buffers despite the authorities' encouragement. Their aversion to depleting their capital ratios is consistent with the analytical research demonstrating a negative correlation between capital margin with respect to the regulatory minimum and the supply of credit (ECB, 2020b).

The most plausible hypothesis for explaining this behaviour is the existence of a market penalty (*stigma effect*) for capital depletion. That assumption has been endorsed by Andreeva *et al.* (2020), who find that the capital targets reported by the banks have barely moved in the wake of the authorities' recommendation to use their buffers. In addition, Schmitz *et al.* (2021) finds a stigma effect in the price of debt that is eligible as capital for regulatory purposes, which depends on the level of own funds.

However, these studies do not directly analyse the nature of that stigma effect. Specifically, they do not examine whether the stigma effect is attributable to difficulties faced by an entity in achieving the absolute level of capital the market deems adequate or whether it is due to insufficient room for manoeuvre to ensure compliance with the minimum ratio required by the regulator.

The difference between the two hypotheses is potentially relevant for the optimal design of the regulatory framework. If the first hypothesis is true, it would not make sense to attribute any impact on the banks' behaviour to the size or nature of the buffers. If the second hypothesis is accurate, the results would justify the redesign of the capital buffers to better align the formal regulatory requirements with cyclical conditions. In other words, such a thesis would lend support to the strategy of rebalancing the buffer system to give greater weight to the releasable buffers relative to the usable buffers.

Against that backdrop, this paper analyses the extent to which the regulatory framework may be falling short of its stated stabilisation function. Our analysis focuses on verifying whether the assumption that the banks' reluctance to use their buffers is due to a possible market penalisation (*stigma effect*) and, if so, whether that penalty is due to the reduction in margin with respect to minimum capital thresholds.

> " Because the countercyclical capital buffer was at or near zero at the start of the crisis, its impact has been diminished. "

> " Failure to meet the combined buffer requirement, or CBR, can lead to restrictions on the distribution of dividends, remuneration on fixed-income instruments that qualify as additional tier-1 capital and employee bonuses. "

Capital buffers under Basel III

One of the fundamental new aspects of Basel III compared to its previous iterations is the consideration of the macroprudential dimension. Key instruments used in Basel III are the above-mentioned capital buffer requirements. They are designed to ensure that banks have some flexibility over and above their minimum capital requirements. Each buffer is designed to mitigate a specific type of risk but they all share certain common characteristics:

- *Capital conservation buffer (CCoB).* Its overriding purpose is to ensure that banks keep an additional layer of capital for use when they incur losses. That buffer, which took full effect in 2019, has been set at 2.5% of total risk-weighted assets (RWA).

- *Countercyclical capital buffer (CCyB).* This buffer is intended to protect the banking sector against periods of excessive growth in credit that have customarily been associated with episodes of build-up of systemic risks.

- *Capital buffers for systemically important institutions (SIIs).* The systemic risk buffer is mandatory for banks identified as systemically important, whether globally (G-SII) or domestically (O-SII).

The total level of CET1 needed to meet the capital conservation and countercyclical buffering requirements and the add-ons applicable as a function of the banks' systemic risk is known as the combined buffer requirement, or CBR. The CBR, together with the Pillar 1 requirements (which are common for all entities) and Pillar 2 requirements (which are set at the firm level), constitute the capital requirements that are overseen by the supervisor.

Failure to meet the CBR can lead to restrictions on the distribution of dividends, remuneration on fixed-income instruments that qualify as additional tier-1 capital (such as contingent convertible bonds, or CoCos) and employee bonuses.

Banks that breach their CBR become subject to more stringent oversight and are required to submit a plan for replenishing their capital and upholding their buffer commitments within a reasonable timeframe. The consequences are, therefore, less severe than the revocation of their business license or the triggering of insolvency procedures. Nevertheless, they are sufficiently serious to motivate the banks to avoid, unless strictly necessary, breaching the CBR and, when they do, replenish their capital as quickly as possible.

Of all the buffers, only the countercyclical buffer can be adjusted in a discretionary manner depending on economic trends. That is why it is classified as releasable. The other buffers are not releasable as they are either a fixed amount (such as the capital conservation buffer) or they are set in the course of the supervisory cycle (such as the SII surcharge and structural buffers), with the stipulated frequency, usually of one year. All of the macroprudential buffers and the CCoB can be used to absorb losses in adverse circumstances and are therefore deemed usable capital buffers.

Buffer usability in the COVID-19 crisis

The Basel Committee has reiterated throughout the pandemic (BCBS, 2020a and b) that an orderly reduction in buffers is appropriate in a crisis of this nature and that until it is over the supervisors will give banks enough time to replenish the previous levels over their minimum requirements, taking

> " The purpose of the capital conservation buffer (CCoB) is to absorb losses as needed but its design renders it a transitory tool due to the incentives attached for relatively fast replenishment. "

prevailing economic and market conditions as well as the banks' performances into consideration (ECB. 2020a). Consequently, regulators such as the ECB have permitted the banks to temporarily operate below the level stipulated in the Pillar 2 Guidance (P2G), CCoB and liquidity coverage ratio (LCR) (ECB, 2020). The national prudential authorities have also eased the CCyB requirements.

The CCyB is the most effective tool for stimulating lending in adverse economic climates because its size is calibrated as a function of cyclical conditions. However, given the absence of any real signs of credit overheating prior to the crisis, the CCyB was close to zero in most jurisdictions.

The purpose of the CCoB is to absorb losses as needed but its design renders it a transitory tool due to the incentives attached for relatively fast replenishment. It is, therefore, an effective instrument for cushioning the effect of adverse situations on the banks' ability to operate, but less so for the purpose of inducing growth in the supply of credit under those conditions. However, given the lack of other mechanisms for stimulating lending, supervisors urged the banks to use this buffer to prevent excessive deleveraging.

So far, the banks have proven reluctant to deplete their capital buffers despite the authorities' clear messaging. Furthermore, some of the banks appear to have embarked on deleveraging, albeit with different levels of intensity. There are three possible reasons for the entities' conduct: a) restrictions on the distribution of dividends; b) uncertainty regarding the path for replenishing their buffers; and, c) a possible stigma effect.

Intervention by the authorities may have deactivated, at least partially, the first two factors. Specifically, the supervisors have intervened to curb and suspend the payment of dividends, irrespective of individual entities' capital levels. As a result, the use or non-use of capital buffers does not determine an entity's ability to pay dividends. The authorities have also expressly committed to providing a generous timeframe for the replenishing of initial capital positions in the event buffers are used to prop up credit (ECB, 2020a).

Thus, the stigma effect looks like the most plausible explanation, albeit one that needs verification. The next step is to analyse whether the market penalisation is triggered when the relevant capital ratios fall in absolute terms or only when the margin between available capital and the minimum level required narrows. The second case implies the banks are likely to remain reluctant to use their buffers unless the regulator formally and credibly modifies them. A reduction in the buffers required in adverse conditions (such as the CCyB) would enable the banks to use the marginal capital so freed up to lift their supply of credit without any impact on market valuations.

Empirical analysis

The model

Our econometric model attempts to explain the relationship between an entity's share price, its actual capital ratios and the minimum capital ratio stipulated for regulatory purposes. As outlined in the last section, the idea is to ascertain whether their capital ratios affect their market values and how that effect may be impacted by possible changes in regulatory requirements.

The panel data regression model estimated is the following:

> " Provisions-to-loans can affect price-to-book value as weak asset quality introduces uncertainty regarding the sufficiency of provisions relative to losses. "

$$PBV_{i,t} = \beta_0 + \beta_1 capital\ ratio_{i,t} + \beta_2 minimum\ ratio_{i,t}$$
$$+\sum_{j=3}^{n} \beta_j control\ variables_{j,i,t} + \varepsilon_{i,t}, \qquad (a)$$

where $PBV_{i,t}$ is the ratio of market value (price) to the book value of entity i's CET1 at time t.

The explanatory variables aim to reflect the banks' capital positions. To do that, we used the regulatory capital ratio reported by the banks (CET1_RATIO) (AFI, 2021a) and the minimum regulatory capital requirement imposed by the authorities (CET1_REG). The regulatory capital ratio is the ratio between an entity's capital and its risk-weighted assets, both measured in accordance with the Basel III framework. The capital requirement is the minimum ratio required by the supervisor, in conformity with the Basel III guidelines.

We also added control variables. Firstly, we introduced profitability (ROE), a key factor in the valuation ascribed to the banks by the market relative to their book value, as a proxy for the market's forward-looking expectations.

We then layered in an indicator of the quality of their balance-sheet assets (PROVISIONS_TO_LOANS). This variable can affect price-to-book value as weak asset quality introduces uncertainty regarding the sufficiency of provisions relative to losses, potentially undermining the credibility of reported book value and, by extension, market value.

The estimation of the coefficients, β_1 and β_2, make it possible to verify the main hypotheses. If the estimator β_1 is positive and significantly above zero, a stigma effect exists. On the other hand, a significantly negative β_2 estimator indicates the importance of the margin over minimum required capital. More specifically, a negative β_2 reading that is similar in absolute

terms to the β_1 value would imply that the capital variable that exclusively explains the stigma effect is the margin between reported and required capital.

The sample used is made up of 50 listed European banks whose core business is commercial banking. We selected entities with a market cap of over €1 billion and assets in excess of €30 billion. The frequency of the data used is annual and the data pertain to 2019, 2020 and 2021.

The accounting variables and capitalisation figures were obtained from the entities' annual reports. The valuation variable (P/BV) was calculated using the banks' share prices at the end of March of the year after the year of reference. This ensures market prices have discounted all the relevant accounting and regulatory information for each year, which tends to be published during the first quarter of the following year.

Findings

The panel regression is estimated using the Ordinary Least Squares method, introducing time fixed effects.

The parameters estimated, and their levels of statistical significance, are as follows:

	Coefficient	Statistical significance
CET1-RATIO	8.74	0.03
CET1-REG	-4.98	0.04
ROE	5.88	0.01
PROVISIONS-TO-LOANS	-11.45	0.07

The results indicate a positive and significant [1] correlation with the capital ratio (CET1_RATIO) and a negative and significant correlation with the capital requirement

(CET1_REG). As for the control variables, profitability (ROE) has the anticipated positive effect on price-to-book, whereas asset quality (PROVISIONS_TO_LOANS) presents the expected negative effect.

The estimate of the fixed effects indicates a negative effect associated with 2019 relative to 2018 and 2020. Given that the share prices used date to the March after the year-end of reference for the estimations, the results are consistent with the widespread correction in the banks' share prices when the WHO declared the coronavirus a global pandemic in the first quarter of 2020 and their partial recovery during the second half of that year and early part of 2021 (Berges *et al.,* 2021).

We also verified the null hypothesis that the absolute values for CET1_RATIO and CET1_REG are identical (zero difference between them). The result of that exercise is that is it not possible to reject that they are equal with a confidence level of 90%.

Model interpretation

Working with equation (a), it is possible to derive equations (b) and (c):

$$PBV_{i,t} = \beta_0 + \beta_1 \left(capital\ ratio_{i,t} - minimum\ ratio_{i,t} \right)$$
$$+ \left(\beta_2 + \beta_1 \right) minimum\ ratio_{i,t} + \sum_{j=3}^{n} \beta_j control$$
$$variables_{j,i,t} + \varepsilon_{i,t}, \qquad (b)$$

$$PBV_{i,t} = \beta_0 + \left(\beta_1 + \beta_2 \right) capital\ ratio_{i,t} - \beta_2$$
$$\left(capital\ ratio_{i,t} - minimum\ ratio_{i,t} \right) +$$
$$\sum_{j=3}^{n} \beta_j control\ variables_{j,i,t} + \varepsilon_{i,t} \qquad (c)$$

The coefficient β_1 in (a) corresponds to the capital ratio (whereas β_2 is the minimum required capital ratio coefficient). Given the coefficients estimated for those variables, the effect of the margin over the minimum required ratio is positive in both (b) and (c).

Looking at approach (b), the regulatory requirement, on its own has a negative effect, insofar as β_2 is negative and β_1, positive. That coincides with the effect estimated in model 1.

Taking approach (c), the capital ratio on its own has a positive effect, so long as β_1 is higher in absolute terms than β_2. Model 1 effectively gives rise to a higher capital ratio coefficient than the minimum ratio coefficient, thus corroborating that net positive effect. This leads us to conclude that the market not only values the headroom over the minimum capital ratio but also the entities' absolute capital levels. However, the Wald test [2] indicates that it is not possible to reject that β_1 is equal to $-\beta_2$ with a confidence level of 90%.

In short, the stigma effect is not independent of supervisors' demands with respect to the minimum level of capital the entities must hold. A reduction in an entity's capital ratio is penalised by the market. However, if it is accompanied by a reduction in regulatory capital and, therefore, the entities continue to hold the same margin over the minimum required, that penalty is mitigated. Moreover, it is not possible to reject the hypothesis that it is completely neutralised.

The results, therefore, indicate that there is a stigma effect associated with the utilisation of available capital. That effect is not, however, independent of supervisory requirements. When the depletion of capital at an entity is accompanied by a reduction in the regulatory requirement and that entity preserves the same buffer over its minimum ratio, the market penalisation is largely neutralised.

Given these findings, regulators should consider fine-tuning the current buffer system to increase releasability. That would reduce the capital requirement in episodes of recession or significant economic tension,

much like the CCyB already works. However, unlike the CCyB mechanism, regulators would need to permit the flexible release of capital buffers in times of unexpected stress (regardless of whether or not linked to the credit cycle). This, by extension, would enable the supervisor to encouraging banks to temporarily use a buffer though the allowance of lower levels of capital on the basis of a wide spectrum of macroeconomic indicators.

Notes

[1] The threshold for statistical significance is 90%, unless stated otherwise.

[2] In statistics, the Wald test assesses constraints on statistical parameters based on the weighted distance between the unrestricted estimate and its hypothesized value under the null hypothesis. The Wald test is one of three classical approaches to hypothesis testing.

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An analysis of Spanish exports post-COVID-19: An opportunity in times of change?

Following the drop in international trade caused by COVID-19, Spain saw a strong rebound in exports. While it is too soon to say whether this marks a turning point for Spanish exporters, some early data point to a structural shift in Spain's trading patterns.

Ramon Xifré

Abstract: This paper analyses the extent to which the COVID-19 crisis has shifted the Spanish economy's international competitiveness, creating new opportunities for Spanish businesses. While the drop in Spanish imports and exports post-COVID-19 (close to 40% year-on-year) was comparable to the contraction sustained in the wake of the Global Financial Crisis of 2008, the rebound, with year-on-year growth in exports of over 70% in April 2021, has been far more dynamic. This raises the question of whether Spain is simply catching-up after trade flows were interrupted in 2020 or whether this is the beginning of a significant structural change in Spanish trading patterns. Although it is still too soon to provide a clear answer to that question, initial data point to a structural shift. Spain's long-standing non-energy trade deficit turned into a surplus in the first half of 2021. Additionally, the food industry was the sector which made the biggest contribution to the recovery in exports, fuelled mainly by non-EU markets. The fact that the food sector is a core component of Spain's export effort, and has a history of robust export-oriented productive capacity, is a possible indicator of a structural improvement in the Spanish economy's international positioning.

" In April 2021, Spanish exports registered year-on-year growth of 73%, easing to 50% in May, while imports grew by 62% and 56% for those months, respectively. "

Introduction

This paper analyses the extent to which the COVID-19 crisis has changed the Spanish economy's international competitiveness. Its purpose is to contribute to the current debate about the opportunities and challenges facing the Spanish economy as it recovers (Torres and Fernández, 2021) and to take previous analyses further (Xifré, 2015, 2019). The paper focuses on imports and exports of goods between Spain and the EU and non-EU markets based on Eurostat data up until June 2021. We first present an assessment in aggregate terms and then analyse the key trends by sector.

In addition to providing a snapshot of the state of Spanish trade, this article aims to provide insight into current thinking about the Spanish economy's place within an international context that continues to be affected by post-COVID-19 adjustments.

Aggregate analysis

We begin by examining recent trends in the trade of Spanish goods compared with longer-run trends. Exhibit 1 shows the year-on-year rates of change in monthly Spanish imports and exports between June 2001 and June 2021. Note that excluding the crises periods, most of the fluctuations have ranged within rates of growth of 20% and contractions of 10%.

After the onset of the Global Financial Crisis in 2008, Spanish exports contracted by slightly below 30% for several months, with imports decreasing by as much as 40%. The period of atypically high year-on-year rates of contraction (over 20%) lasted broadly

Exhibit 1   **Year-on-year change in imports and exports between Spain and the rest of the world between January 2001 and June 2021**

Percentage
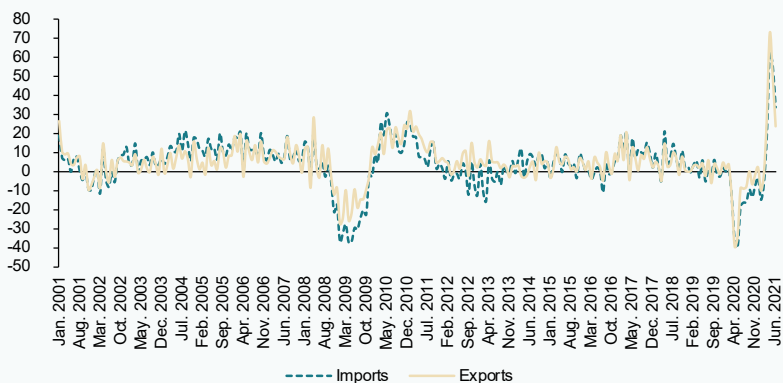
Source: Eurostat.

from November 2008 until October 2009 for imports and from January until July 2009 for exports. These periods were followed on the whole by months of abnormally high growth (also over 20%) from March 2010 until January 2011 in the case of imports and through to April 2011 in the case of exports.

Turning to the COVID-19 crisis, the periods of sustained contractions did not last as long (between March and August 2020 for imports and only from March to May 2020 for exports) but their intensity was more pronounced (with the pace of decline in both flows peaking at 40% year-on-year). Most noteworthy, however, is the buoyancy of the recovery in both imports and exports, which is largely attributable to the sharp corrections of 2020. In April 2021, Spanish exports registered year-on-year growth of 73%, easing to 50% in May, while imports grew by 62% and 56% for those months, respectively. Such sharp swings were not observed in the last crisis. In short, the figures confirm that we are in the midst of a period that is clearly atypical, with little indication as to when it will end.

Exhibit 2 shows the monthly trend in foreign trade in Spanish goods broken down in two

ways: (i) by destination, *i.e.,* intra-EU-27 and extra-EU-27; and, (ii) by the direction of the flows, *i.e.,* imports and exports. The four series have been rebased to January 2020, an approach that reveals the speed of recovery in each series.

The intra-EU-27 series depicts a trend that is similar for both exports and imports. As already shown, both series contracted by as much as 40% and the trend post-pandemic has been comparable, with imports and exports revisiting January 2020 levels in February 2021. The trend in extra-EU-27 exports from Spain is fairly similar to the first two series. Extra-EU-27 imports to Spain, on the other hand, have etched out a different trend. The impact of the initial rout of April 2020 was similar to the first three series but the recovery has proven slower. January 2020 levels were still out of reach as of June 2021. Thus, the trend in imports to Spain from the rest of the world has differed from the trend in exports of Spanish goods to the rest of the world and to that of imports to Spain from the EU-27.

Exhibit 3 depicts the balance (exports less imports) and these two flows of goods between

| Exhibit 2 | **Exports and imports of goods from / to Spain: Intra-EU-27 *vs.* extra-EU-27** |

Rebased to January 2020 = 100
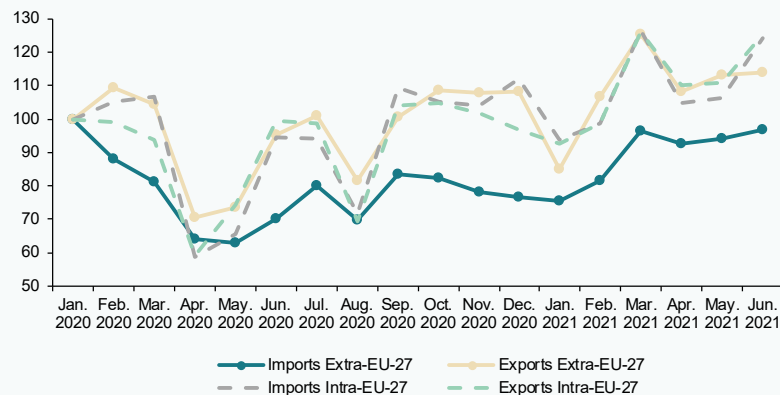
Source: Eurostat.

Exports and imports of goods from / to Spain and trade balance

Billions of euros
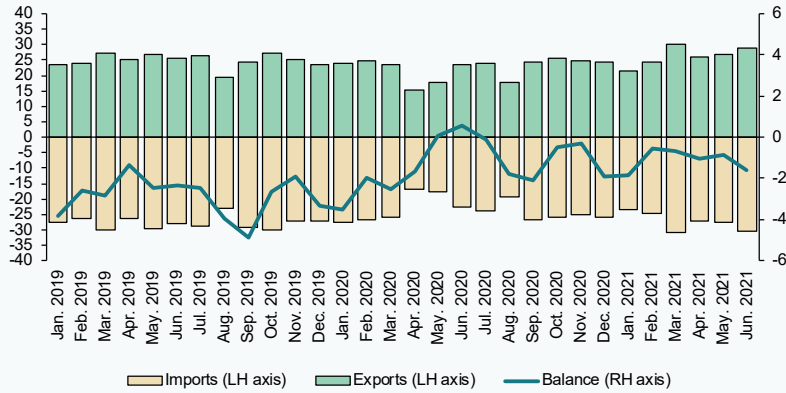
Source: Eurostat.

January 2019 and June 2021. Spain has had a persistent deficit in its trade in goods with the rest of the world, a deficit that oscillated between 1 and 5 billion euros a month in 2019. The COVID-19 crisis reduced that

deficit, with Spain actually reporting small surpluses of 46 and 575 million euros in May and June 2020. These surpluses are likely due to the exceptional circumstances created by the pandemic rather than a structural

Contribution of intra-EU-27 and extra-UE-27 balances to Spain's balance of trade in goods

Billions of euros
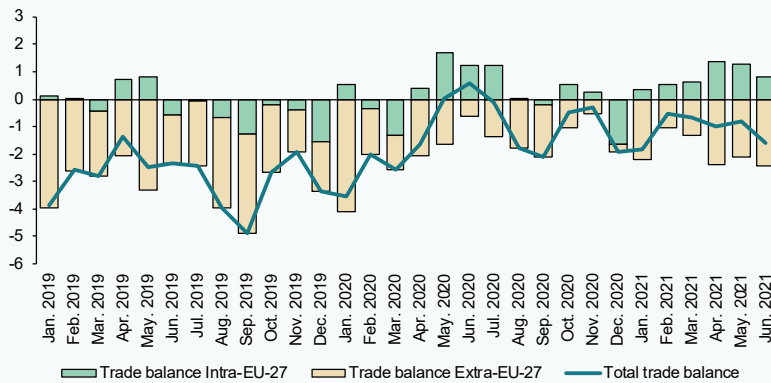
Source: Eurostat.

> " Intra-EU-27 trade is more balanced than Spain's extra-EU-27 trade, which yields systematic and substantial deficits due to the importation of energy products. "

improvement in Spanish companies' international positioning. Spain's monthly trade deficits post-COVID-19 have fluctuated within a significantly narrower range, without topping the 2-billion-euro mark to date.

To determine the source of the structural improvement in the Spanish economy's international standing, Exhibit 4 breaks down the aggregate trade balance between intra-EU-27 and extra-EU-27 contributions.

The first takeaway is that intra-EU-27 trade is more balanced than Spain's extra-EU-27 trade, which yields systematic and substantial deficits due to the importation of energy products. Pre-COVID-19, the only intra-EU-27 surpluses were observed in March and April 2019 and February 2020. Exhibit 4 shows how the improvement in the

overall balance post-COVID-19 is the result of recurring intra-EU-27 surpluses since January 2021. Note that the improvement in the intra-EU balances has been accompanied by worsening extra-EU deficits, such that the aggregate trade deficit has widened since February 2021.

Disaggregated analysis

Exhibit 5 depicts exports, imports and the overall non-energy trade balance (*i.e.,* excluding Spain's trade in fuels and other energy products). The energy balance is sourced from the Standard International Trade Classification of products (SITC), using category 3 products (mineral fuels, lubricants and related materials). The non-energy balance is obtained by subtracting the category 3 balance from the total trade balance.

Exhibit 5

Exports and imports of goods from / to Spain and trade balance, excluding fuels and other energy goods

Billions of euros

Exports excl. energy (LH axis)   Imports excl. energy (LH axis)   Balance excl. energy (RH axis)
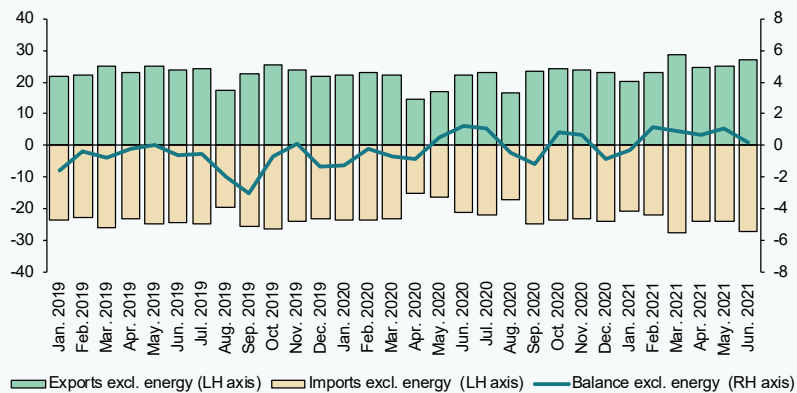
Source: Eurostat.

Trade balances between January and June by destination, product and year

Millions of euros

	2019	2021
A. World		
Total Trade Balance	-15,415.3	-6,471.0
Non-Energy Trade Balance	-3,455.2	3,663.6
Energy Trade Balance	-11,960.1	-10,134.6
B. Intra-EU-27		
Total Trade Balance	627.7	5,024.6
Non-Energy Trade Balance	-2,147.8	4,076.8
Energy Trade Balance	2,775.5	947.8
C. Extra-EU-27		
Total Trade Balance	-16,043.0	-11,495.6
Non-Energy Trade Balance	-1,307.4	-413.2
Energy Trade Balance	-14,735.6	-11,082.4

Source: Eurostat.

Exhibit 5 shows that Spain's non-energy trade balance has been consistently more favourable than the overall balance, evidencing that Spain, like most industrialised countries, is a net importer of fuels and energy goods. Once again, we see a recent improvement in the non-energy balance of trade in goods in Spain, with the economy recording a surplus since February 2021.

Leaving aside 2020 due to the atypical impact of COVID-19, Table 1 presents the balances for the first six months of 2019 and 2021 based on geography (world, intra-EU-27 and extra-EU-27) and product (total trade balance, energy balance and non-energy balance).

Interestingly, Table 1 highlights the shift from deficit to surplus during the first six months of the year, specifically from a deficit of over 3.4 billion euros to a surplus of more than 3.6 billion euros (Panel A of Table 1). This implies an improvement in the non-energy goods trade balance of over 7.1 billion euros in the first half of 2021 compared to the first half of 2019. As shown in Table 1 (Panel B), the bulk of the improvement in the non-energy trade balance stems from intra-EU trade, which has gone from a deficit of 2.1 billion euros to a surplus of nearly 4.1 billion euros. There has also been an improvement in the extra-EU non-energy balance (Panel C), albeit more modest. Specifically, the deficit narrowed from 1.3 billion euros in 2019 to just over 400 million euros in 2021.

To gain insight into which sectors have contributed to the improvement in the non-energy trade balance in the wake of the COVID-19 crisis, Table 2 breaks down the trade

" There was an improvement in the non-energy goods trade balance of over 7.1 billion euros in the first half of 2021 compared to the first half of 2019. "

Table 2   **Trade balances for the non-energy categories, between January and June, by destination, product and year**

Millions of euros

	January - June 2019			January - June 2021			Change in the balance	Contribution to the overall change (%)
	Intra-EU	Extra-EU	Total	Intra-EU	Extra-EU	Total		
0. Food and live animals	7,205.2	116.8	7,322.0	7,983.3	2,320.0	10,303.3	2,981.3	41.9
1. Beverages and tobacco	-233.3	807.0	573.7	-222.0	953.8	731.8	158.1	2.2
2. Crude materials, inedible, except fuels	-406.5	-1,851.4	-2,257.9	-425.3	-2,305.0	-2,730.3	-472.3	-6.6
4. Animal and vegetable oils, fats and waxes	984.0	26.0	1,010.0	846.7	77.9	924.6	-85.3	-1.2
5. Chemicals and related products, n.e.s.	-4,653.2	-196.4	-4,849.6	-3,811.3	-1,291.3	-5,102.6	-253.0	-3.6
6. Manufactured goods classified chiefly by material	1,998.1	1,812.3	3,810.3	3,870.7	1,744.1	5,614.7	1,804.4	25.3
7. Machinery and transport equipment	-5,892.0	2,302.2	-3,589.9	-4,050.5	1,586.2	-2,464.4	1,125.5	15.8
8. Miscellaneous manufactured articles	-1,630.9	-5,137.9	-6,768.8	-1,005.9	-4,208.5	-5,214.4	1,554.4	21.8
9. Commodities and transactions not classified elsewhere	480.9	814.1	1,295.0	891.0	709.7	1,600.7	305.7	4.3
Total non-energy	-2,147.8	-1,307.4	-3,455.2	4,076.8	-413.2	3,663.6	7,118.8	100.0

Source: Eurostat.

balances for the first six months of 2019 and 2021 into nine SITC product categories (excluding fuels). The table shows the non-energy balances based on destination and product category as well as presenting the change in the overall balance and contribution to the change in the overall balance by each category.

The biggest contribution to the improvement in the non-energy trade balance came from food and live animals (SITC category 0), which accounts for nearly 42% of the total improvement. Geography-wise, the improvement is concentrated in extra-EU flows, where the surplus widened significantly, from 116 million euros to 2.32 billion euros. Although the intra-EU balance of trade in food and live animals is much bigger, the improvement is more modest.

The two product categories associated with manufacturing (SITC categories 6 and 8) make a relatively similar contribution to the improvement in the overall balance. Chapter 6 –officially "Manufactured goods classified chiefly by material"– includes relatively less processed manufactured items such as leather, rubber, paper, textiles, *etc.,* in addition to metals. Category 8 comprises more elaborate manufactured goods including apparel and footwear, furniture, scientific instruments and miscellaneous manufactured articles. Importantly, the manner in which the two categories contribute to the improvement is different. The existing intra-EU surplus in

category 6 products improved considerably, from 2 billion euros to 3.87 billion euros, while the extra-EU surplus narrowed slightly. In the case of category 8, the contribution came by way of a reduction in the intra- and extra-EU deficits, with the latter falling from 5.14 billion euros to 4.21 billion euros.

Lastly, Table 2 reveals that the majority of categories made a positive contribution to the improvement in the overall trade balance in the first half of 2021, with the exception of crude materials (category 2), animal and vegetable oils, fats and waxes (category 4) and chemical products (category 5).

Conclusions

There is no recent precedent that explains the change in Spanish imports and exports during the COVID-19 crisis. The prevailing situation and outlook remain shrouded in uncertainty. While the drop in both imports and exports post-COVID-19 (close to 40% year-on-year) was comparable to the contraction in the wake of the economic and financial crisis of 2008, the rebound (with year-on-year growth in exports of over 70% in April 2021) has been far more dynamic.

The sharp recovery may be attributable to the resumption of the flows held up by the crisis. However, it may also be that the COVID-19 crisis has triggered structural changes in the Spanish economy's trading patterns. However, it is not possible to provide a definitive explanation to these trends.

In 2019, Spain's monthly trade deficit fluctuated between 1 and 5 billion euros. The monthly deficits post-COVID-19 have been oscillating within a narrower band and have not exceeded 2 billion euros. The improvement is chiefly attributable to intra-EU trade, where Spain has gone from virtually systematic deficits pre-COVID-19 to presenting recurring surpluses since January 2021.

It is worth highlighting that the non-energy trade balance has gone from a deficit of over 3.4 billion euros in the first six months of 2019 to a surplus of over 3.6 billion euros in the first half of 2021, *i.e.,* an improvement of over 7.1 billion euros. Sector-wise, the food industry, driven mainly by extra-EU-27 trade, made the biggest contribution to the improvement in the overall trade balance. After food, the improvement in the non-energy balance is attributed to the improvement in the balance of trade in manufactured goods, both processed and less transformed articles, driven above all by intra-EU exports.

While it is too soon to talk about structural changes, the fact that the primary sector, an established pillar of Spanish exports with a proven and resilient productive base, is largely responsible for the improvement in the overall trade balance bodes well for the future of Spanish trade.

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Recent key developments in the area of Spanish financial regulation

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

Draft Bank of Spain Circular amending Circulars 4/2017 and 4/2019

The Bank of Spain published its draft Circular for amending Circular 4/2017 of November 27th, 2017, on public and confidential financial reporting rules and templates for banks (the Accounting Circular) and Circular 4/2019, of November 26th, on public and confidential financial reporting rules and templates for financial credit establishments, for consultation on June 22nd, 2021. The consultation ended on July 13th.

The amendments intended for the Accounting Circular 4/2017 and Circular 4/2019 are:

■ Adapting the Accounting Circular for the changes in the International Financial Reporting Standards adopted by the European Union (IFRS-EU) as a result of Regulations (EU) 2020/34 (IAS 39 and IFRS 7 and 9) and 2021/25 (IAS 39 and IFRS 4, 7, 9 and 16) in response to the interbank offered rate (IBOR) reform.

■ Adjusting the treatment of restructured, refinanced and refinancing transactions as per Annex 9 of the Accounting Circular (credit risk analysis, allowances and provisions) to keep it aligned with the financial reporting framework recently modified by Implementing Regulation (EU) 2021/451.

■ Updating the alternative solutions for collective estimation of credit risk loss allowances and the haircuts applied to assets forborne or received in lieu of payment.

The banks will not be obliged to develop internal models nor will they have to continue to use the alternative solutions insofar as, in keeping with the principle of effectiveness and simplicity set down in Annex 9, the results provide an accurate overview of their credit transactions, the prevailing economic climate and available forward-looking information.

■ Updating the Economic and Monetary Union (EMU) statistical requirements for the modifications introduced via Regulation (EU) 2021/379 of the European Central Bank. Specifically, the banks will be required to provide additional data to enhance analysis of monetary and credit developments; meanwhile, some of the existing data requirements and definitions will be modified to facilitate integration with other bodies of statistical data.

■ Simplifying the confidential financial statement submission requirements applicable to the branches of foreign credit institutions with operations in Spain that are headquartered in a European Economic Area country. Furthermore, all Spanish branches of foreign credit institutions will be exempt from having to submit the group structure statement.

■ Lastly, introducing *ad-hoc* changes to the individual confidential financial statements required under the Accounting Circular in order to introduce new data requirements to verify standard compliance, gather statistical information and make technical adjustments and corrections.

Spanish economic forecasts panel: September 2021*

Funcas Economic Trends and Statistics Department

GDP growth estimated at 6.2% in 2021, up 0.1pp from the last survey

According to the provisional national accounts, Spanish GDP grew by 2.8% in 2Q21 (this is before the revised number was released on September 23rd, *i.e.* after completion of the Panel). That would be 0.7pp higher than the consensus forecast. Domestic demand contributed 3.6pp to growth, with foreign demand detracting 0.8pp.

The consensus forecasts for the third and fourth quarters are for growth of 2.5% and 1.7%, respectively (Table 2). For all of 2021, the average estimate stands at 6.2%, which is 0.1pp higher than the analysts were forecasting in July, with eight raising their forecasts and two lowering them (Table 1).

The expected composition of that growth has shifted: the contribution by net trade is now forecast at zero (compared to a forecast of +0.3pp in the last survey), with domestic demand accounting for the full 6.2pp, up 0.4pp from the July consensus estimate. The forecast for household consumption has been raised by one point; estimated public spending is unchanged. The forecasts for investment in construction and capital goods have both been trimmed. Lastly, the imports growth forecast has been raised 0.3pp to 11.4%, whereas the outlook for export growth has been cut by 0.8pp to 11.1%.

Growth forecast for 2022: Unchanged at 6.1%

The consensus forecast for GDP growth in 2022 is unchanged at 6.1%. The headline rate is the sum of quarterly rate of 1.3% in 1Q22 and rates of around 0.9% to 1.1% the rest of the year (Table 2).

The slight tapering in growth next year is attributable to a slowdown in national demand, specifically a decrease in both private and public consumption, more than offsetting the higher anticipated growth in investment (Table 1).

Sharp upward revision to CPI forecasts

The inflation in energy products since the start of the year has trickled through to CPI, which registered year-on-year growth of 3.3% in August. Headline inflation is forecast to remain above 3% in the months to come (Table 3). The consensus forecast for the average annual rate in 2021 has been raised by 0.5pp to 2.4%. As for core inflation, the recent uptick is expected to continue for the rest of the year to reach an average annual rate of 0.7%.

The consensus forecasts for headline and core inflation in 2022 have been raised upwards to 1.6% and 1.2%, respectively. The year-on-year rates forecast for December 2021 and December 2022 are 3.2% and 1.2%, respectively.

Unemployment expected to rise to 15.6% in 2021

According to the Social Security contributor numbers, effective employment has increased by nearly one million people since May (seasonally adjusted), underpinned by people brought out of furlough as well as new contributors.

The consensus for employment, in terms of full-time equivalents, is for growth of 4.8% in 2021 –up 0.1pp from the last survey– and of 3.4% in 2022. The forecasts for growth in GDP, job creation and wage compensation yield implied forecasts for growth in productivity and unit labour costs (ULC). Productivity is expected to gain 1.4% this year and advance by 2.7% in 2022. ULCs, meanwhile, are forecast to contract by 0.7% in 2021 and by 1.2% in 2022, having risen sharply in 2020; however, the trend in these variables should be interpreted with caution due to the distortion created by the furlough scheme.

The average annual rate of unemployment is expected to increase to 15.6% in 2021 (down 0.1pp from the last set of forecasts) and fall back to 14.7% in 2022 (down 0.2pp).

Balance of payments surplus forecast unchanged

To June, Spain presented a current account deficit of 487 million euros, compared to the 1.19 billion euro surplus recorded in the first half of 2020, shaped by the contraction in tourism receipts (recall that January and February 2020 were still 'normal' months).

The consensus forecasts for the current account are unchanged from July: surpluses of 0.9% of GDP in 2021 and of 1.2% in 2022.

Slow downtrend in public deficit

The fiscal deficit, excluding local authorities, amounted to 48.56 billion euros in the first half of 2021, compared to 69.86 billion euros in the same period of 2020. The improvement was driven by growth in revenue of 20.4 billion euros, coupled with a reduction in expenditure of 881 million euros. The fiscal situation is improving across all levels of government.

The analysts are expecting a reduction in the overall deficit to 8.1% of GDP in 2021 and to 5.7% next year.

Outlook for Europe brighter than for the rest of the world

The recovery continues to gain traction in the EU and the outlook remains positive, despite lingering supply chain bottlenecks. The economic indicators remain buoyant, albeit easing slightly since July. However, production costs continue to trend higher, particularly in the manufacturing sector, and supply issues are causing production delays in cars and other products. The ECB has accordingly revised upwards its forecasts for both growth and inflation.

Outside the EU, recent trends have been less favourable than anticipated in July due to the expansion of the Delta variant and intensification of labour shortages in the US and UK. The Chinese economy is also slowing by more than expected, while some emerging economies are being forced to raise rates (so curtailing their recoveries) to contain inflationary pressures and prevent sharp international capital outflows.

The analysts' forecasts reflect these trends: they are growing more optimistic regarding the outlook for the European economy. Moreover, all of the analysts currently expect the economic climate to remain positive or improve further. There is less agreement about the non-EU environment, although the general picture remains cautiously optimistic.

Uptick in inflation seen as a challenge for the central banks

The main advanced economy central banks see the spike in inflation as a transitory phenomenon underpinned by reversible factors such as the growth in semiconductor prices and tightening caused by the abrupt nature of the global economic recovery. The monetary authorities do not foresee significant changes in the factors underpinning the low rates of inflation seen in recent years (intense competition at the global level, weak salary bargaining power amidst rapid technological change). Hence, the moves by the ECB and the Fed to become more flexible around their inflation targets so as to accommodate *ad-hoc* spikes.

For the time being, market trends are broadly consistent with the view that the current increase in inflation will prove transitory. The yield on the 10-year Spanish bond remains below 0.2%, which is under July trading levels. Nor has the spread over the German counterpart widened, indicating no significant change in the risk premium. 12-month EURIBOR has barely budged, evidencing the stability in ECB benchmark rates, particularly the rate on the deposit facility, anchored at -0.5%.

The analysts have taken note of the market trends and are now forecasting a softer increase in rates than they were anticipating in July (Table 2).

Slight euro depreciation

Given the prospect of more pronounced rate tightening in the US than in Europe, the euro depreciated somewhat during the month of August. However, it then went on to recover the ground lost after the Fed communicated messages intended to lower expectations. The analysts expect the euro to trade at around $1.20, which is slightly higher than current trading levels, for nearly all of the projection horizon.

Macroeconomic policy should remain expansionary

The analysts unanimously consider that monetary and fiscal policy are expansionary and nearly all of them believe they should remain so for the coming months (Table 4). No changes of substance are expected in ECB benchmark rates until at least the end of 2022.

Change in forecasts (Consensus values)

Annual rates in %

1.1 GDP

1.2 Domestic Demand

1.3 CPI
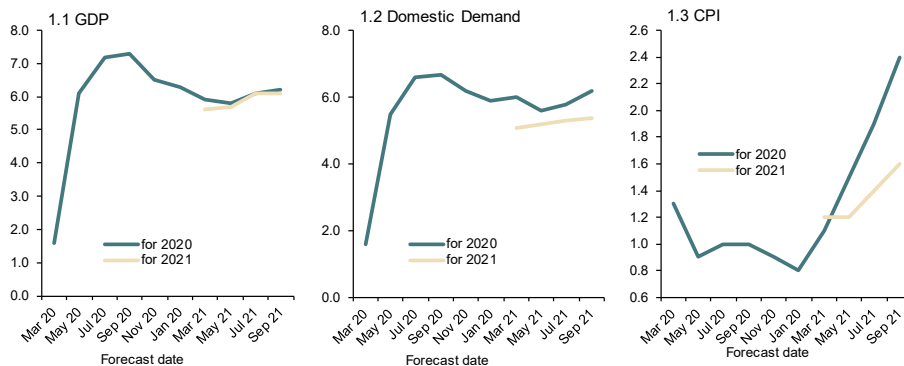
Forecast date

Source: Funcas Panel of Forecasts.

Spanish economic forecasts panel: September 2021*

Funcas Economic Trends and Statistics Department

Table 1

Economic Forecasts for Spain – September 2021

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

	GDP		Household consumption		Public consumption		Gross fixed capital formation		GFCF machinery and capital goods		GFCF construction		Domestic demand[3]	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Analistas Financieros Internacionales (AFI)	6.4	5.8	7.7	4.9	2.5	4.9	9.9	5.2	10.5	5.6	7.4	5.4	6.5	4.9
Axesor Rating	6.1	5.7	8.3	4.2	2.3	0.4	4.7	7.5	9.9	6.6	3.2	8.8	--	--
BBVA Research	6.5	7.0	7.4	6.7	2.8	2.5	9.7	16.4	16.5	12.4	5.0	18.8	6.6	7.6
CaixaBank Research	6.3	6.0	9.6	4.6	2.5	1.0	4.8	10.4	11.7	9.0	-0.5	11.3	6.8	4.9
Cámara de Comercio de España	5.9	6.2	5.9	4.9	4.8	3.3	7.1	11.1	14.0	12.6	4.0	8.4	5.6	6.0
Cemex	6.5	6.0	9.3	4.7	2.2	2.5	6.5	8.7	12.0	7.1	3.8	11.0	6.8	4.9
Centro de Estudios Economía de Madrid (CEEM-URJC)	6.3	5.7	7.5	5.6	2.2	1.5	7.4	6.8	12.5	7.3	5.8	8.3	6.1	4.8
Centro de Predicción Económica (CEPREDE-UAM)	6.0	6.2	8.6	6.3	2.9	1.2	4.8	8.1	11.5	5.8	0.5	12.2	6.4	5.8
CEOE	5.7	6.0	5.4	5.9	2.4	1.7	5.8	7.6	12.5	8.1	2.4	8.4	4.8	4.1
Equipo Económico (Ee)	6.3	5.2	5.3	5.1	2.6	3.0	5.9	6.8	4.5	7.0	6.9	8.2	5.0	5.0
Funcas	6.3	5.8	7.6	4.3	2.5	3.1	6.3	10.5	8.3	10.2	3.6	12.4	6.0	5.3
Instituto Complutense de Análisis Económico (ICAE-UCM)	6.6	8.4	8.1	8.1	3.8	3.3	6.6	9.3	2.1	7.0	12.2	13.2	7.1	7.3
Instituto de Estudios Económicos (IEE)	5.4	5.7	5.3	5.5	2.4	1.6	5.4	7.4	11.6	8.0	2.3	8.2	4.7	3.9
Intermoney	7.0	6.7	10.1	6.6	2.9	2.2	5.1	9.2	12.3	6.5	0.0	14.0	7.3	6.0
Mapfre Economics	6.0	6.0	6.0	6.6	3.5	1.7	7.3	8.5	--	--	--	--	5.5	5.4
Oxford Economics	6.1	5.8	9.2	5.1	3.0	2.2	5.8	10.0	6.0	5.9	2.0	9.1	6.9	5.0
Repsol	6.1	5.8	6.8	4.3	3.6	3.6	8.6	9.0	17.6	9.0	4.3	10.4	6.1	4.2
Santander	6.7	7.0	10.0	4.6	2.3	0.4	5.3	13.2	13.2	16.5	-0.4	10.1	7.1	5.6
Metyis	6.3	5.3	8.1	4.6	2.8	2.6	6.6	8.5	13.8	8.6	4.5	9.0	6.5	5.0
Universidad Loyola Andalucía	6.1	6.4	6.8	6.0	3.0	3.0	7.4	10.5	10.6	10.9	7.5	8.2	6.1	6.3
CONSENSUS (AVERAGE)	6.2	6.1	7.6	5.4	2.9	2.3	6.6	9.2	11.1	8.6	3.9	10.3	6.2	5.4
Maximum	7.0	8.4	10.1	8.1	4.8	4.9	9.9	16.4	17.6	16.5	12.2	18.8	7.3	7.6
Minimum	5.4	5.2	5.3	4.2	2.2	0.4	4.7	5.2	2.1	5.6	-0.5	5.4	4.7	3.9
Change on 2 months earlier[1]	0.1	0.0	1.0	-0.3	0.0	0.1	-0.8	0.6	-1.1	0.4	-0.7	1.2	0.4	0.1
- Rise[2]	8	4	11	3	2	4	2	9	3	6	1	10	10	5
- Drop[2]	2	5	0	8	5	2	9	3	7	5	10	1	0	6
Change on 6 months earlier[1]	0.3	0.5	0.9	0.2	-1.1	0.1	0.0	0.6	1.3	-0.1	-1.2	1.2	0.2	0.3
Memorandum items:														
Government (July 2021)	6.5	7.0	7.3	6.9	2.5	1.5	9.0	12.4	16.5	18.3	6.1	10.4	6.5	6.7
Bank of Spain (September 2021)	6.3	5.9	9.6	4.3	2.2	0.2	5.8	10.5	--	--	--	--	7.0	4.7
EC (July 2021)	6.2	6.3	--	--	--	--	--	--	--	--	--	--	--	--
IMF (July 2021)	6.2	5.8	--	--	--	--	--	--	--	--	--	--	--	--
OECD (September 2021)	6.8	6.6	--	--	--	--	--	--	--	--	--	--	--	--

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

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

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

Table 1 (Continued)

Economic Forecasts for Spain – September 2021

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

	Exports of goods & services		Imports of goods & services		CPI (annual av.)		Core CPI (annual av.)		Wage earnings[3]		Jobs[4]		Unempl. (% labour force)		C/A bal. of payments (% of GDP)[5]		Gen. gov. bal. (% of GDP)[6]	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Analistas Financieros Internacionales (AFI)	12.2	10.9	13.2	7.8	2.3	1.3	0.5	1.2	-	-	5.1	2.5	15.7	15.3	0.8	1.1	-7.8	-5.3
Axesor Rating	14.6	12.8	16.3	8.6	2.5	1.4	0.8	1.0	-	-	-	-	15.7	15.1	0.9	1.5	-8.5	-6.0
BBVA Research	12.2	17.2	13.6	20.0	2.0	1.2	0.6	1.2	0.4	2.9	5.6	3.3	15.7	14.2	0.3	-0.3	-7.7	-5.5
CaixaBank Research	8.4	10.0	10.3	6.7	2.4	1.7	0.6	1.5	0.1	2.4	5.5	3.8	15.1	14.0	1.5	1.6	-7.9	-5.4
Cámara de Comercio de España	14.6	13.7	13.9	12.8	2.1	1.4	0.7	1.0	--	--	3.5	4.6	16.6	15.4	0.9	1.0	-8.0	-6.3
Cemex	9.1	14.7	10.7	11.7	2.3	1.7	0.7	1.2	--	--	5.5	3.0	--	--	1.0	1.5	-7.9	-5.5
Centro de Estudios Economía de Madrid (CEEM-URJC)	9.9	13.4	9.6	11.1	2.5	2.0	0.9	1.7	--	--	3.8	3.0	15.3	14.7	1.1	1.3	-8.7	-5.8
Centro de Predicción Económica (CEPREDE-UAM)	8.8	16.1	10.8	14.9	2.4	1.8	--	--	1.1	1.4	5.4	2.5	15.4	14.2	0.3	1.1	-7.1	-3.4
CEOE	9.0	11.1	6.0	5.1	2.4	0.9	0.5	0.9	0.5	1.1	4.4	4.6	15.4	14.6	1.2	1.5	-8.3	-6.0
Equipo Económico (Ee)	13.9	7.1	11.1	7.0	2.4	2.0	0.9	1.6	0.7	1.2	4.4	3.2	16.6	15.9	1.0	1.2	-8.9	-7.7
Funcas	11.4	11.9	11.1	10.5	2.7	2.2	0.6	1.2	-0.2	0.3	5.9	2.1	15.8	14.7	0.2	1.4	-7.9	-6.2
Instituto Complutense de Análisis Económico (ICAE-UCM)	12.3	19.2	12.7	16.2	2.5	2.4	0.7	1.3	--	--	5.1	5.2	15.5	14.5	0.8	0.2	-7.5	-4.5
Instituto de Estudios Económicos (IEE)	8.3	10.9	6.0	5.0	2.3	0.8	0.5	0.8	0.4	1.0	4.3	4.5	15.5	14.8	1.0	1.2	-8.6	-6.2
Intermoney	10.8	14.8	12.1	13.2	2.5	2.0	0.7	1.6	--	--	5.6	3.7	15.0	14.2	0.9	1.0	-7.5	-5.5
Mapfre Economics	11.0	10.1	9.9	8.7	2.2	1.6	1.0	1.5	--	--	2.5	1.5	15.7	15.0	0.8	1.5	-8.2	-5.8
Oxford Economics	7.7	10.4	10.5	8.4	2.4	1.3	0.4	1.2	--	--	--	--	15.1	14.9	0.8	1.5	-8.1	-6.1
Repsol	18.3	13.0	17.9	11.1	2.3	1.6	0.8	1.1	1.0	1.3	4.0	3.5	15.4	14.6	1.2	1.5	-8.5	-6.0
Santander	8.1	10.9	9.9	6.9	2.3	1.6	0.4	1.1	2.0	2.0	--	--	15.0	14.4	1.4	2.0	--	--
Metyis	10.5	10.5	11.0	9.1	2.2	1.5	0.6	1.1	--	--	5.5	4.0	15.5	14.8	0.7	1.0	-8.3	-6.0
Universidad Loyola Andalucía	10.7	10.5	10.8	10.3	2.5	2.1	0.9	1.4	--	--	5.3	3.5	15.4	14.4	0.9	1.1	-7.8	-5.6
CONSENSUS (AVERAGE)	11.1	12.5	11.4	10.3	2.4	1.6	0.7	1.2	0.7	1.5	4.8	3.4	15.6	14.7	0.9	1.2	-8.1	-5.7
Maximum	18.3	19.2	17.9	20.0	2.7	2.4	1.0	1.7	2.0	2.9	5.9	5.2	16.6	15.9	1.5	2.0	-7.1	-3.4
Minimum	7.7	7.1	6.0	5.0	2.0	0.8	0.4	0.8	-0.2	0.3	2.5	1.5	15.0	14.0	0.2	-0.3	-8.9	-7.7
Change on 2 months earlier[1]	-0.8	0.7	0.3	0.4	0.5	0.2	0.0	0.1	0.1	0.0	0.1	0.0	-0.1	-0.2	0.0	0.0	0.1	0.0
- Rise[2]	1	8	6	7	18	12	6	9	2	2	4	4	2	2	1	1	5	2
- Drop[2]	8	2	4	3	0	1	4	2	0	0	2	1	7	9	4	3	1	1
Change on 6 months earlier[1]	0.9	1.6	1.2	1.1	1.3	0.4	0.0	0.2	-0.3	-0.1	1.4	0.0	-1.1	-0.8	-0.2	-0.1	0.2	0.3
Memorandum items:																		
Government (July 2021)	10.0	10.3	10.3	10.0	--	--	--	--	--	--	4.0	2.7	15.2	14.1	--	--	-8.4	-5.0
Bank of Spain (September 2021)	8.7	11.1	11.5	7.5	2.1[7]	1.7[7]	0.3[8]	1.0[8]	--	--	8.1[9]	5.6[9]	15.1	14.3	--	--	-7.6	-4.3
EC (July 2021)	--	--	--	--	2.1[7]	1.4[7]	--	--	--	--	--	--	--	--	--	--	--	--
IMF (July 2021)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-8.6	--
OECD (September 2021)	--	--	--	--	2.4	1.9	0.4	1.3	--	--	--	--	--	--	--	--	--	--

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

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

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

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

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

[6] Excluding financial entities bail-out expenditures.

[7] Harmonized Index of Consumer Prices (HICP).

[8] Harmonized Index excluding energy and food.

[9] Hours worked.

Table 2

Quarterly Forecasts – September 2021

	21-I Q	21-II Q	21-III Q	21-IV Q	22-I Q	22-II Q	22-III Q	22-IV Q
GDP[1]	-0.4	2.8	2.5	1.7	1.3	0.9	1.1	0.9
Euribor 1 yr [2]	-0.49	-0.48	-0.48	-0.46	-0.44	-0.42	-0.39	-0.37
Government bond yield 10 yr [2]	0.31	0.43	0.39	0.43	0.49	0.56	0.59	0.65
ECB main refinancing operations interest rate [2]	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
ECB deposit rates [2]	-0.50	-0.50	-0.50	-0.50	-0.49	-0.49	-0.49	-0.49
Dollar / Euro exchange rate [2]	1.19	1.21	1.19	1.20	1.20	1.20	1.20	1.21

Forecasts in yellow.
[1] *Qr-on-qr growth rates.*
[2] *End of period.*

Table 3

CPI Forecasts – September 2021

	Year-on-year change (%)				
Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Dec-22
3.3	3.3	3.4	3.4	3.2	1.2

Table 4

Opinions – September 2021

Number of responses

	Currently			Trend for next six months		
	Favourable	Neutral	Unfavourable	Improving	Unchanged	Worsening
International context: EU	12	6	2	12	8	0
International context: Non-EU	9	7	4	9	10	1
	Is being			Should be		
	Restrictive	Neutral	Expansionary	Restrictive	Neutral	Expansionary
Fiscal policy assessment[1]	0	0	20	0	2	18
Monetary policy assessment[1]	0	0	20	0	3	17

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

Key Facts

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Economic Indicators

Table 1

National accounts: GDP and main expenditure components SWDA*
Forecasts in yellow

		GDP	Private consumption	Public consumption	Gross fixed capital formation			Exports	Imports	Domestic demand (a)	Net exports (a)
					Total	Construction	Equipment & others products				
Chain-linked volumes, annual percentage changes											
2014		1.4	1.7	-0.7	4.1	3.0	5.2	4.5	6.8	1.9	-0.5
2015		3.8	2.9	2.0	4.9	1.5	8.2	4.3	5.1	3.9	-0.1
2016		3.0	2.7	1.0	2.4	1.6	3.1	5.4	2.6	2.0	1.0
2017		3.0	3.0	1.0	6.8	6.7	6.9	5.5	6.8	3.1	-0.2
2018		2.3	1.7	2.3	6.3	9.5	3.4	1.7	3.9	2.9	-0.6
2019		2.1	1.0	2.0	4.5	7.1	1.9	2.5	1.2	1.6	0.5
2020		-10.8	-12.0	3.3	-9.5	-9.6	-9.5	-20.1	-15.2	-8.6	-2.2
2021		6.3	7.6	2.5	6.3	3.6	8.8	11.4	11.1	6.0	0.3
2022		5.8	4.3	3.1	10.5	12.4	8.6	11.9	10.5	5.3	0.5
2020	I	-4.3	-5.3	3.5	-5.1	-6.3	-3.9	-6.9	-5.3	-3.6	-0.6
	II	-21.6	-24.7	3.3	-24.3	-25.4	-23.1	-38.0	-32.6	-19.0	-2.6
	III	-8.6	-9.2	4.0	-9.0	-12.5	-5.4	-19.7	-15.7	-6.8	-1.8
	IV	-8.9	-9.4	4.5	-7.2	-11.5	-2.8	-16.0	-9.4	-6.4	-2.5
2021	I	-4.2	-4.2	3.2	-3.2	-10.7	4.4	-9.7	-5.2	-2.6	-1.6
	II	19.8	28.7	3.4	19.9	10.4	29.5	34.1	36.8	20.1	-0.3
Chain-linked volumes, quarter-on-quarter percentage changes											
2020	I	-5.4	-5.8	1.1	-4.9	-4.2	-5.6	-8.6	-5.8	-16.8	11.4
	II	-17.8	-20.7	0.6	-20.5	-20.7	-20.2	-32.4	-28.6	-63.1	45.3
	III	17.1	21.5	1.3	21.5	16.7	26.4	29.6	26.8	63.0	-45.9
	IV	0.0	-0.1	1.3	1.0	-0.2	2.1	4.9	6.2	1.4	-1.3
2021	I	-0.4	-0.4	-0.1	-0.8	-3.2	1.4	-1.7	-1.3	-1.2	0.8
	II	2.8	6.5	0.8	-1.5	-2.0	-1.0	0.4	2.9	13.8	-11.1
		Current prices (EUR billions)	Percentage of GDP at current prices								
2014		1,032	59.4	19.6	17.8	8.8	8.9	33.5	30.4	96.9	3.1
2015		1,078	58.5	19.5	18.0	8.7	9.3	33.6	30.6	97.0	3.0
2016		1,114	58.2	19.1	18.0	8.6	9.4	33.9	29.9	96.0	4.0
2017		1,162	58.4	18.6	18.7	9.0	9.7	35.1	31.5	96.4	3.6
2018		1,204	58.2	18.7	19.5	9.7	9.7	35.1	32.4	97.3	2.7
2019		1,245	57.3	18.9	19.9	10.0	9.9	34.9	31.9	97.0	3.0
2020		1,122	56.0	22.0	19.8	9.8	10.1	30.6	29.1	98.5	1.5
2021		1,207	57.4	21.5	19.8	9.5	10.3	32.6	32.0	99.3	0.7
2022		1,298	56.6	20.9	20.6	10.1	10.5	33.6	32.2	98.6	1.4

*Seasonally and Working Day Adjusted.
(a) Contribution to GDP growth.
Source: INE and Funcas (Forecasts).

Chart 1.1 - GDP

Percentage change

Quarterly change (left) — Annual change (right)
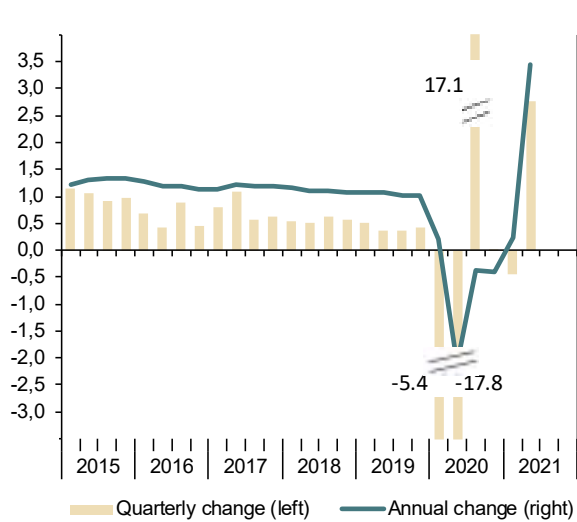
Chart 1.2 - Contribution to GDP annual growth

Percentage points

GDP — Domestic demand — Net exports
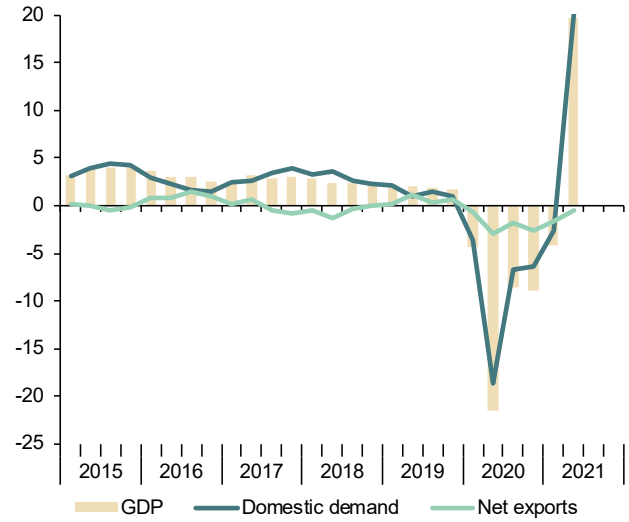
Chart 1.3 - Final consumption

Annual percentage change

National consumption — Private consumption
Public consumption
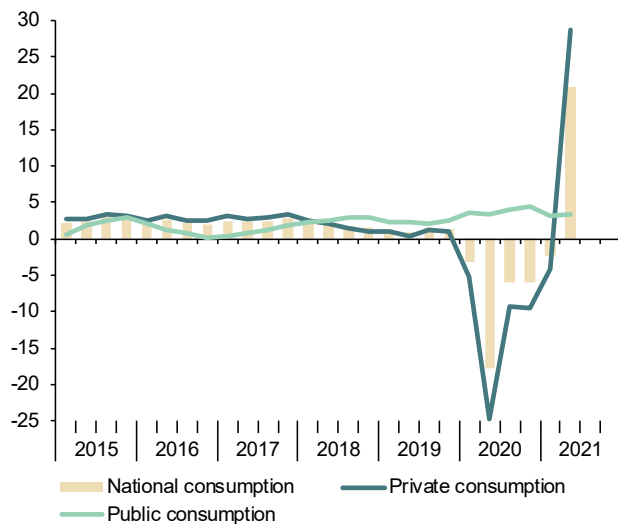
Chart 1.4 - Gross fixed capital formation

Annual percentage change

Total — Construction — Equipment & other products
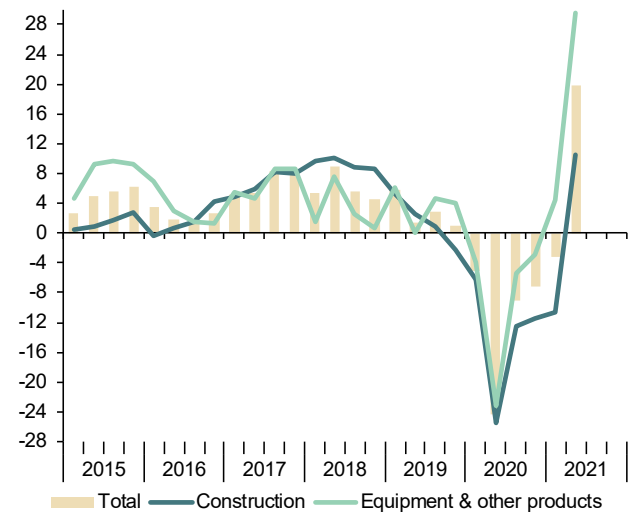
Table 2

National accounts: Gross value added by economic activity SWDA*

			Gross value added at basic prices						Taxes less subsidies on products
			Industry			Services			
		Total	Agriculture, forestry and fishing	Total	Manufacturing	Construction	Total	Public administration, health, education	Other services	Taxes less subsidies on products
Chain-linked volumes, annual percentage changes									
2015		3.3	4.7	3.0	4.6	5.4	3.1	1.1	3.8	9.6
2016		2.8	4.8	4.1	2.3	3.9	2.4	1.4	2.7	5.2
2017		3.1	-3.7	4.0	5.7	2.0	3.3	2.5	3.5	1.9
2018		2.5	7.5	0.6	0.0	4.1	2.6	1.0	3.1	1.8
2019		2.1	-2.3	1.7	1.2	4.3	2.2	1.2	2.6	0.1
2020		-10.6	5.3	-9.6	-10.7	-14.5	-11.1	1.5	-15.1	-12.9
2021 (a)		6.5	0.7	12.0	14.3	-0.3	6.2	5.1	6.6	8.0
2019	III	2.0	0.0	2.4	1.9	3.2	1.9	1.0	2.2	0.0
	IV	1.9	-5.3	2.1	2.0	1.7	2.2	1.5	2.4	-0.3
2020	I	-3.8	1.0	-5.4	-6.2	-6.8	-3.4	0.9	-4.8	-8.9
	II	-21.5	7.6	-24.3	-27.8	-28.3	-21.5	0.1	-28.4	-22.2
	III	-8.5	4.6	-5.0	-5.4	-10.2	-9.6	1.3	-13.1	-9.0
	IV	-8.6	8.2	-3.6	-3.7	-12.7	-10.0	3.5	-14.3	-11.7
2021	I	-4.3	2.7	0.9	0.7	-10.1	-5.1	4.2	-8.3	-3.2
	II	19.7	-1.2	25.7	31.9	12.4	20.1	6.1	26.4	21.1
Chain-linked volumes, quarter-on-quarter percentage changes									
2019	III	0.4	1.4	0.7	0.7	-0.3	0.3	0.0	0.5	-0.1
	IV	0.5	0.1	-0.1	0.4	-0.1	0.7	0.4	0.7	-0.2
2020	I	-5.1	2.3	-6.6	-7.5	-7.0	-4.8	-0.2	-6.3	-8.4
	II	-18.1	3.7	-19.4	-22.8	-22.6	-18.3	-0.1	-24.5	-14.8
	III	17.1	-1.4	26.4	31.9	24.8	15.5	1.1	21.9	16.9
	IV	0.3	3.4	1.3	2.2	-2.8	0.3	2.6	-0.6	-3.2
2021	I	-0.5	-2.9	-2.3	-3.2	-4.3	0.3	0.6	0.2	0.4
	II	2.4	-0.3	0.5	1.1	-3.1	3.4	1.6	4.1	6.6
		Current prices EUR billions)	Percentage of value added at basic prices							
2014		940	2.8	16.4	12.4	5.7	75.2	18.7	56.5	9.8
2015		978	3.0	16.4	12.4	5.8	74.9	18.5	56.4	10.1
2016		1,011	3.1	16.2	12.4	5.9	74.8	18.4	56.5	10.2
2017		1,053	3.1	16.2	12.5	5.9	74.8	18.1	56.7	10.3
2018		1,090	3.1	16.1	12.3	6.1	74.7	17.9	56.8	10.5
2019		1,129	2.9	16.1	12.3	6.4	74.5	18.0	56.5	10.3
2020		1,024	3.5	16.3	12.2	6.3	74.0	20.5	53.4	9.6

(a) Period with available data over the same period previous year.

* Seasonally and Working Day Adjusted.

Source: INE.

Chart 2.1 - GVA by sectors

Annual percentage change

Total — Industry — Construction — Services
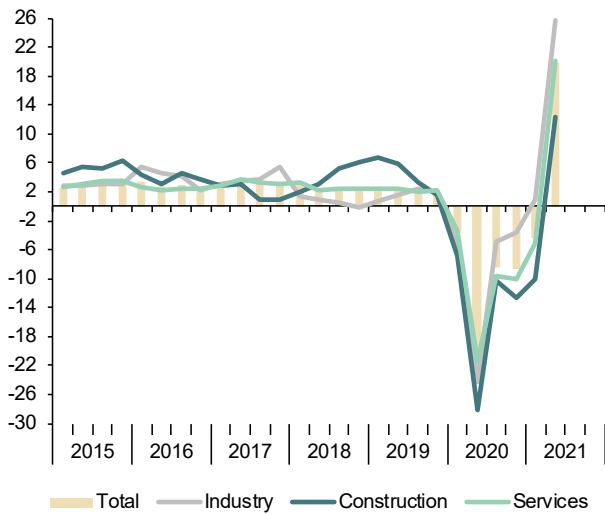
Chart 2.2 - GVA, Industry

Annual percentage change

Total — Extractive and utilities — Manufacturing
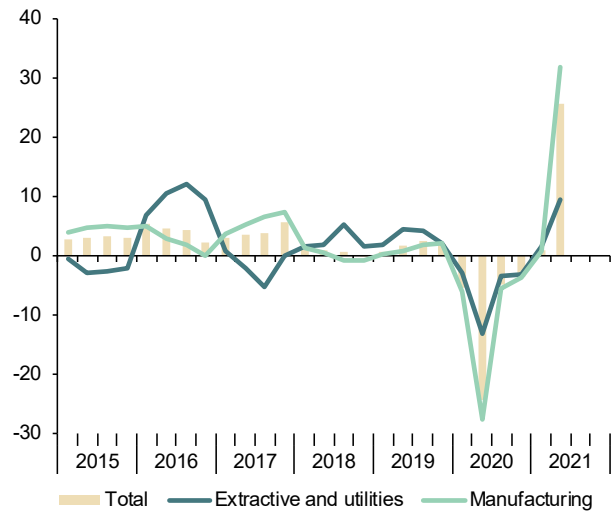
Chart 2.3 - GVA, services

Annual percentage change

Total
Public administration, health, education
Other services
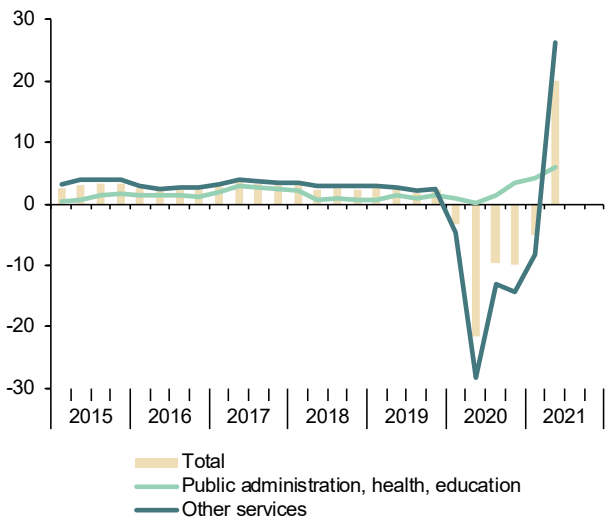
Chart 2.4 - GVA, structure by sectors

Percentage of value added at basic prices

Services
Construction
Industry
Agriculture, forestry and fishing
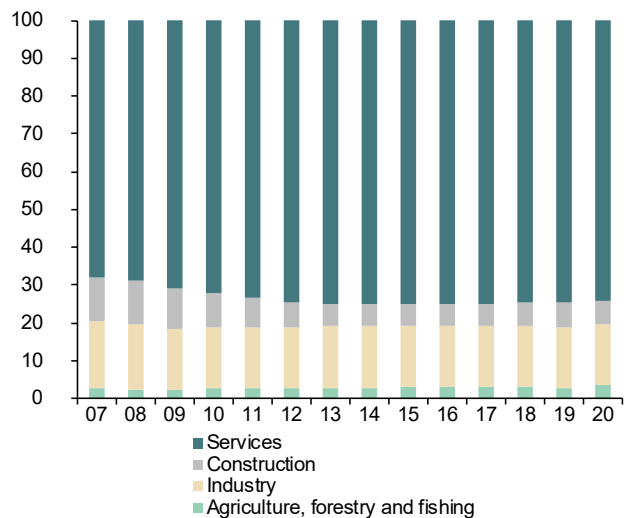
Table 3

National accounts: Productivity and labour costs
Forecasts in yellow

		Total economy						Manufacturing Industry					
		GDP, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)	Gross value added, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)
		1	2	3=1/2	4	5=4/3	6	7	8	9=7/8	10	11=10/9	12
Indexes, 2015 = 100, SWDA													
2014		96.3	96.9	99.4	99.4	100.1	100.6	95.6	97.7	97.9	100.7	102.9	102.6
2015		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016		103.0	102.8	100.2	99.4	99.2	98.8	102.3	103.5	98.9	100.1	101.2	100.4
2017		106.1	105.8	100.3	100.1	99.8	98.1	108.1	106.6	101.4	101.5	100.1	100.1
2018		108.5	108.5	100.0	101.2	101.2	98.4	108.2	108.8	99.4	102.4	103.0	101.2
2019		110.8	111.0	99.8	104.1	104.3	100.0	109.5	111.2	98.5	103.5	105.1	100.9
2020		98.8	102.7	96.2	105.3	109.5	103.9	97.7	102.8	95.1	101.1	106.3	100.9
2021		105.0	108.8	96.6	105.1	108.8	102.1	--	--	--	--	--	--
2022		111.2	111.1	100.1	105.4	105.4	97.1	--	--	--	--	--	--
2019	III	111.0	111.0	100.0	103.5	103.5	99.3	109.8	111.8	98.2	103.6	105.4	101.3
	IV	111.4	111.9	99.6	103.7	104.1	99.0	110.3	111.1	99.2	104.3	105.1	99.2
2020	I	105.5	109.6	96.2	103.6	107.7	103.0	102.1	110.9	92.0	102.9	111.8	108.6
	II	86.7	90.3	96.0	106.2	110.6	105.1	78.8	93.6	84.1	98.8	117.5	110.0
	III	101.5	104.8	96.8	104.3	107.7	102.0	103.9	102.2	101.6	100.4	98.8	94.2
	IV	101.5	106.1	95.7	104.6	109.3	103.0	106.2	104.4	101.7	101.8	100.1	93.7
2021	I	101.1	107.6	93.9	103.8	110.5	104.4	102.8	103.9	99.0	101.7	102.8	96.5
	II	103.9	107.3	96.7	107.8	111.4	104.7	103.9	104.0	99.9	100.9	101.0	93.1
Annual percentage changes													
2014		1.4	1.0	0.4	0.3	-0.1	0.1	2.1	-1.9	4.0	0.7	-3.2	-3.3
2015		3.8	3.2	0.6	0.6	-0.1	-0.6	4.6	2.4	2.2	-0.7	-2.9	-2.6
2016		3.0	2.8	0.2	-0.6	-0.8	-1.1	2.3	3.5	-1.1	0.1	1.2	0.4
2017		3.0	2.9	0.1	0.7	0.6	-0.7	5.7	3.0	2.5	1.4	-1.1	-0.4
2018		2.3	2.6	-0.3	1.1	1.5	0.2	0.0	2.1	-2.0	0.8	2.9	1.1
2019		2.1	2.3	-0.2	2.8	3.0	1.7	1.2	2.2	-0.9	1.1	2.0	-0.3
2020		-10.8	-7.5	-3.6	1.2	5.0	3.9	-10.7	-7.5	-3.5	-2.4	1.2	0.1
2021		6.3	5.9	0.4	-0.2	-0.6	-1.8	--	--	--	--	--	--
2022		5.9	2.2	3.6	0.3	-3.2	-4.8	--	--	--	--	--	--
2019	III	1.8	1.8	0.1	2.3	2.2	0.8	1.9	3.1	-1.1	1.0	2.1	0.4
	IV	1.7	2.1	-0.4	1.9	2.3	0.7	2.0	1.9	0.1	1.0	0.9	-2.7
2020	I	-4.3	-0.6	-3.7	1.2	5.0	3.9	-6.2	0.3	-6.5	0.0	6.9	6.7
	II	-21.6	-18.5	-3.8	3.0	7.1	5.9	-27.8	-15.8	-14.3	-4.3	11.7	8.8
	III	-8.6	-5.6	-3.2	0.7	4.0	2.7	-5.4	-8.6	3.5	-3.0	-6.3	-7.0
	IV	-8.9	-5.2	-3.9	0.8	4.9	4.1	-3.7	-6.1	2.5	-2.4	-4.8	-5.5
2021	I	-4.2	-1.9	-2.3	0.3	2.6	1.4	0.7	-6.3	7.5	-1.1	-8.0	-11.2
	II	19.8	18.9	0.7	1.4	0.7	-0.4	31.9	11.1	18.7	2.0	-14.0	-15.4

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

Source: INE and Funcas (Forecasts).

Chart 3.1 - Nominal ULC, total economy

Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
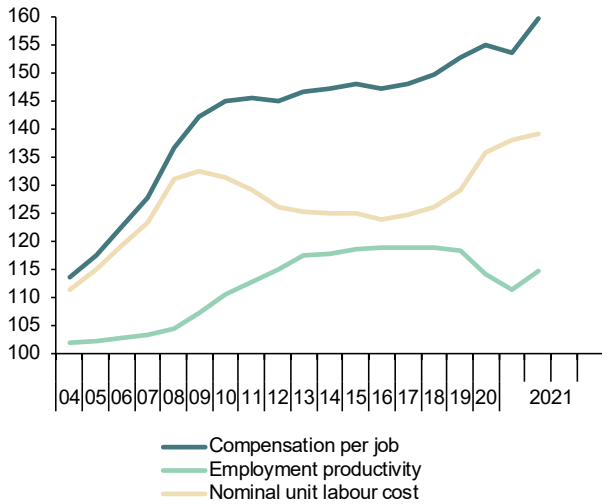
Chart 3.2 - Real ULC, total economy

Index, 2000=100

- Nominal unit labour cost
- GDP deflator
- Real unit labour cost (1)
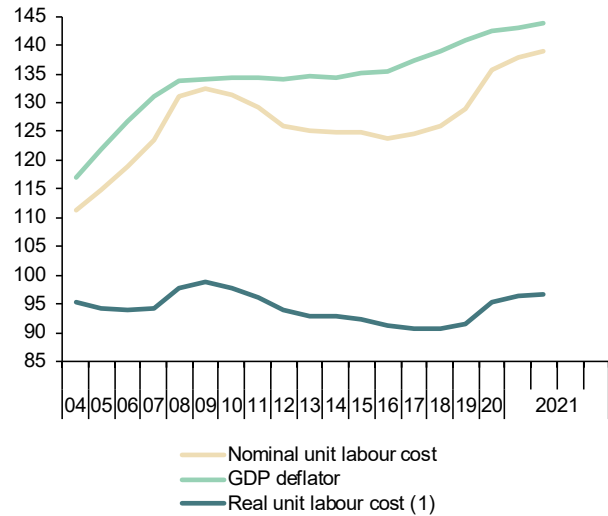
(1) Nominal ULC deflated by GDP deflator.

Chart 3.3 - Nominal ULC, manufacturing industry

Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
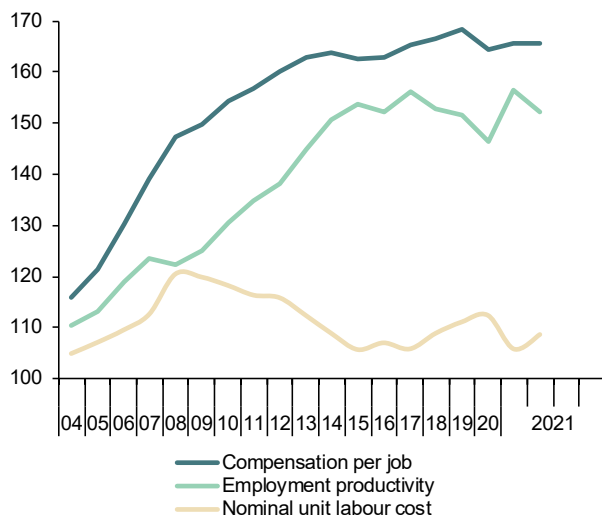
Chart 3.4 - Real ULC, manufacturing industry

Index, 2000=100

- Nominal unit labour cost
- GVA deflator
- Real unit labour cost (1)
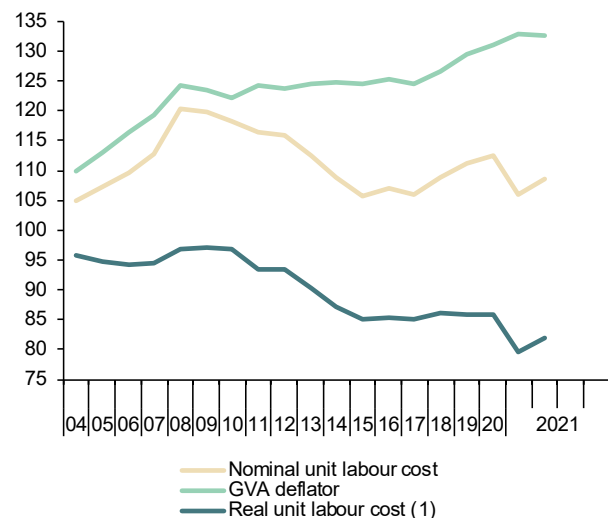
(1) Nominal ULC deflated by manufacturing GVA deflator.

Table 4

National accounts: National income, distribution and disposition
Forecasts in yellow

		Gross domestic product	Compen-sation of employees	Gross operating surplus	Gross national disposable income	Final national consum-ption	Gross national saving (a)	Gross capital formation	Compen-sation of employees	Gross operating surplus	Saving rate	Investment rate	Current account balance	Net lending or borrowing
		EUR Billions, 4-quarter cumulated transactions							Percentage of GDP					
2014		1,032.2	473.5	455.4	1,017.7	815.4	202.3	184.8	45.9	44.1	19.6	17.9	1.7	2.1
2015		1,077.6	492.9	472.6	1,066.7	840.1	226.5	204.7	45.7	43.9	21.0	19.0	2.0	2.7
2016		1,113.8	503.7	495.8	1,104.8	860.5	244.3	208.9	45.2	44.5	21.9	18.8	3.2	3.4
2017		1,161.9	523.7	518.4	1,152.2	894.4	257.7	225.5	45.1	44.6	22.2	19.4	2.8	3.0
2018		1,203.3	545.7	531.4	1,193.7	924.2	269.5	246.4	45.4	44.2	22.4	20.5	1.9	2.4
2019		1,244.4	575.9	540.9	1,233.3	948.0	285.4	259.9	46.3	43.5	22.9	20.9	2.0	2.5
2020		1,121.9	543.9	476.4	1,112.6	873.3	239.3	232.1	48.5	42.5	21.3	20.7	0.6	1.1
2021		1,207.3	572.1	515.9	1,204.1	950.4	253.7	248.8	47.4	42.7	21.0	20.6	0.4	1.0
2022		1,299.0	587.3	582.9	1,299.8	1,003.2	296.6	278.2	45.2	44.9	22.8	21.4	1.4	2.7
2019	III	1,234.7	564.9	542.1	1,224.3	942.9	281.4	257.8	45.7	43.9	22.8	20.9	1.9	2.4
	IV	1,244.8	571.0	546.4	1,233.7	948.7	285.0	258.6	45.9	43.9	22.9	20.8	2.1	2.5
2020	I	1,234.8	573.6	536.5	1,225.6	944.1	281.5	256.4	46.4	43.5	22.8	20.8	2.0	2.6
	II	1,170.4	553.7	506.9	1,161.7	903.1	258.6	241.1	47.3	43.3	22.1	20.6	1.5	1.9
	III	1,147.5	546.7	496.5	1,138.8	889.7	249.1	235.7	47.6	43.3	21.7	20.5	1.2	1.4
	IV	1,121.7	540.1	480.4	1,112.4	875.5	236.9	229.5	48.2	42.8	21.1	20.5	0.7	1.1
2021	I	1,112.9	536.1	478.2	1,102.9	872.3	230.6	227.7	48.2	43.0	20.7	20.5	0.3	1.0
	II	1,164.8	558.2	494.9	--	916.2	--	239.7	47.9	42.5	--	20.6	--	--
		Annual percentage changes							Difference from one year ago					
2014		1.2	1.3	0.1	1.7	1.3	3.0	5.2	0.1	-0.5	0.3	0.7	-0.3	-0.5
2015		4.4	4.1	3.8	4.8	3.0	12.0	10.8	-0.1	-0.3	1.4	1.1	0.3	0.5
2016		3.4	2.2	4.9	3.6	2.4	7.8	2.0	-0.5	0.7	0.9	-0.2	1.1	0.7
2017		4.3	4.0	4.6	4.3	3.9	5.5	8.0	-0.2	0.1	0.3	0.7	-0.4	-0.4
2018		3.6	4.2	2.5	3.6	3.3	4.6	9.3	0.3	-0.5	0.2	1.1	-0.8	-0.6
2019		3.4	5.5	1.8	3.3	2.6	5.9	5.5	0.9	-0.7	0.5	0.4	0.1	0.0
2020		-9.8	-5.6	-11.9	-9.8	-7.9	-16.1	-10.7	2.2	-1.0	-1.6	-0.2	-1.4	-1.4
2021		7.6	5.2	8.3	8.2	8.8	6.0	7.2	-1.1	0.2	-0.3	-0.1	-0.2	-0.1
2022		7.6	2.7	13.0	8.0	5.6	16.9	11.8	-2.2	2.2	1.8	0.8	1.0	1.7
2019	III	3.4	4.8	2.2	3.4	2.7	5.9	7.2	0.6	-0.5	0.5	0.7	-0.2	-0.1
	IV	3.4	4.8	2.5	3.3	2.6	5.7	4.9	0.6	-0.4	0.5	0.3	0.2	0.0
2020	I	1.7	4.0	0.2	1.7	1.4	2.7	1.5	1.0	-0.6	0.2	0.0	0.3	0.3
	II	-4.5	-0.9	-5.9	-4.4	-3.6	-7.0	-5.5	1.7	-0.7	-0.6	-0.2	-0.4	-0.5
	III	-7.1	-3.2	-8.4	-7.0	-5.6	-11.5	-8.6	1.9	-0.6	-1.1	-0.3	-0.7	-1.0
	IV	-9.9	-5.4	-12.1	-9.8	-7.7	-16.9	-11.2	2.3	-1.1	-1.8	-0.3	-1.5	-1.4
2021	I	-9.9	-6.5	-10.9	-10.0	-7.6	-18.1	-11.2	1.7	-0.5	-2.1	-0.3	-1.8	-1.6
	II	-0.5	0.8	-2.3	--	1.5	--	-0.6	0.6	-0.8	--	0.0	--	--

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

Source: INE and Funcas (Forecasts).

Chart 4.1 - National income, consumption and saving

EUR Billions, 4-quarter cumulated

Saving
National consumption
Gross national income
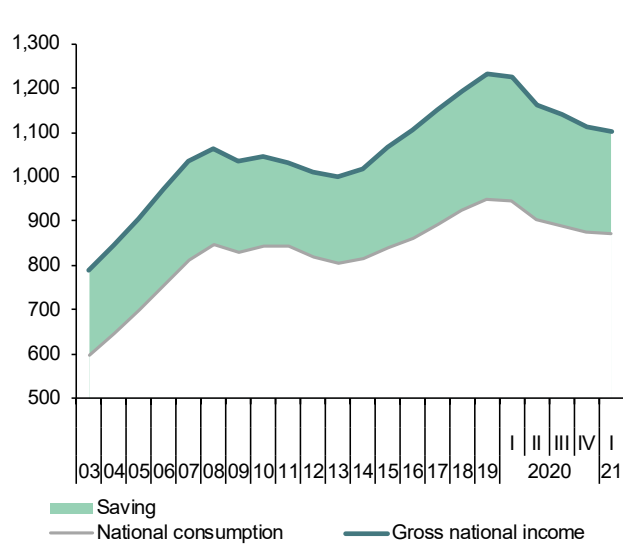
Chart 4.2 - National income, consumption and saving rate

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

Saving rate (right)   GNI (left)   Consumption (left)
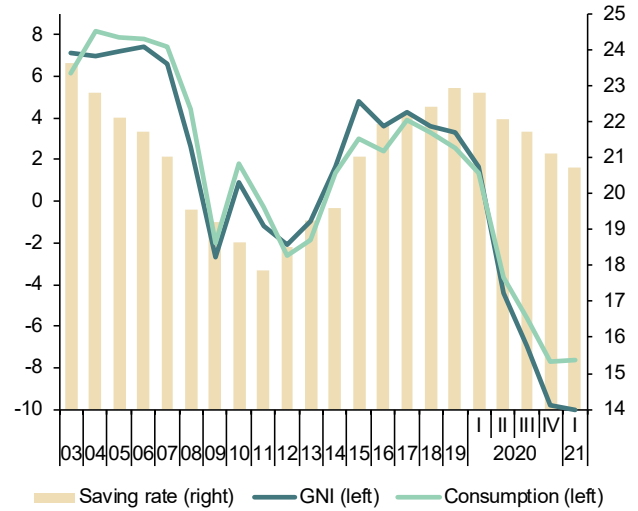
Chart 4.3 - Components of National Income

Percentage of GDP, 4-quarter moving averages

Compensation of employees   Gross operating surplus
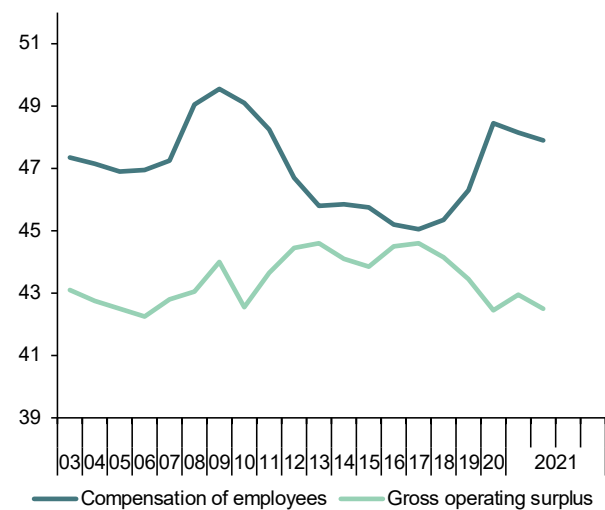
Chart 4.4 - Saving, Investment and Current Account Balance

Percentage of GDP, 4-quarter moving averages

Current Account Balance (right)
Investment rate (left)
Saving Rate (left)
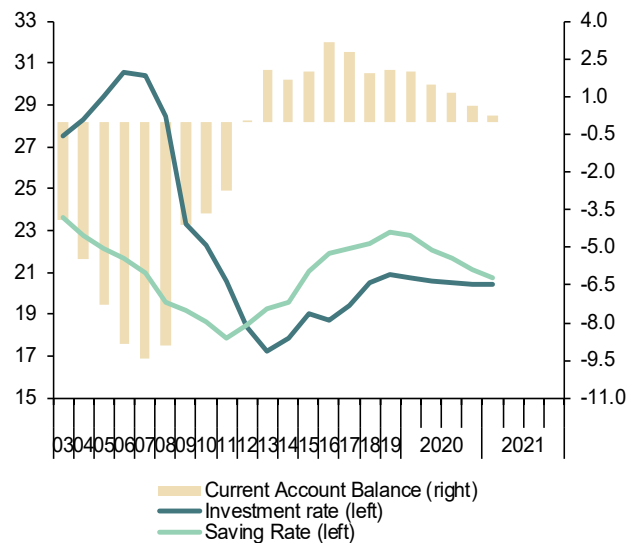
Table 5

National accounts: Household and non-financial corporations accounts
Forecasts in yellow

		Households						Non-financial corporations					
		Gross disposable income (GDI)	Final consumption expenditure	Gross saving	Gross capital formation	Saving rate	Gross capital formation	Net lending or borrowing	Gross operating surplus	Gross saving	Gross capital formation	Saving rate	Gross capital formation	Net lending or borrowing
		EUR Billions, 4-quarter cumulated operations				Percentage of GDI	Percentage of GDP		EUR Billions, 4-quarter cumulated operations			Percentage of GDP		
2014		656.2	612.7	41.5	30.2	6.3	2.9	1.0	228.7	171.7	127.7	16.6	12.4	4.7
2015		682.2	630.2	49.0	30.5	7.2	2.8	1.7	241.0	185.1	140.4	17.2	13.0	4.4
2016		700.6	648.3	49.2	31.8	7.0	2.9	1.4	255.3	196.2	149.2	17.6	13.4	4.4
2017		722.9	678.1	41.8	36.8	5.8	3.2	0.2	267.0	200.7	160.6	17.3	13.8	3.6
2018		744.9	700.3	41.8	40.9	5.6	3.4	-0.1	272.9	201.2	177.1	16.7	14.7	2.2
2019		764.6	713.8	48.0	42.5	6.3	3.4	0.3	281.6	218.2	187.5	17.5	15.1	2.7
2020		739.6	628.2	108.8	35.7	14.7	3.2	6.5	230.6	181.4	159.1	16.2	14.2	2.4
2021		771.4	693.2	75.7	36.9	9.8	3.1	3.0	256.7	197.7	173.1	16.4	14.3	2.5
2022		799.5	734.7	62.2	39.9	7.8	3.1	1.6	286.9	221.3	196.2	17.0	15.1	3.1
2019	II	756.9	706.8	47.9	42.2	6.3	3.4	0.3	276.9	207.7	184.2	16.9	15.0	2.2
	III	760.7	710.6	47.1	42.7	6.2	3.5	0.2	278.1	210.2	185.1	17.0	15.0	2.3
	IV	764.6	713.8	48.0	42.5	6.3	3.4	0.3	281.6	218.2	187.5	17.5	15.1	2.7
2020	I	767.8	703.9	61.2	41.6	8.0	3.4	1.4	271.5	207.4	183.7	16.8	14.9	2.1
	II	748.7	662.1	84.1	37.3	11.2	3.2	3.9	250.1	198.5	171.6	16.9	14.6	2.4
	III	746.7	648.5	95.2	37.1	12.8	3.2	4.9	241.8	188.4	165.5	16.4	14.4	2.1
	IV	739.6	628.2	108.8	35.7	14.7	3.2	6.5	230.6	181.4	159.1	16.2	14.2	2.4
2021	I	737.5	620.6	114.1	35.8	15.5	3.2	7.0	229.0	179.1	159.7	16.1	14.4	2.3
		Annual percentage changes				Difference from one year ago			Annual percentage changes			Difference from one year ago		
2014		0.0	1.8	-19.8	-2.7	-1.6	-0.1	-1.0	0.0	2.5	11.3	0.2	1.1	-0.6
2015		4.0	2.9	18.1	1.1	0.9	-0.1	0.7	5.4	7.8	10.0	0.5	0.7	-0.3
2016		2.7	2.9	0.5	4.2	-0.2	0.0	-0.3	5.9	6.0	6.2	0.4	0.4	0.0
2017		3.2	4.6	-15.2	15.7	-1.3	0.3	-1.2	4.6	2.3	7.7	-0.3	0.4	-0.8
2018		3.0	3.3	0.1	11.2	-0.2	0.2	-0.3	2.2	0.3	10.2	-0.6	0.9	-1.4
2019		2.6	1.9	14.9	3.8	0.7	0.0	0.4	3.2	8.4	5.9	0.8	0.4	0.5
2020		-3.3	-12.0	126.6	-16.0	8.4	-0.2	6.3	-18.1	-16.9	-15.1	-1.4	-0.9	-0.3
2021		4.3	10.3	-30.5	3.5	-4.9	-0.1	-3.5	11.3	9.0	8.8	0.2	0.2	0.1
2022		3.6	6.0	-17.8	8.0	-2.0	0.0	-1.5	11.8	11.9	13.4	0.7	0.8	0.5
2019	II	3.3	2.5	18.6	12.3	0.8	0.3	0.3	2.0	1.0	9.5	-0.5	0.8	-1.2
	III	3.0	2.2	17.9	10.7	0.8	0.2	0.3	2.0	3.0	6.2	-0.1	0.4	-0.4
	IV	2.6	1.9	14.9	3.8	0.7	0.0	0.4	3.2	8.4	5.9	0.8	0.4	0.5
2020	I	2.4	0.0	42.8	-0.9	2.3	-0.1	1.6	-1.1	1.6	1.7	0.0	0.0	-0.1
	II	-1.1	-6.3	75.6	-11.6	4.9	-0.3	3.6	-9.7	-4.4	-6.8	0.0	-0.4	0.3
	III	-1.8	-8.7	102.2	-13.1	6.6	-0.2	4.8	-13.1	-10.4	-10.6	-0.6	-0.6	-0.2
	IV	-3.3	-12.0	126.6	-16.0	8.4	-0.2	6.3	-18.1	-16.9	-15.1	-1.4	-0.9	-0.3
2021	I	-4.0	-11.8	86.5	-14.0	7.5	-0.1	5.6	-15.7	-13.7	-13.1	-0.7	-0.5	0.2

Source: INE and Funcas (Forecasts).

Chart 5.1 - Households: Net lending or borrowing

Percentage of GDP, 4-quarter moving averages

- Net lending (-) or borrowing(+) (right)
- Saving rate (left)
- Gross Capital Formation (left)
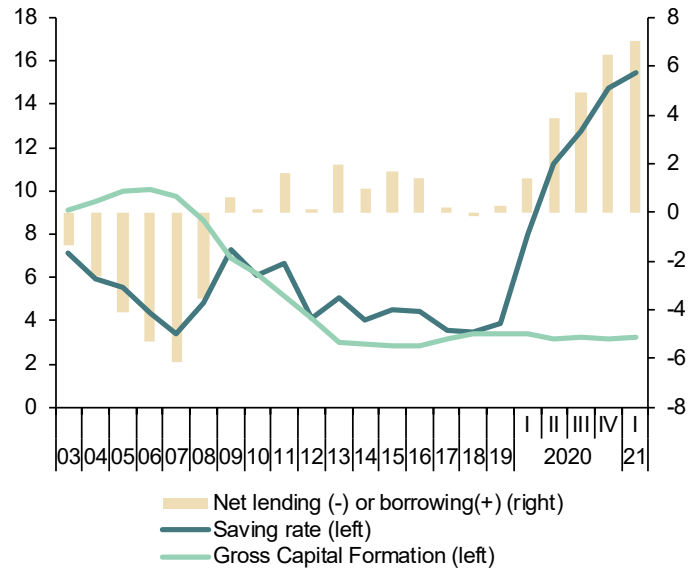
Chart 5.2 - Non-financial corporations: Net lending or borrowing

Percentage of GDP, 4-quarter moving averages

- Net lending (-) or borrowing(+) (right)
- Saving rate (left)
- Gross Capital Formation (left)
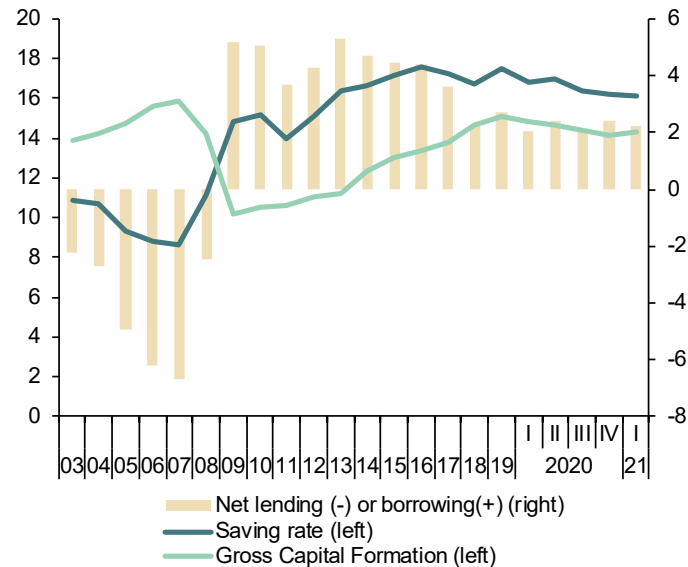
Table 6

National accounts: Public revenue, expenditure and deficit
Forecasts in yellow

		Non financial revenue					Non financial expenditures							Net lending(+)/ net borrowing(-)	Net lending(+)/ net borrowing (-) excluding financial entities bail-out expenditures
		Taxes on produc- tion and imports	Taxes on income and wealth	Social contribu- tions	Capital and other revenue	Total	Compen- sation of employees	Interme- diate con- sumption	Interests	Social benefits and social transfers in kind	Gross capital formation and other capital expenditure	Other expendi- ture	Total		
		1	2	3	4	5=1+2+3+4	6	7	8	9	10	11	12=6+7+8 +9+10+11	13=5-12	14
		EUR Billions, 4-quarter cumulated operations													
2014		118.5	104.4	129.0	52.7	404.6	115.0	56.3	35.5	198.5	32.4	28.0	465.7	-61.1	-59.7
2015		126.4	107.1	131.5	52.1	417.2	119.2	59.0	32.4	198.6	35.4	28.3	473.0	-55.8	-55.2
2016		128.9	110.0	135.6	50.3	424.8	121.5	58.7	30.7	203.0	30.4	28.4	472.7	-48.0	-45.6
2017		135.1	116.9	142.4	49.1	443.5	123.5	59.9	29.3	207.4	30.6	28.0	478.7	-35.1	-34.6
2018		141.2	127.3	149.5	53.8	471.7	127.6	62.1	29.3	216.6	36.4	29.6	501.6	-29.9	-29.8
2019		142.8	129.2	160.7	55.1	487.8	134.5	64.5	28.4	229.6	34.8	31.6	523.4	-35.6	-35.6
2020		126.0	125.3	161.9	50.2	463.3	140.5	66.6	25.2	261.7	50.9	41.5	586.4	-123.1	-113.2
2021		137.6	131.0	164.2	59.7	492.5	146.1	69.8	26.7	258.0	43.2	44.1	587.8	-95.3	-95.3
2022		146.4	135.1	164.8	76.7	523.0	149.3	73.8	27.9	262.4	52.8	37.1	603.4	-80.4	-80.4
2019	I	142.5	127.1	152.5	55.0	477.1	129.4	62.9	28.9	219.5	36.4	30.5	507.4	-30.3	-30.5
	II	142.4	129.0	155.3	55.2	481.8	131.7	63.2	29.3	224.0	36.3	31.1	515.7	-33.9	-33.8
	III	143.2	130.8	158.0	55.8	487.8	132.9	63.7	28.8	226.0	37.3	32.1	520.8	-33.0	-32.9
	IV	142.8	129.2	160.7	55.1	487.8	134.5	64.5	28.4	229.6	34.8	31.6	523.4	-35.6	-35.6
2020	I	141.7	130.6	161.6	55.8	489.7	135.6	65.4	27.9	234.2	37.0	32.2	532.3	-42.6	-42.6
	II	131.6	126.6	161.4	53.1	472.8	136.8	65.6	26.6	250.4	37.1	37.5	553.9	-81.1	-81.1
	III	128.1	126.7	161.4	51.8	468.0	138.3	65.9	26.0	255.6	37.1	38.8	561.7	-93.7	-93.7
	IV	126.0	125.3	161.9	50.2	463.3	140.5	66.6	25.2	261.7	50.9	41.5	586.4	-123.1	-113.2
2021	I	126.0	126.0	163.3	48.5	463.7	142.4	66.1	25.4	265.7	49.2	42.9	591.7	-128.0	-117.9
		Percentage of GDP, 4-quarter cumulated operations													
2014		11.5	10.1	12.5	5.1	39.2	11.1	5.5	3.4	19.2	3.1	2.7	45.1	-5.9	-5.8
2015		11.7	9.9	12.2	4.8	38.7	11.1	5.5	3.0	18.4	3.3	2.6	43.9	-5.2	-5.1
2016		11.6	9.9	12.2	4.5	38.1	10.9	5.3	2.8	18.2	2.7	2.6	42.4	-4.3	-4.1
2017		11.6	10.1	12.3	4.2	38.2	10.6	5.2	2.5	17.9	2.6	2.4	41.2	-3.0	-3.0
2018		11.7	10.6	12.4	4.5	39.2	10.6	5.2	2.4	18.0	3.0	2.5	41.7	-2.5	-2.5
2019		11.5	10.4	12.9	4.4	39.2	10.8	5.2	2.3	18.4	2.8	2.5	42.1	-2.9	-2.9
2020		11.2	11.2	14.4	4.5	41.3	12.5	5.9	2.2	23.3	4.5	3.7	52.3	-11.0	-10.1
2021		11.4	10.9	13.6	4.9	40.8	12.1	5.8	2.2	21.4	3.6	3.7	48.7	-7.9	-7.9
2022		11.3	10.4	12.7	5.9	40.3	11.5	5.7	2.2	20.2	4.1	2.9	46.5	-6.2	-6.2
2019	I	11.7	10.5	12.5	4.5	39.2	10.6	5.2	2.4	18.0	3.0	2.5	41.7	-2.5	-2.5
	II	11.6	10.5	12.7	4.5	39.3	10.7	5.2	2.4	18.3	3.0	2.5	42.0	-2.8	-2.8
	III	11.6	10.6	12.8	4.5	39.5	10.8	5.2	2.3	18.3	3.0	2.6	42.2	-2.7	-2.7
	IV	11.5	10.4	12.9	4.4	39.2	10.8	5.2	2.3	18.4	2.8	2.5	42.1	-2.9	-2.9
2020	I	11.5	10.6	13.1	4.5	39.6	11.0	5.3	2.3	18.9	3.0	2.6	43.1	-3.4	-3.4
	II	11.2	10.8	13.8	4.5	40.4	11.7	5.6	2.3	21.4	3.2	3.2	47.3	-6.9	-6.9
	III	11.2	11.0	14.1	4.5	40.8	12.1	5.7	2.3	22.3	3.2	3.4	48.9	-8.2	-8.2
	IV	11.2	11.2	14.4	4.5	41.3	12.5	5.9	2.2	23.3	4.5	3.7	52.3	-11.0	-10.1
2021	I	11.3	11.3	14.7	4.4	41.7	12.8	5.9	2.3	23.9	4.4	3.9	53.2	-11.5	-10.6

Source: IGAE and Funcas (Forecasts).

Chart 6.1 - Public sector: Revenue, expenditure and deficit (a)

Percentage of GDP, 4-quarter moving averages

Net lending or borrowing (right)
Revenue (left)
Expenditure (left)
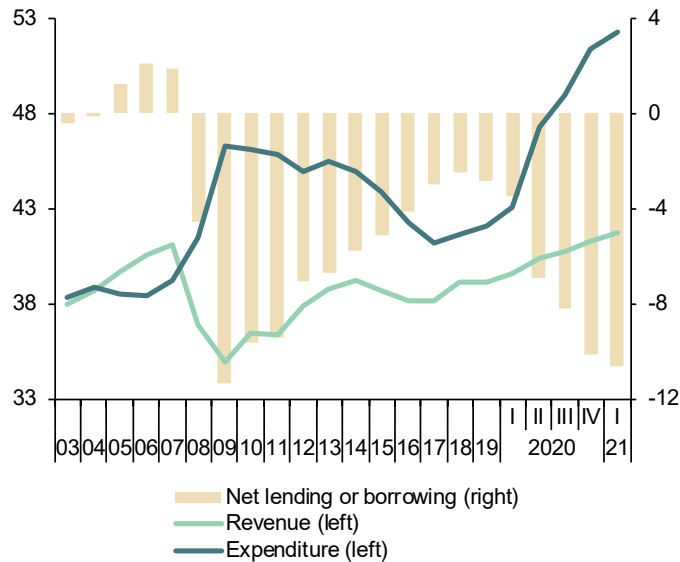
(a) Excluding financial entities bail-out expenditures.

Chart 6.2 - Public sector: Main expenditures

Percentage of GDP, 4-quarter moving averages

Rest
Capital expenditure
Social benefits and transfers in kind
Interests
Compensation of employees
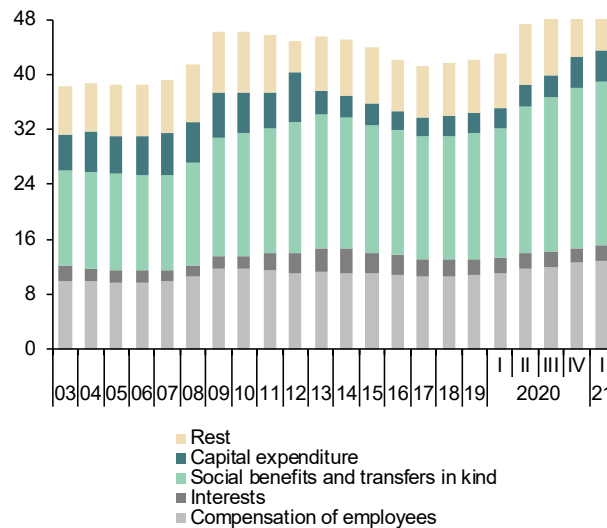
Table 7

Public sector balances, by level of Government
Forecasts in yellow

		Net lending (+)/ net borrowing (-) (a)					Debt				
		Central Government	Regional Governments	Local Governments	Social Security	TOTAL Government	Central Government	Regional Governments	Local Governments	Social Security	Total Government (consolidated)
		EUR Billions, 4-quarter cumulated operations					EUR Billions, end of period				
2014		-35.9	-18.7	5.5	-10.6	-59.7	901.4	237.9	38.3	17.2	1,039.4
2015		-28.2	-18.9	4.6	-12.9	-55.2	939.3	263.3	35.1	17.2	1,070.1
2016		-25.7	-9.5	7.0	-17.4	-45.6	968.4	277.0	32.2	17.2	1,104.6
2017		-20.6	-4.2	6.9	-16.8	-34.6	1,011.5	288.1	29.0	27.4	1,145.1
2018		-15.7	-3.3	6.5	-17.3	-29.8	1,047.3	293.4	25.8	41.2	1,173.4
2019		-16.4	-7.1	3.7	-15.9	-35.6	1,061.2	295.1	23.2	55.0	1,188.8
2020		-84.1	-2.3	2.9	-29.7	-113.2	1,206.6	303.6	21.9	85.4	1,345.4
2021		--	--	--	--	-95.3	--	--	--	--	1,438.9
2022		--	--	--	--	-80.4	--	--	--	--	1,517.3
2019	II	-17.2	-4.1	5.8	-18.3	-33.8	1,072.0	300.6	26.2	48.7	1,207.4
	III	-11.4	-8.5	4.8	-17.7	-32.9	1,070.3	298.1	25.2	52.4	1,203.8
	IV	-16.4	-7.1	3.7	-15.9	-35.6	1,061.2	295.1	23.2	55.0	1,188.8
2020	I	-15.8	-8.1	3.6	-22.3	-42.6	1,094.9	298.3	22.9	55.0	1,224.5
	II	-54.8	-6.3	2.2	-22.2	-81.1	1,159.2	305.7	25.0	68.9	1,291.0
	III	-64.7	-1.6	3.3	-30.7	-93.7	1,177.7	301.9	23.7	74.9	1,308.2
	IV	-84.1	-2.3	2.9	-29.7	-113.2	1,206.6	303.6	21.9	85.4	1,345.4
2021	I	-89.3	-3.1	3.6	-29.1	-117.9	1,247.9	307.3	22.1	85.4	1,392.7
		Percentage of GDP, 4-quarter cumulated operations					Percentage of GDP				
2014		-3.5	-1.8	0.5	-1.0	-5.8	87.3	23.1	3.7	1.7	100.7
2015		-2.6	-1.8	0.4	-1.2	-5.1	87.2	24.4	3.3	1.6	99.3
2016		-2.3	-0.9	0.6	-1.6	-4.1	86.9	24.9	2.9	1.5	99.2
2017		-1.8	-0.4	0.6	-1.4	-3.0	87.1	24.8	2.5	2.4	98.6
2018		-1.3	-0.3	0.5	-1.4	-2.5	87.0	24.4	2.1	3.4	97.4
2019		-1.3	-0.6	0.3	-1.3	-2.9	85.3	23.7	1.9	4.4	95.5
2020		-7.5	-0.2	0.3	-2.6	-10.1	107.6	27.1	2.0	7.6	119.9
2021		--	--	--	--	-7.9	--	--	--	--	119.2
2022		--	--	--	--	-6.2	--	--	--	--	116.9
2019	II	-1.4	-0.3	0.5	-1.5	-2.8	87.5	24.5	2.1	4.0	98.6
	III	-0.9	-0.7	0.4	-1.4	-2.7	86.7	24.1	2.0	4.2	97.5
	IV	-1.3	-0.6	0.3	-1.3	-2.9	85.3	23.7	1.9	4.4	95.5
2020	I	-1.3	-0.7	0.3	-1.8	-3.4	88.7	24.2	1.9	4.5	99.2
	II	-4.7	-0.5	0.2	-1.9	-6.9	99.0	26.1	2.1	5.9	110.3
	III	-5.6	-0.1	0.3	-2.7	-8.2	102.6	26.3	2.1	6.5	114.0
	IV	-7.5	-0.2	0.3	-2.6	-10.1	107.6	27.1	2.0	7.6	119.9
2021	I	-8.0	-0.3	0.3	-2.6	-10.6	112.1	27.6	2.0	7.7	125.1

(a) Excluding financial entities bail-out expenditures.

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

Chart 7.1 - Government deficit

Percent of GDP, 4-quarter cumulated operations

Central — Regional — Local — Social Security — TOTAL
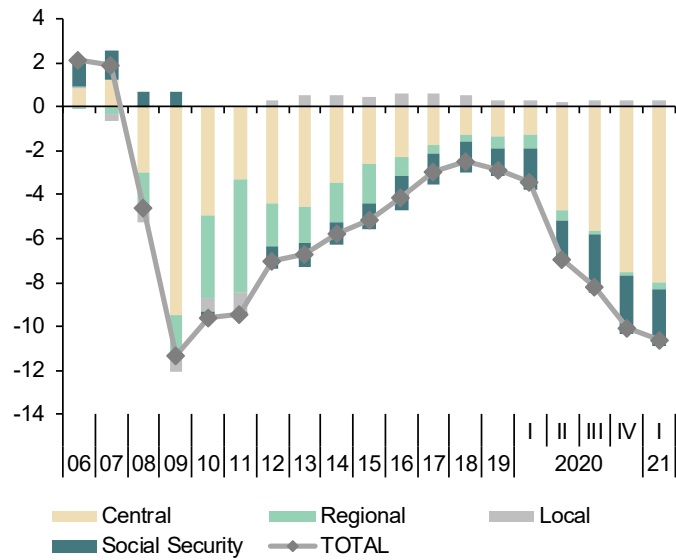
Chart 7.2 - Government debt

Percent of GDP

Central — Regional — Local — Social Security — TOTAL consolidated
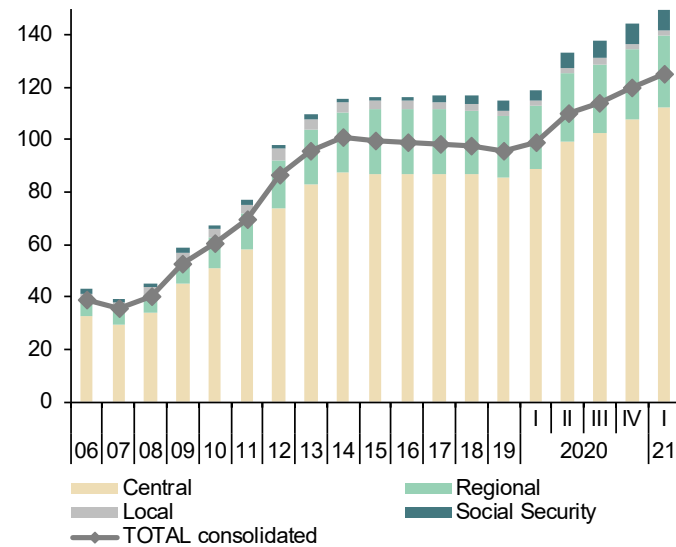
Table 8

General activity and industrial sector indicators (a)

		General activity indicators			Industrial sector indicators					
		Economic Sentiment Index	Composite PMI index	Social Security Affiliates (f)	Electricity consumption (temperature adjusted)	Industrial production index	Social Security Affiliates in industry	Manufacturing PMI index	Industrial confidence index	Manufacturing Turnover index deflated	Industrial orders
		Index	Index	Thousands	1,000 GWH	2015=100	Thousands	Index	Balance of responses	2015=100 (smoothed)	Balance of responses
2013		90.7	48.3	15,855.2	247.6	95.6	2,021.6	48.5	-14.0	93.2	-30.7
2014		100.9	55.1	16,111.1	247.2	96.8	2,022.8	53.2	-7.1	95.3	-16.3
2015		108.1	56.7	16,641.8	251.4	100.0	2,067.3	53.6	-0.3	100.0	-5.4
2016		105.9	54.9	17,157.5	252.1	101.8	2,124.7	53.1	-2.3	102.7	-5.4
2017		108.8	56.2	17,789.6	256.4	105.1	2,191.0	54.8	1.0	107.1	2.2
2018		108.4	54.6	18,364.5	257.9	105.3	2,250.9	53.3	-0.1	108.4	-0.2
2019		104.6	52.7	18,844.1	251.2	106.1	2,283.2	49.1	-3.9	108.9	-5.1
2020		90.2	41.5	18,440.5	239.1	95.8	2,239.3	47.5	-14.0	98.8	-29.8
2021	(b)	102.5	54.6	18,739.1	163.2	104.4	2,257.5	56.9	-1.4	104.8	-5.7
2019	IV	102.3	51.9	18,969.0	62.5	104.3	2,291.5	47.2	-4.6	105.3	-7.3
2020	I	101.8	43.3	18,904.2	61.6	99.2	2,284.4	48.2	-2.0	99.2	-7.8
	II	78.5	29.4	17,957.3	55.0	82.6	2,201.9	39.4	-27.8	95.7	-53.3
	III	90.3	48.5	18,321.9	59.9	100.4	2,227.3	51.4	-11.9	99.2	-38.8
	IV	90.1	44.8	18,592.5	61.6	101.9	2,244.1	51.1	-11.0	103.4	-19.6
2021	I	93.8	46.1	18,634.2	61.3	101.8	2,245.5	53.1	-7.3	104.5	-13.5
	II	107.2	58.9	18,666.3	61.0	104.3	2,258.5	59.2	2.5	103.6	-0.9
	III (b)	108.3	60.9	18,969.3	40.1	102.9	2,278.2	59.2	1.8	--	-1.3
2021	Jun	107.2	62.4	18,804.9	20.3	104.0	2,265.8	60.4	0.2	103.2	-0.8
	Jul	108.9	61.2	18,906.0	20.2	102.9	2,273.3	59.0	2.1	--	-2.7
	Aug	107.7	60.6	19,032.7	20.2	--	2,283.1	59.5	1.4	--	0.0
Percentage changes (c)											
2013		--	--	-2.9	-2.2	-1.5	-4.4	--	--	-2.0	--
2014		--	--	1.6	-0.1	1.3	0.1	--	--	2.3	--
2015		--	--	3.3	1.7	3.4	2.2	--	--	4.9	--
2016		--	--	3.1	0.3	1.8	2.8	--	--	2.8	--
2017		--	--	3.7	1.7	3.2	3.1	--	--	4.3	--
2018		--	--	3.2	0.6	0.2	2.7	--	--	1.2	--
2019		--	--	2.6	-2.6	0.7	1.4	--	--	0.5	--
2020		--	--	-2.1	-4.8	-9.7	-1.9	--	--	-9.3	--
2021	(d)	--	--	1.9	3.4	11.8	0.9	--	--	11.4	--
2019	IV	--	--	0.4	0.8	-1.6	0.2	--	--	-3.1	--
2020	I	--	--	-0.3	-1.5	-4.9	-0.3	--	--	-5.7	--
	II	--	--	-5.0	-10.7	-16.7	-3.6	--	--	-3.6	--
	III	--	--	2.0	8.9	21.6	1.2	--	--	3.7	--
	IV	--	--	1.5	2.9	1.5	0.8	--	--	4.2	--
2021	I	--	--	0.2	-0.5	-0.1	0.1	--	--	1.1	--
	II	--	--	0.2	-0.4	2.5	0.6	--	--	-0.8	--
	III (e)	--	--	1.6	-1.5	-1.3	0.9	--	--	--	--
2021	Jun	--	--	1.0	-1.1	-1.1	0.3	--	--	-0.4	--
	Jul	--	--	0.5	-1.3	-1.1	0.3	--	--	--	--
	Aug	--	--	0.7	0.8	--	0.4	--	--	--	--

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

Sources: European Commision, Markit Economics Ltd., M. of Labour, M. of Industry, National Statistics Institute, REE and Funcas.

Chart 8.1 - General activity indicators (I)

Annual percentage changes

Social Security affiliates — Electricity consumption
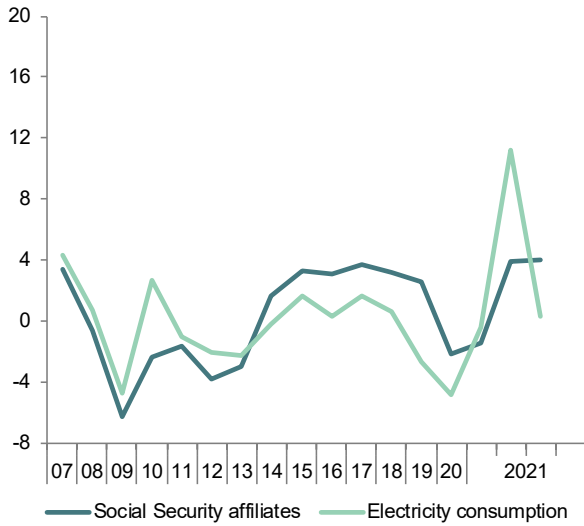
Chart 8.2 - General activity indicators (II)

Index

Economic Sentiment (left) — Composite PMI (right)
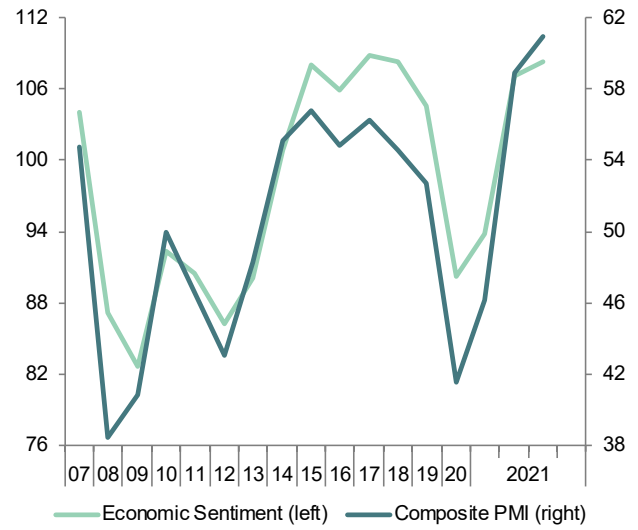
Chart 8.3 - Industrial sector indicators (I)

Annual percentage changes

Social Security affiliates in industry
IPI
Turnover

Chart 8.4 - Industrial sector indicators (II)

Index

Manufacturing PMI (left)
Industrial confidence (right)
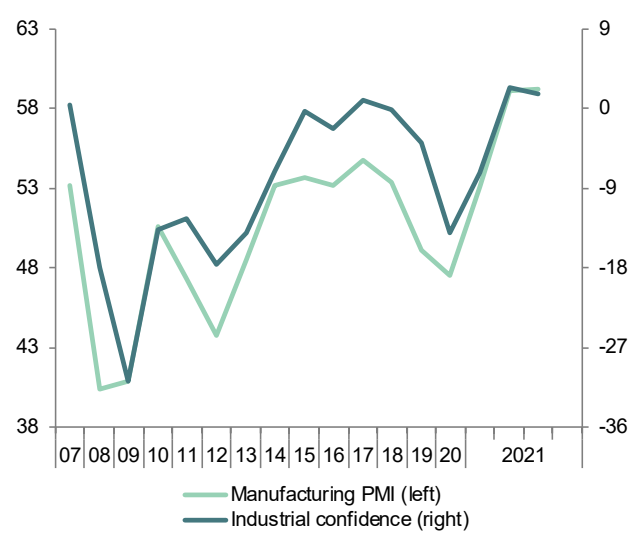
Table 9

Construction and services sector indicators (a)

	Construction indicators					Service sector indicators					
	Social Security Affiliates in construction	Industrial production index construction materials	Construction confidence index	Official tenders (f)	Housing permits (f)	Social Security Affiliates in services (g)	Turnover index (nominal)	Services PMI index	Hotel overnight stays	Passenger air transport	Services confidence index
	Thousands	2015=100 (smoothed)	Balance of responses	EUR Billions (smoothed)	Million m²	Thousands	2015=100 (smoothed)	Index	Million (smoothed)	Million (smoothed)	Balance of responses
2013	996.8	93.6	-55.6	9.2	6.8	11,727.9	92.9	48.3	286.0	186.5	-15.3
2014	980.3	92.8	-41.4	13.1	6.9	11,995.5	95.3	55.2	295.3	194.9	9.9
2015	1,026.7	100.0	-25.3	9.4	9.9	12,432.3	100.0	57.3	308.2	206.6	19.4
2016	1,053.9	102.6	-39.6	9.2	12.7	12,851.6	104.1	55.0	331.2	229.4	17.8
2017	1,118.8	111.5	-26.9	12.7	15.9	13,338.2	111.0	56.4	340.6	248.4	22.5
2018	1,194.1	114.2	-4.6	16.6	19.8	13,781.3	117.5	54.8	340.0	262.9	21.7
2019	1,254.9	124.8	-7.0	18.3	20.0	14,169.1	122.2	53.9	343.0	276.9	13.9
2020	1,233.1	110.6	-18.4	14.1	16.1	13,849.2	102.9	40.3	91.6	75.6	-26.2
2021 (b)	1,279.9	127.0	-3.7	10.6	7.8	14,079.3	111.3	53.9	60.1	59.9	-1.2
2019 IV	1,265.1	119.0	-12.4	3.9	4.5	14,287.9	118.2	53.6	78.4	62.5	11.0
2020 I	1,253.7	111.1	-8.6	3.4	4.7	14,250.7	108.4	42.5	56.0	44.2	7.8
II	1,166.6	107.4	-26.3	3.1	3.3	13,470.8	100.2	28.4	29.3	22.6	-47.1
III	1,250.3	112.2	-24.3	3.4	3.9	13,728.1	101.2	47.3	16.0	12.0	-35.9
IV	1,263.5	117.6	-14.4	4.1	4.2	13,958.9	105.9	43.0	12.4	9.6	-29.4
2021 I	1,261.4	121.5	-11.8	5.0	4.5	14,000.3	110.7	44.3	15.5	12.1	-25.5
II	1,281.0	124.9	2.2	5.9	5.0	14,008.1	115.6	58.8	26.7	20.7	10.2
III (b)	1,297.8	126.8	-0.4	--	--	14,282.6	--	61.0	12.5	21.2	18.0
2021 Jun	1,287.0	125.9	4.6	2.1	--	14,135.1	117.2	62.5	10.6	8.3	17.9
Jul	1,291.9	126.8	-1.5	--	--	14,233.2	--	61.9	12.5	9.8	19.3
Aug	1,303.7	--	0.7	--	--	14,332.0	--	60.1	--	11.4	16.7
Percentage changes (c)											
2013	-12.2	-7.5	--	23.2	-20.3	-1.5	-2.0	--	1.9	-3.5	--
2014	-1.7	-0.9	--	42.6	2.2	2.3	2.6	--	3.2	4.6	--
2015	4.7	7.8	--	-28.2	42.6	3.6	4.9	--	4.4	6.0	--
2016	2.6	2.6	--	-1.7	29.0	3.4	4.1	--	7.4	11.0	--
2017	6.2	8.7	--	37.1	24.8	3.8	6.6	--	2.8	8.3	--
2018	6.7	2.5	--	30.8	24.5	3.3	5.8	--	-0.2	5.8	--
2019	5.1	9.2	--	10.4	1.3	2.8	4.0	--	0.9	5.3	--
2020	-1.7	-11.3	--	-22.7	-19.8	-2.3	-15.8	--	-73.3	-72.7	--
2021 (d)	4.9	17.8	--	68.6	16.8	1.9	14.5	--	8.1	1.3	--
2019 IV	0.5	-3.8	--	-20.6	-8.8	0.6	-3.6	--	-10.1	-10.4	--
2020 I	-0.9	-6.6	--	-33.1	-10.5	-0.3	-8.3	--	-28.6	-29.2	--
II	-7.0	-3.3	--	-35.6	-39.4	-5.5	-7.6	--	-47.7	-48.8	--
III	7.2	4.4	--	-23.4	-18.9	1.9	1.0	--	-45.4	-46.9	--
IV	1.1	4.8	--	6.2	-7.8	1.7	4.6	--	-22.7	-20.3	--
2021 I	-0.2	3.4	--	50.2	-4.1	0.3	4.6	--	25.3	26.7	--
II	1.6	2.7	--	92.7	71.8	0.1	4.4	--	72.1	70.7	--
III (e)	1.3	1.6	--	--	--	2.0	--	--	40.4	53.8	--
2021 Jun	0.4	0.8	--	100.3	--	1.3	1.4	--	20.2	20.8	--
Jul	0.4	0.7	--	--	--	0.7	--	--	17.8	18.9	--
Aug	0.9	--	--	--	--	0.7	--	--	--	16.4	--

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

Sources: European Commision, Markit Economics Ltd., M. of Labour, M. of Public Works, National Statistics Institute, AENA, OFICEMEN, SEOPAN and Funcas.

Chart 9.1 - Construction indicators (I)

Annual percentage changes and index

- S. Security affiliates in construction (left)
- Construction confidence index (right)
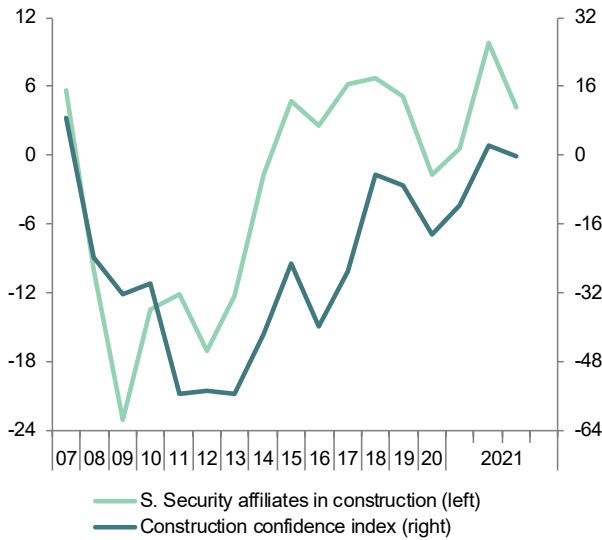
Chart 9.2 - Construction indicators (II)

Annual percentage changes

- Official tenders
- Housing permits
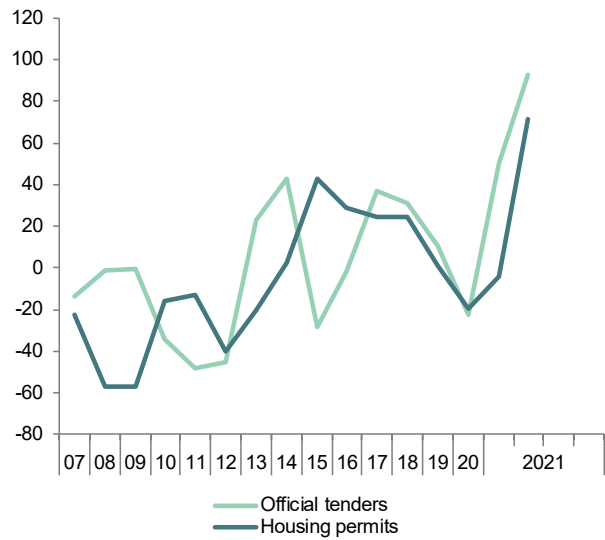
Chart 9.3 - Services indicators (I)

Annual percentage changes

1085,7

129,6

- Social Security affiliates in services
- Turnover
- Hotel overnight stays
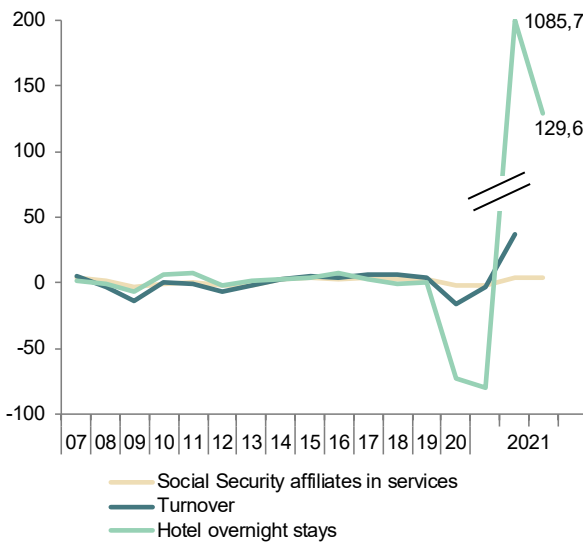
Chart 9.4 - Services indicators (II)

Index

- Services PMI (left)
- Services confidence (right)
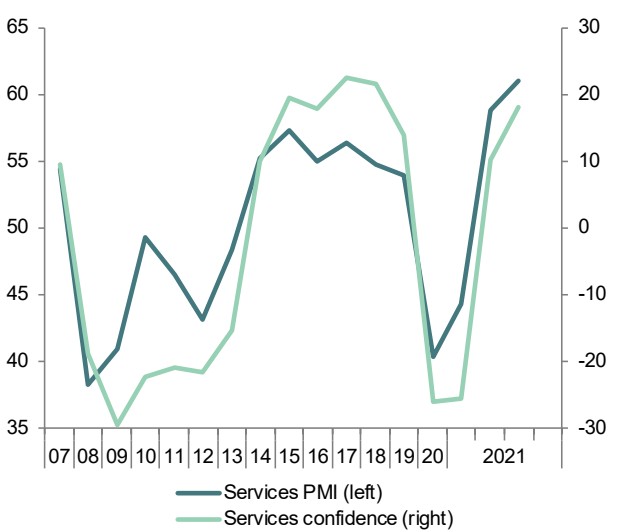
Table 10

Consumption and investment indicators (a)

		Consumption indicators				Investment in equipment indicators		
		Retail sales deflated	Car registrations	Consumer confidence index	Hotel overnight stays by residents in Spain	Industrial orders for consumer goods	Cargo vehicles registrations	Industrial orders for investment goods	Imports of capital goods (volume)
		2015=100 (smoothed)	Thousands (smoothed)	Balance of responses	Million (smoothed)	Balance of responses	Thousands (smoothed)	Balance of responses	2005=100 (smoothed)
2013		95.0	742.3	-28.1	100.6	-21.8	107.6	-33.5	68.9
2014		96.0	890.1	-14.5	104.7	-9.1	137.5	-16.5	81.6
2015		100.0	1,094.0	-4.7	110.3	-3.1	180.3	0.2	93.3
2016		103.9	1,230.1	-6.3	114.2	-1.4	191.3	-0.2	97.2
2017		104.7	1,341.6	-3.4	115.8	2.2	207.6	4.9	103.3
2018		105.4	1,424.0	-4.2	116.5	-5.6	230.0	12.4	105.4
2019		107.9	1,375.6	-6.3	119.6	-2.9	220.9	8.8	105.6
2020		100.4	939.1	-22.8	50.9	-25.3	170.8	-22.7	100.0
2021 (b)		101.3	645.2	-14.8	37.2	-15.4	129.2	-0.7	107.0
2019	IV	105.4	305.2	-10.5	27.0	-2.8	48.7	1.2	99.8
2020	I	100.5	247.4	-10.3	20.1	-3.8	41.4	-11.4	94.5
	II	97.9	216.4	-27.9	12.7	-41.5	39.1	-41.0	94.4
	III	100.4	240.8	-26.9	10.2	-32.8	45.1	-28.9	101.3
	IV	102.7	256.4	-26.3	9.5	-23.1	50.1	-9.6	107.8
2021	I	103.6	247.9	-22.1	11.0	-18.0	51.0	-13.7	110.9
	II	104.2	240.3	-11.1	17.0	-15.5	48.4	11.4	111.1
	III (b)	104.6	156.7	-9.4	7.6	-11.5	29.8	0.6	110.4
2021	Jun	104.4	79.5	-11.7	6.6	-15.0	15.7	15.0	110.8
	Jul	104.6	78.7	-10.2	7.6	-11.7	15.2	-6.7	110.4
	Aug	--	78.0	-8.5	--	-11.4	14.6	7.9	--
Percentage changes (c)									
2013		-3.8	4.5	--	-1.4	--	-0.1	--	13.7
2014		1.1	19.9	--	4.1	--	27.8	--	18.4
2015		4.2	22.9	--	5.3	--	31.1	--	14.4
2016		3.9	12.4	--	3.6	--	6.1	--	4.1
2017		0.8	9.1	--	1.4	--	8.5	--	6.4
2018		0.7	6.1	--	0.6	--	10.8	--	2.0
2019		2.3	-3.4	--	2.7	--	-4.0	--	0.2
2020		-6.9	-31.7	--	-57.5	--	-22.6	--	-5.3
2021 (d)		6.3	12.0	--	48.7	--	28.0	--	18.1
2019	IV	-2.3	-9.2	--	-10.1	--	-9.4	--	-18.6
2020	I	-4.7	-18.9	--	-25.8	--	-15.1	--	-19.8
	II	-2.6	-12.5	--	-36.5	--	-5.5	--	-0.3
	III	2.5	11.3	--	-19.8	--	15.3	--	32.7
	IV	2.3	6.5	--	-7.3	--	11.1	--	28.4
2021	I	0.9	-3.3	--	16.4	--	1.6	--	11.8
	II	0.6	-3.1	--	54.2	--	-5.0	--	0.9
	III (e)	0.3	-2.2	--	34.1	--	-7.8	--	-2.8
2021	Jun	0.2	-0.8	--	17.1	--	-3.0	--	-0.4
	Jul	0.2	-0.9	--	15.3	--	-3.4	--	-0.4
	Aug	--	-0.9	--	--	--	-3.6	--	--

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

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

Chart 10.1 - Consumption indicators

Annual percentage changes and balance of responses

Retail sales (left)
Industrial orders for consumer goods (right, balance of responses)
Consumer confidence index (right, balance of responses)
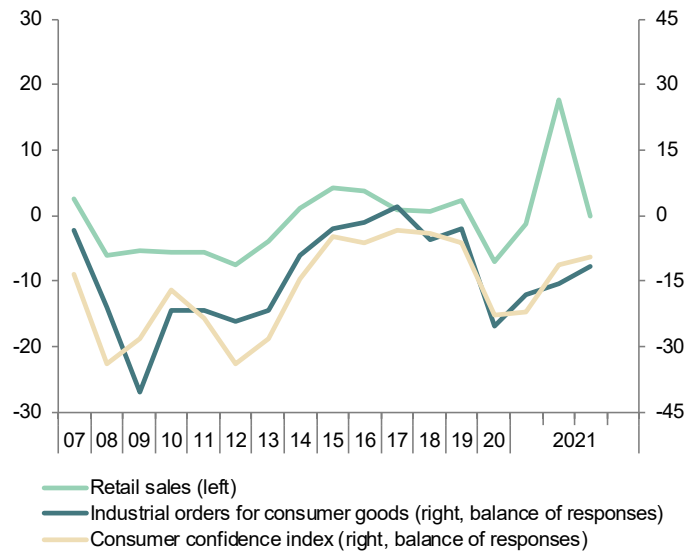
Chart 10.2 - Investment indicators

Annual percentage changes and balance of responses

Imports of capital goods
Industrial orders for investment goods (balance of responses)
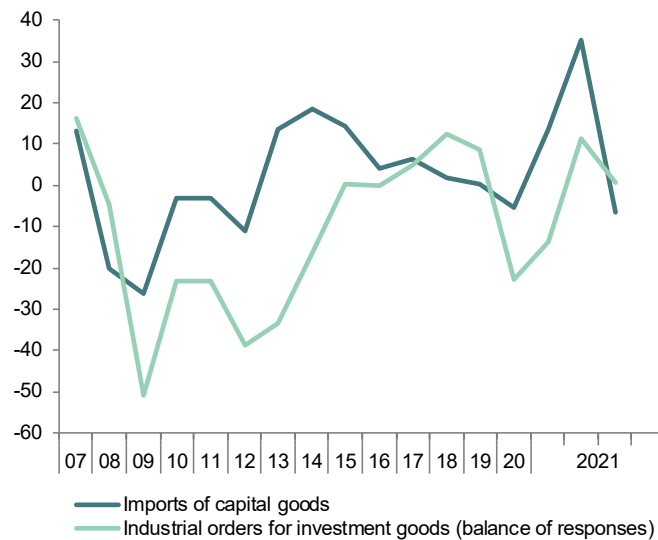
Table 11a

Labour market (I)
Forecasts in yellow

	Population aged 16 or more	Labour force		Employment		Unemployment		Participation rate aged 16 or more (a)	Employment rate aged 16 or more (b)	Unemployment rate (c)			
		Original	Seasonally adjusted	Original	Seasonally adjusted	Original	Seasonally adjusted			Total	Aged 16-24	Spanish	Foreign
										Seasonally adjusted			
	I	2=4+6	3=5+7	4	5	6	7	8	9	10=7/3	11	12	13
	Million									Percentage			
2014	38.5	23.0	--	17.3	--	5.6	--	59.6	45.0	24.4	53.2	23.0	34.5
2015	38.5	22.9	--	17.9	--	5.1	--	59.5	46.4	22.1	48.3	20.9	30.5
2016	38.5	22.8	--	18.3	--	4.5	--	59.2	47.6	19.6	44.4	18.7	26.6
2017	38.7	22.7	--	18.8	--	3.9	--	58.8	48.7	17.2	38.6	16.3	23.8
2018	38.9	22.8	--	19.3	--	3.5	--	58.6	49.7	15.3	34.4	14.3	21.9
2019	39.3	23.0	--	19.8	--	3.2	--	58.6	50.4	14.1	32.6	13.2	20.1
2020	39.6	22.7	--	19.2	--	3.5	--	57.4	48.5	15.5	38.3	14.1	24.6
2021	39.8	23.2	--	19.5	--	3.7	--	58.3	49.0	15.8	--	--	--
2022	40.1	23.3	--	19.9	--	3.4	--	58.2	49.7	14.7	--	--	--
2019 III	39.2	23.1	23.0	19.9	19.8	3.2	3.3	58.5	50.2	13.9	31.7	13.1	19.3
IV	39.3	23.2	23.1	20.0	19.9	3.2	3.2	58.7	50.6	13.8	30.5	12.8	20.0
2020 I	39.4	23.0	23.2	19.7	19.9	3.3	3.2	58.6	50.4	14.4	33.0	13.3	21.2
II	39.5	22.0	21.9	18.6	18.5	3.4	3.4	55.5	46.9	15.3	39.6	13.9	24.9
III	39.6	22.9	22.8	19.2	19.1	3.7	3.8	57.6	48.1	16.3	40.4	14.8	25.7
IV	39.6	23.1	23.0	19.3	19.3	3.7	3.7	58.1	48.7	16.1	40.1	14.5	26.6
2021 I	39.6	22.9	23.0	19.2	19.4	3.7	3.6	58.1	49.1	16.0	39.5	14.4	26.2
II	39.6	23.2	23.2	19.7	19.6	3.5	3.6	58.5	49.5	15.3	38.4	13.9	23.8
	Percentage changes (d)							Difference from one year ago					
2014	-0.3	-1.0	--	1.2	--	-7.3	--	-0.4	0.7	-1.7	-2.3	-1.4	-2.5
2015	0.0	-0.1	--	3.0	--	-9.9	--	-0.1	1.4	-2.4	-4.9	-2.1	-4.0
2016	0.1	-0.4	--	2.7	--	-11.4	--	-0.3	1.2	-2.4	-3.9	-2.2	-3.8
2017	0.3	-0.4	--	2.6	--	-12.6	--	-0.4	1.1	-2.4	-5.9	-2.4	-2.8
2018	0.6	0.3	--	2.7	--	-11.2	--	-0.2	1.0	-2.0	-4.2	-2.0	-1.9
2019	1.0	1.0	--	2.3	--	-6.6	--	0.0	0.7	-1.2	-1.8	-1.1	-1.8
2020	0.8	-1.3	--	-2.9	--	8.7	--	-1.2	-1.9	1.4	5.7	0.9	4.5
2021	0.5	2.0	--	1.6	--	4.1	--	0.8	0.5	0.3	--	--	--
2022	0.7	0.6	--	2.0	--	-6.5	--	-0.1	0.6	-1.1	--	--	--
2019 III	1.0	1.0	0.1	1.8	0.1	-3.4	0.3	-0.1	0.4	-0.6	-1.3	-0.6	-1.3
IV	1.1	1.3	0.5	2.1	1.0	-3.4	-2.2	0.1	0.5	-0.7	-3.0	-0.7	-0.8
2020 I	1.0	0.7	0.1	1.1	-0.2	-1.2	1.4	-0.1	0.0	-0.3	-2.0	-0.4	0.4
II	1.0	-4.6	-5.2	-6.0	-6.9	4.3	4.9	-3.2	-3.5	1.3	6.5	0.8	4.7
III	0.9	-0.8	4.0	-3.5	2.8	15.8	10.7	-0.9	-2.1	2.3	8.8	1.7	6.3
IV	0.7	-0.4	0.9	-3.1	1.4	16.5	-1.5	-0.6	-1.8	2.3	9.6	1.6	6.6
2021 I	0.5	-0.6	0.0	-2.4	0.7	10.3	-3.2	-0.4	-1.3	1.6	6.5	1.1	5.0
II	0.3	5.6	0.6	5.7	0.8	5.2	-0.3	3.0	2.6	-0.1	-1.2	0.1	-1.2

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

Source: INE (Labour Force Survey) and Funcas.

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

Annual growth rates and percentage of active population

Unemployment rate (right)
Labour force (growth rate, left)
Employed (growth rate, left)
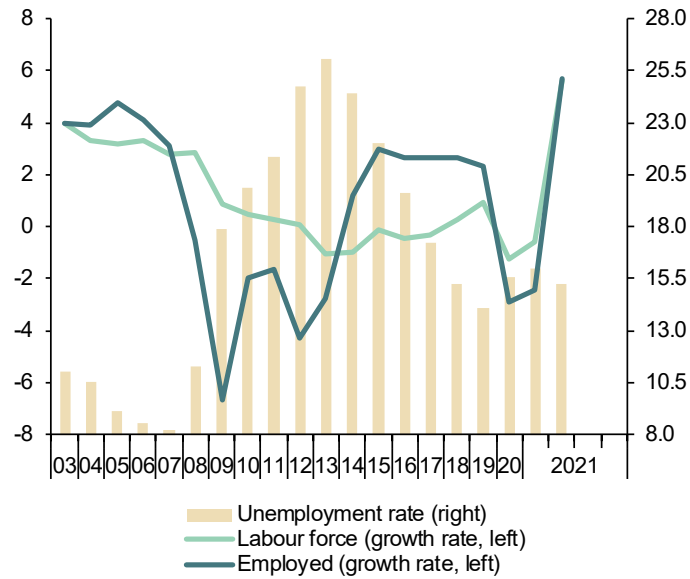
Chart 11a.2 - Unemployment rates, S.A.

Percentage

Total   Aged 16-24
Spanish   Foreign
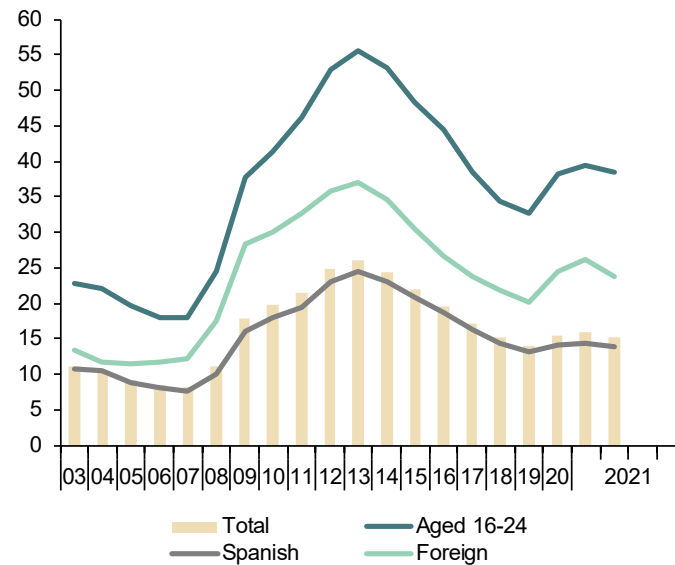
Table 11b

Labour market (II)

		Employed by sector				Employed by professional situation					Employed by duration of the working-day		
						Employees				Self employed			Part-time employment rate (b)
							By type of contract						
		Agriculture	Industry	Construction	Services	Total	Tempo-rary	Indefinite	Temporary employment rate (a)	Self employed	Full-time	Part-time	
		1	2	3	4	5=6+7	6	7	8=6/5	9	10	11	12
						Million (original data)							
2014		0.74	2.38	0.99	13.23	14.29	3.43	10.86	24.0	3.06	14.59	2.76	15.91
2015		0.74	2.48	1.07	13.57	14.77	3.71	11.06	25.1	3.09	15.05	2.81	15.74
2016		0.77	2.52	1.07	13.97	15.23	3.97	11.26	26.1	3.11	15.55	2.79	15.21
2017		0.82	2.65	1.13	14.23	15.72	4.19	11.52	26.7	3.11	16.01	2.82	14.97
2018		0.81	2.71	1.22	14.59	16.23	4.35	11.88	26.8	3.09	16.56	2.76	14.31
2019		0.80	2.76	1.28	14.94	16.67	4.38	12.29	26.3	3.11	16.95	2.83	14.30
2020		0.77	2.70	1.24	14.49	16.11	3.88	12.23	24.1	3.09	16.51	2.70	14.05
2021(c)		0.80	2.65	1.29	14.69	16.31	3.98	12.32	24.4	3.13	16.67	2.77	14.23
2019	II	0.81	2.76	1.28	14.95	16.69	4.40	12.29	26.4	3.12	16.85	2.95	14.90
	III	0.75	2.82	1.27	15.04	16.79	4.48	12.31	26.7	3.08	17.09	2.79	14.03
	IV	0.79	2.76	1.28	15.13	16.85	4.40	12.45	26.1	3.12	17.30	2.67	13.38
2020	I	0.78	2.77	1.28	14.85	16.56	4.14	12.42	25.0	3.12	16.83	2.85	14.47
	II	0.76	2.64	1.17	14.03	15.53	3.47	12.06	22.4	3.08	16.12	2.49	13.36
	III	0.73	2.69	1.25	14.51	16.11	3.89	12.21	24.2	3.07	16.52	2.65	13.84
	IV	0.78	2.69	1.28	14.59	16.24	4.00	12.24	24.6	3.10	16.55	2.80	14.47
2021	I	0.80	2.64	1.26	14.50	16.10	3.83	12.27	23.8	3.10	16.51	2.70	14.04
	II	0.81	2.67	1.32	14.87	16.51	4.14	12.37	25.1	3.16	16.84	2.84	14.41
		Annual percentage changes							Difference from one year ago	Annual percentage changes			Difference from one year ago
2014		-0.1	1.0	-3.5	1.7	1.5	5.3	0.4	0.9	-0.4	1.1	1.9	0.1
2015		0.1	4.3	8.1	2.6	3.4	8.3	1.9	1.1	1.1	3.2	1.9	-0.2
2016		5.1	1.6	0.0	2.9	3.1	6.8	1.8	0.9	0.7	3.3	-0.8	-0.5
2017		5.8	5.0	5.1	1.9	3.2	5.6	2.3	0.6	-0.1	2.9	1.0	-0.2
2018		-0.8	2.3	8.3	2.5	3.3	3.8	3.1	0.1	-0.5	3.5	-1.9	-0.7
2019		-1.9	2.0	4.6	2.4	2.7	0.6	3.5	-0.6	0.5	2.3	2.3	0.0
2020		-4.0	-2.3	-2.6	-3.0	-3.4	-11.4	-0.5	-2.2	-0.5	-2.6	-4.6	-0.3
2021(d)		3.9	-1.9	5.7	1.7	1.6	4.7	0.7	0.7	1.0	1.2	3.7	0.3
2019	II	-1.6	1.5	5.0	2.5	2.7	1.0	3.3	-0.4	1.0	0.9	11.9	1.3
	III	-2.9	3.3	2.4	1.7	2.2	-0.7	3.3	-0.8	-0.3	1.6	2.8	0.1
	IV	-3.8	2.0	0.3	2.5	2.4	-0.5	3.4	-0.8	0.3	3.8	-7.7	-1.4
2020	I	-6.5	2.2	-0.3	1.4	1.2	-2.2	2.4	-0.9	0.2	1.6	-1.8	-0.4
	II	-5.7	-4.4	-8.4	-6.2	-7.0	-21.1	-1.9	-4.0	-1.2	-4.3	-15.8	-1.5
	III	-2.0	-4.5	-1.6	-3.5	-4.1	-13.0	-0.8	-2.5	-0.5	-3.3	-4.8	-0.2
	IV	-1.5	-2.5	-0.3	-3.6	-3.6	-9.0	-1.7	-1.5	-0.6	-4.3	4.8	1.1
2021	I	1.7	-4.6	-1.3	-2.3	-2.8	-7.5	-1.2	-1.2	-0.6	-1.9	-5.3	-0.4
	II	6.2	0.9	13.3	6.0	6.3	19.2	2.6	2.7	2.7	4.4	14.1	1.1

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

Source: INE (Labour Force Survey).

Chart 11b.1 - Employment by sector

Annual percentage changes

Agriculture — Industry — Construction — Services
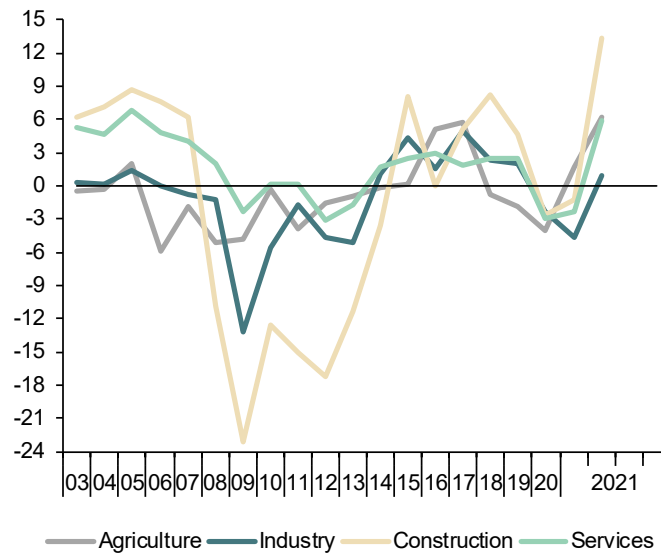
Chart 11b.2 - Employment by type of contract

Annual percentage changes and percentage over total employees

Temporary employment rate (right)
Temporary (left)
Indefinite (left)
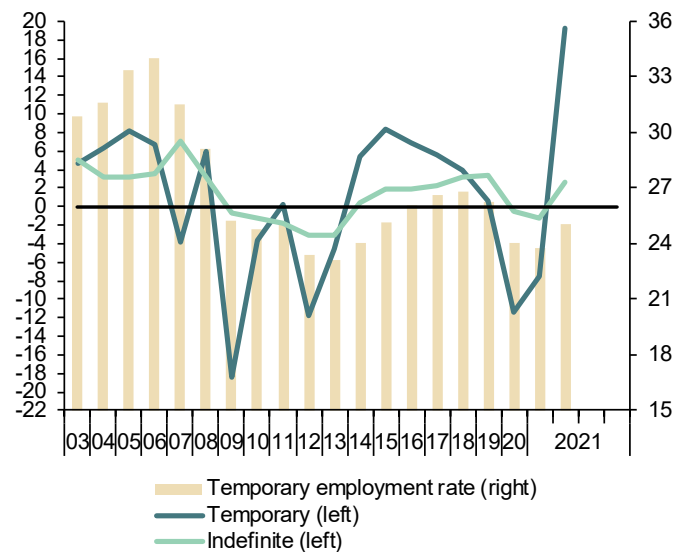
Table 12

Index of Consumer Prices
Forecasts in yellow

		Total	Total excluding food and energy	Excluding unprocessed food and energy				Unprocessed food	Energy	Food
				Total	Non-energy industrial goods	Services	Processed food			
% of total in 2020		100.00	62.46	80.14	24.07	38.40	17.68	9.14	10.72	26.82
				Indexes, 2016 = 100						
2015		100.2	99.2	99.2	99.5	98.9	99.2	97.7	109.4	98.7
2016		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2017		102.0	101.1	101.1	100.2	101.6	100.7	102.6	108.0	101.3
2018		103.7	102.1	102.0	100.2	103.1	101.7	105.8	114.7	103.1
2019		104.4	103.0	102.9	100.4	104.6	102.2	107.8	113.2	104.0
2020		104.1	103.6	103.6	100.6	105.4	103.6	111.8	102.4	106.2
2021		106.8	104.1	104.2	101.2	105.7	104.5	114.0	122.1	107.6
2022		109.2	105.4	105.5	102.0	107.4	105.6	115.4	133.0	108.7
				Annual percentage changes						
2015		-0.5	0.5	0.6	0.3	0.7	0.9	1.8	-9.0	1.2
2016		-0.2	0.8	0.8	0.5	1.1	0.8	2.3	-8.6	1.3
2017		2.0	1.1	1.1	0.2	1.6	0.7	2.6	8.0	1.3
2018		1.7	0.9	0.9	0.0	1.5	1.0	3.1	6.1	1.8
2019		0.7	1.0	0.9	0.3	1.4	0.5	1.9	-1.2	0.9
2020		-0.3	0.6	0.7	0.2	0.8	1.3	3.7	-9.6	2.1
2021		2.7	0.4	0.6	0.6	0.3	0.9	1.9	19.3	1.3
2022		2.2	1.3	1.2	0.8	1.6	1.0	1.3	8.9	1.1
2021	Jan	0.5	0.4	0.6	0.3	0.5	1.1	2.5	-1.8	1.6
	Feb	0.0	0.1	0.3	0.2	0.1	0.7	2.6	-4.2	1.4
	Mar	1.3	0.1	0.3	0.3	0.0	0.6	2.6	8.4	1.3
	Apr	2.2	-0.1	0.0	0.4	-0.4	0.3	0.2	21.4	0.3
	May	2.7	0.1	0.2	0.5	-0.1	0.2	1.4	24.0	0.6
	Jun	2.7	0.1	0.2	0.7	-0.3	0.7	1.4	23.5	0.9
	Jul	2.9	0.4	0.6	0.4	0.5	1.0	2.4	20.7	1.5
	Aug	3.3	0.5	0.7	0.6	0.6	1.2	2.6	23.5	1.6
	Sep	4.0	0.5	0.8	0.7	0.5	1.3	2.3	29.7	1.7
	Oct	4.4	0.8	0.9	0.9	0.8	1.2	1.5	33.6	1.3
	Nov	4.2	0.9	1.0	1.1	0.8	1.3	2.0	30.8	1.6
	Dec	3.9	1.0	1.1	1.1	0.9	1.5	1.9	27.1	1.6
2022	Jan	2.9	0.7	0.8	0.8	0.6	1.3	1.0	19.6	1.2
	Feb	3.7	0.9	1.0	0.9	0.9	1.3	1.3	25.9	1.3
	Mar	3.1	1.0	1.1	0.8	1.2	1.3	0.8	18.8	1.1
	Apr	2.7	1.2	1.2	0.8	1.5	1.2	1.0	14.2	1.1
	May	2.5	1.2	1.2	0.9	1.4	1.1	0.9	12.5	1.0
	Jun	2.2	1.3	1.2	0.9	1.6	0.9	1.6	8.6	1.2
	Jul	2.2	1.5	1.3	0.8	1.9	0.8	1.2	8.8	0.9
	Aug	1.9	1.6	1.4	0.8	2.1	0.7	0.6	5.9	0.7
	Sep	1.2	1.5	1.3	0.7	2.0	0.8	0.8	0.4	0.8
	Oct	1.1	1.5	1.3	0.6	2.0	0.9	1.4	-0.6	1.1
	Nov	1.3	1.5	1.4	0.6	2.1	0.9	2.0	0.3	1.3
	Dec	1.4	1.6	1.4	0.6	2.2	0.9	2.6	0.3	1.5

Source: INE and Funcas (Forecasts).

Chart 12.1 - Inflation rate (I)

Annual percentage changes

—— All-Items —— All-Items ex. food and energy
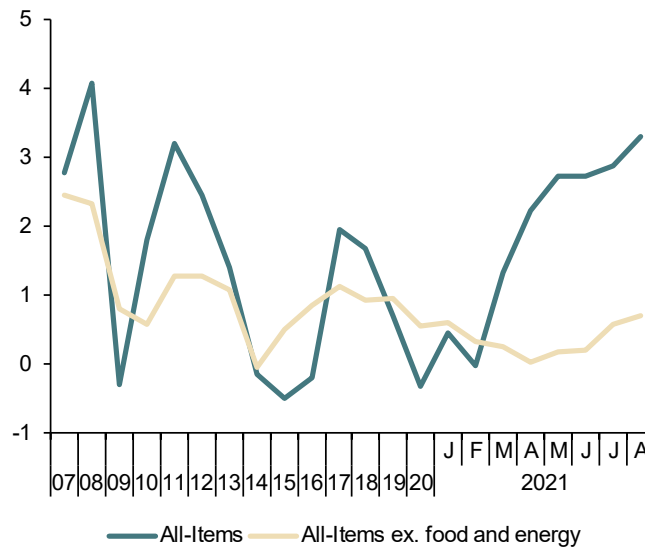
Chart 12.2 - Inflation rate (II)

Annual percentage changes

—— Non-energy industrial goods —— Services
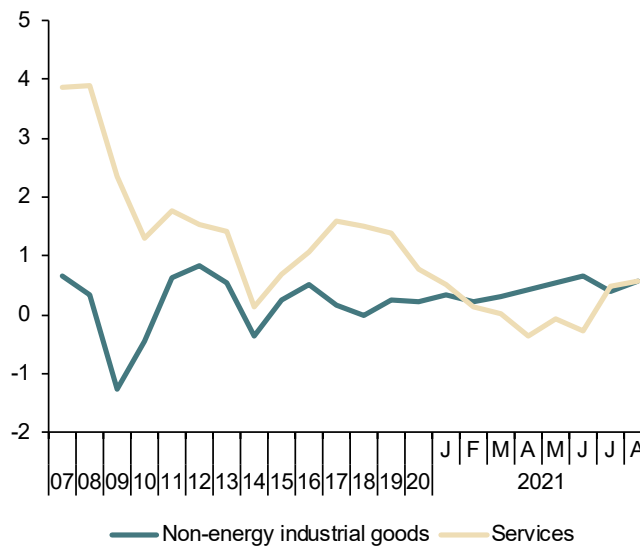
Table 13

Other prices and costs indicators

	GDP deflator (a)	Industrial producer prices		Housing prices		Urban land prices (M. Public Works)	Labour Costs Survey				Wage increase agreed in collective bargaining
		Total	Excluding energy	Housing Price Index (INE)	m² average price (M. Public Works)		Total labour costs per worker	Wage costs per worker	Other cost per worker	Total labour costs per hour worked	
	2015=100	2015=100		2007=100			2000=100				
2013	99.7	103.5	100.5	64.3	72.7	55.1	143.8	141.1	152.2	155.2	--
2014	99.5	102.1	99.7	64.5	71.0	52.6	143.3	140.9	150.7	155.5	--
2015	100.0	100.0	100.0	66.8	71.7	54.9	144.2	142.5	149.6	156.5	--
2016	100.3	96.9	99.6	70.0	73.1	57.8	143.6	142.1	148.3	156.2	--
2017	101.6	101.1	101.9	74.3	74.8	58.2	144.0	142.3	149.1	156.2	--
2018	102.8	104.1	103.0	79.3	77.4	57.3	145.4	143.8	150.6	158.6	--
2019	104.3	103.6	103.2	83.3	79.8	57.7	148.7	146.4	155.7	162.7	--
2020	105.4	99.2	103.1	85.0	78.9	52.3	145.4	142.6	154.1	173.3	--
2021 (b)	106.6	108.2	108.3	86.5	79.6	53.6	151.8	148.8	161.3	167.2	--
2019 IV	105.7	102.8	103.0	83.8	80.4	56.5	155.7	155.4	156.6	171.2	--
2020 I	105.0	101.4	103.5	84.7	79.8	58.9	145.3	141.5	156.7	158.6	--
II	105.7	96.3	102.6	84.8	78.3	50.1	138.1	135.1	147.2	180.2	--
III	106.1	99.2	102.8	85.7	78.8	49.3	142.7	139.2	153.5	174.1	--
IV	106.6	99.9	103.6	85.0	78.9	51.0	155.5	154.4	159.1	180.5	--
2021 I	106.4	104.0	106.2	85.4	79.0	49.0	147.3	142.9	160.8	163.5	--
II	106.9	110.3	109.5	87.5	80.2	58.3	156.4	154.6	161.8	170.9	--
III (b)	--	114.5	110.8	--	--	--	--	--	--	--	--
2021 May	--	110.1	109.8	--	--	--	--	--	--	--	--
Jun	--	112.5	110.2	--	--	--	--	--	--	--	--
Jul	--	114.5	110.8	--	--	--	--	--	--	--	--
Annual percent changes (c)											
2013	0.4	0.6	0.7	-10.6	-5.8	-15.7	0.2	0.0	0.6	0.3	0.5
2014	-0.2	-1.3	-0.8	0.3	-2.4	-4.6	-0.3	-0.1	-1.0	0.2	0.5
2015	0.5	-2.1	0.3	3.6	1.1	4.3	0.6	1.1	-0.7	0.6	0.7
2016	0.3	-3.1	-0.4	4.7	1.9	5.3	-0.4	-0.3	-0.8	-0.2	1.0
2017	1.3	4.4	2.3	6.2	2.4	0.8	0.2	0.1	0.5	0.0	1.4
2018	1.2	3.0	1.1	6.7	3.4	-1.6	1.0	1.0	1.0	1.5	1.8
2019	1.4	-0.4	0.1	5.1	3.2	0.7	2.2	1.9	3.4	2.6	2.3
2020	1.1	-4.3	0.0	2.1	-1.1	-9.4	-2.2	-2.6	-1.0	6.5	1.9
2021 (d)	1.2	9.4	5.1	2.1	0.7	-1.6	7.2	7.5	6.1	-1.3	1.5
2019 IV	1.6	-2.3	0.0	3.6	2.1	-0.2	2.3	1.8	4.0	2.7	2.3
2020 I	1.1	-2.7	0.4	3.2	0.3	2.8	0.8	0.7	1.0	4.2	2.0
II	1.1	-7.7	-0.7	2.1	-1.7	-15.1	-8.3	-9.4	-5.0	12.3	2.0
III	1.3	-3.9	-0.4	1.7	-1.1	-15.2	-1.1	-1.0	-1.6	4.3	1.9
IV	0.8	-2.8	0.5	1.5	-1.8	-9.7	-0.1	-0.7	1.6	5.4	1.9
2021 I	1.3	2.6	2.6	0.9	-0.9	-16.9	1.4	1.0	2.6	3.1	1.6
II	1.1	14.6	6.7	3.3	2.4	16.3	13.2	14.4	9.9	-5.2	1.6
III (e)	--	15.3	7.8	--	--	--	--	--	--	--	--
2021 Jun	--	15.4	7.5	--	--	--	--	--	--	--	1.6
Jul	--	15.3	7.9	--	--	--	--	--	--	--	1.6
Aug	--	--	--	--	--	--	--	--	--	--	1.5

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

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

Chart 13.1 - Housing and urban land prices

Index (2007=100)

Housing (INE)
Housing (M. of Public Works)
Urban Land (M. of Public Works)
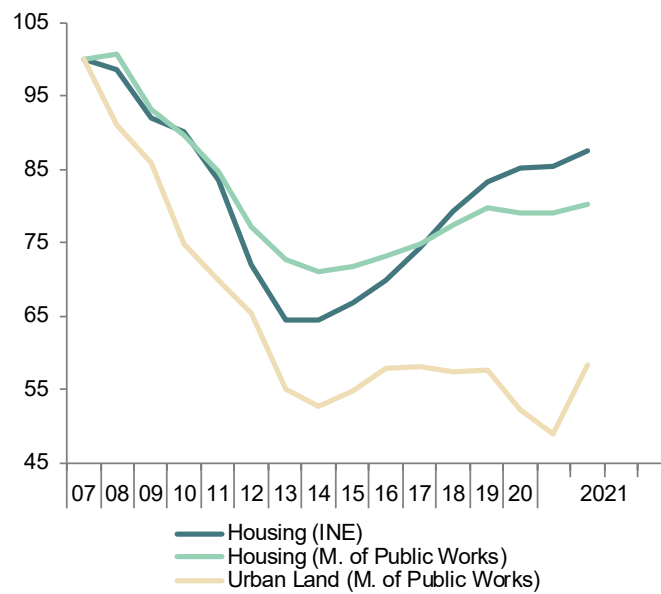
Chart 13.2 - Wage costs

Annual percent change

Total labour cost
Wage cost
Wage increases agreed in collective bargaining
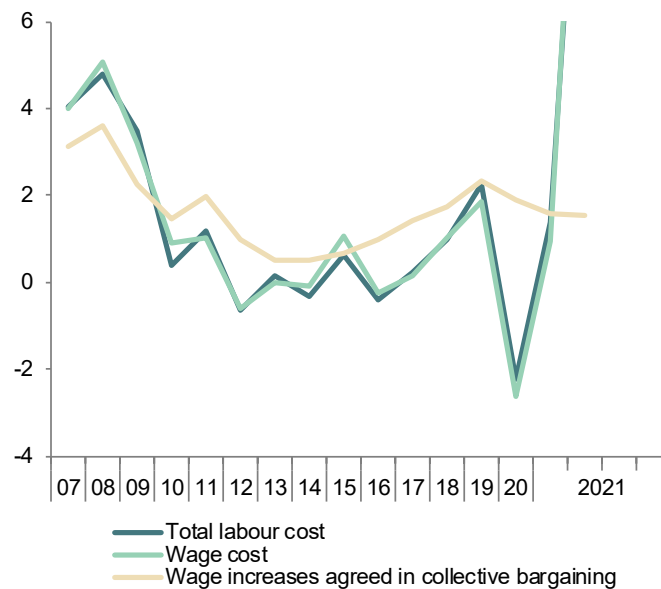
Table 14

External trade (a)

		Exports of goods			Imports of goods			Exports to EU countries (monthly average)	Exports to non-EU countries (monthly average)	Total Balance of goods (monthly average)	Balance of goods excluding energy (monthly average)	Balance of goods with EU countries (monthly average)
		Nominal	Prices	Real	Nominal	Prices	Real					
		2005=100			2005=100			EUR Billions				
2014		155.2	109.4	141.9	114.0	107.3	106.3	11.4	8.7	-2.1	1.1	0.4
2015		161.2	110.1	146.5	118.0	104.6	112.9	12.0	8.9	-2.1	0.2	0.2
2016		165.4	108.2	153.0	117.5	101.3	116.1	12.5	8.8	-1.4	0.3	0.4
2017		178.2	108.9	163.7	129.8	106.1	122.4	13.6	9.5	-2.2	0.0	0.6
2018		184.0	112.1	164.2	137.2	110.9	123.8	14.1	9.7	-2.9	-0.3	0.7
2019		187.7	112.9	166.3	138.4	110.8	125.0	14.3	9.9	-2.6	-0.3	0.8
2020		168.5	112.1	150.6	117.9	107.4	109.5	13.2	8.6	-1.1	0.3	1.3
2021(b)		199.1	118.2	168.5	138.9	114.1	121.7	15.8	9.8	-1.0	0.3	2.1
2019	II	196.1	111.7	175.5	142.2	110.4	128.9	14.8	10.4	-2.4	-0.2	1.0
	III	186.9	112.5	166.1	139.8	109.5	127.7	14.0	10.0	-3.1	-0.9	0.3
	IV	186.2	114.3	163.0	134.6	113.1	119.0	14.1	9.8	-2.1	0.1	0.9
2020	I	176.6	113.4	155.8	129.8	111.1	116.8	13.7	9.0	-2.4	-0.2	0.9
	II	140.7	111.6	126.1	96.0	104.7	91.6	10.9	7.1	-0.5	0.2	1.6
	III	176.1	110.5	159.4	119.9	105.5	113.7	13.8	8.8	-0.6	0.7	1.5
	IV	181.3	112.5	161.2	124.4	107.4	115.8	14.0	9.2	-0.8	0.4	1.2
2021	I	187.4	115.2	162.7	129.9	110.6	117.4	14.9	9.1	-1.1	0.7	1.8
	II	208.6	119.3	174.8	145.6	115.8	125.7	16.4	10.4	-1.4	0.5	1.8
2021	May	211.2	119.5	176.8	145.5	115.4	126.1	16.4	10.7	-1.0	1.1	2.1
	Jun	205.5	120.7	170.3	145.5	116.2	125.2	16.2	10.1	-1.8	0.1	1.9
	Jul	205.8	123.0	167.3	145.9	118.8	122.8	16.3	10.0	-1.8	0.5	2.2
Percentage changes (c)										Percentage of GDP		
2014		2.0	-0.9	3.0	5.2	-2.3	7.7	3.5	-0.4	-2.4	1.3	1.0
2015		3.8	0.6	3.2	3.5	-2.5	6.1	5.3	1.8	-2.3	0.2	0.2
2016		2.6	-1.7	4.4	-0.4	-3.1	2.8	4.7	-0.1	-1.6	0.3	0.4
2017		7.7	0.7	7.0	10.5	4.7	5.5	8.3	6.9	-2.3	0.0	0.7
2018		3.3	3.0	0.3	5.7	4.5	1.2	3.9	2.5	-2.9	-0.3	0.7
2019		2.0	0.7	1.3	0.9	-0.1	0.9	1.8	2.2	-2.5	-0.3	0.8
2020		-10.2	-0.7	-9.5	-14.8	-3.1	-12.4	-8.2	-13.1	-1.2	0.3	1.4
2021(d)		21.7	5.0	15.9	20.1	5.7	13.5	24.1	18.1	--	--	--
2019	II	6.4	-0.9	7.4	2.7	0.2	2.5	4.5	9.3	-9.1	-0.7	3.7
	III	-4.7	0.7	-5.3	-1.7	-0.8	-0.9	-5.6	-3.4	-11.8	-3.4	1.2
	IV	-0.3	1.6	-1.9	-3.7	3.4	-6.8	0.7	-1.8	-8.1	0.4	3.5
2020	I	-5.2	-0.8	-4.4	-3.6	-1.8	-1.8	-2.7	-8.7	-9.9	-0.7	3.7
	II	-20.3	-1.6	-19.1	-26.0	-5.7	-21.6	-19.9	-20.9	-2.5	1.2	8.0
	III	25.2	-1.0	26.4	24.9	0.7	24.0	26.0	23.9	-2.5	2.8	6.4
	IV	3.0	1.8	1.1	3.8	1.8	1.9	1.5	5.3	-3.3	1.6	5.1
2021	I	3.4	2.4	0.9	4.4	3.0	1.4	6.3	-1.1	-4.5	2.8	7.3
	II	11.3	3.6	7.5	12.1	4.7	7.0	10.1	13.3	-5.6	2.1	7.4
2021 May		1.0	1.2	-0.2	-0.2	-0.4	0.2	-0.6	3.5	--	--	--
Jun		-2.7	1.0	-3.7	0.0	0.6	-0.7	-0.9	-5.6	--	--	--
Jul		0.1	1.9	-1.8	0.3	2.3	-1.9	0.5	-0.4	--	--	--

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

Source: Ministry of Economy.

Chart 14.1 - External trade (real)

Annual percent change

Exports ——— Imports ———

Chart 14.2 - Trade balance

EUR Billions, moving sum of 12 months

Balance of energy goods
Balance of non-energy goods
Total balance of goods

Table 15

Balance of Payments (according to IMF manual)
(Net transactions)

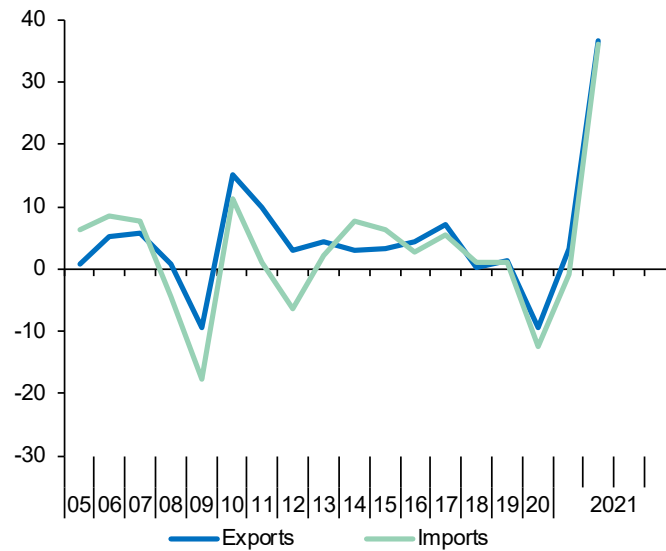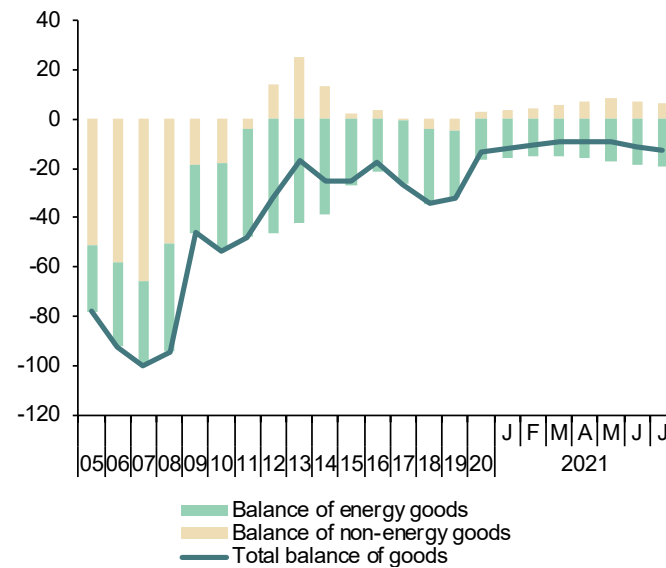|		Current account				Capital account	Current and capital accounts	Financial account					Bank of Spain	Errors and omissions
	Total	Goods	Services	Primary Income	Secondary Income			Financial account, excluding Bank of Spain						
								Total	Direct investment	Porfolio investment	Other investment	Financial derivatives		
	1=2+3+4+5	2	3	4	5	6	7=1+6	8=9+10+11+12	9	10	11	12	13	14
							EUR billions							
2014	17.54	-21.26	53.25	-3.79	-10.67	4.54	22.08	-10.00	10.68	-2.67	-19.03	1.01	27.14	-4.94
2015	21.83	-20.68	53.44	-0.24	-10.69	6.98	28.80	69.47	30.07	-5.16	40.75	3.81	-40.79	-0.12
2016	35.37	-14.28	58.70	2.75	-11.80	2.43	37.80	89.49	11.19	46.65	29.09	2.57	-54.02	-2.34
2017	32.21	-22.04	63.93	0.44	-10.13	2.84	35.05	68.01	12.46	25.08	22.74	7.72	-32.63	0.33
2018	23.22	-29.68	62.45	2.20	-11.74	5.81	29.03	47.49	-13.35	15.24	46.35	-0.75	-14.25	4.20
2019	26.57	-26.47	63.93	1.86	-12.74	4.21	30.78	10.05	9.97	-50.98	59.32	-8.26	14.82	-5.92
2020	7.71	-9.08	25.83	5.36	-14.39	5.03	12.74	98.35	15.66	54.21	32.79	-4.32	-81.47	4.14
2021 (a)	-2.06	-2.30	3.55	0.80	-4.10	0.85	-1.21	3.15	-3.27	3.69	1.05	1.69	-3.00	1.36
2019 II	10.98	-3.94	18.43	-1.25	-2.27	0.84	11.82	45.79	6.18	11.05	26.37	2.19	-35.09	-1.12
III	8.66	-9.23	21.65	-0.29	-3.47	0.54	9.20	18.82	-3.73	11.84	9.34	1.37	-7.02	2.60
IV	8.30	-5.29	13.48	2.69	-2.58	2.08	10.37	17.67	2.21	4.03	11.45	-0.02	-4.49	2.81
2020 I	-0.46	-6.09	8.88	0.86	-4.12	1.03	0.57	46.43	-2.76	31.55	15.79	1.86	-43.40	2.46
II	1.65	0.51	3.83	-0.07	-2.61	0.78	2.43	1.76	5.14	-3.72	-3.26	3.60	5.62	4.95
III	2.00	-2.69	7.66	-0.04	-2.93	0.94	2.94	13.58	7.95	4.64	-0.98	1.98	-0.54	10.11
IV	4.52	-0.82	5.46	4.61	-4.74	2.28	6.80	6.23	2.14	-7.38	11.19	0.28	5.70	5.14
2021 I	-2.06	-2.30	3.55	0.80	-4.10	0.85	-1.21	3.15	-3.27	3.69	1.05	1.69	-3.00	1.36
		Goods and Services		Primary and Secondary Income										
Apr	0.40	0.98		-0.58		0.65	1.05	9.39	0.27	-0.87	9.66	0.33	-8.26	0.08
May	0.90	1.64		-0.74		0.50	1.40	6.65	2.79	4.78	-1.86	0.95	-0.74	4.52
Jun	0.28	1.56		-1.28		0.52	0.80	0.50	-2.36	-16.95	19.41	0.39	1.65	1.34
							Percentage of GDP							
2014	1.7	-2.1	5.2	-0.4	-1.0	0.4	2.1	-1.0	1.0	-0.3	-1.8	0.1	2.6	-0.5
2015	2.0	-1.9	5.0	0.0	-1.0	0.6	2.7	6.4	2.8	-0.5	3.8	0.4	-3.8	0.0
2016	3.2	-1.3	5.3	0.2	-1.1	0.2	3.4	8.0	1.0	4.2	2.6	0.2	-4.9	-0.2
2017	2.8	-1.9	5.5	0.0	-0.9	0.2	3.0	5.9	1.1	2.2	2.0	0.7	-2.8	0.0
2018	1.9	-2.5	5.2	0.2	-1.0	0.5	2.4	3.9	-1.1	1.3	3.8	-0.1	-1.2	0.3
2019	2.1	-2.1	5.1	0.1	-1.0	0.3	2.5	0.8	0.8	-4.1	4.8	-0.7	1.2	-0.5
2020	0.7	-0.8	2.3	0.5	-1.3	0.4	1.1	8.8	1.4	4.8	2.9	-0.4	-7.3	0.4
2021 (a)	-0.7	-0.8	1.3	0.3	-1.5	0.3	-0.4	1.1	-1.2	1.3	0.4	0.6	-1.1	0.5
2019 II	3.5	-1.2	5.8	-0.4	-0.7	0.3	3.7	14.5	2.0	3.5	8.4	0.7	-11.1	-0.4
III	2.8	-3.0	7.1	-0.1	-1.1	0.2	3.0	6.2	-1.2	3.9	3.1	0.4	-2.3	0.8
IV	2.6	-1.6	4.1	0.8	-0.8	0.6	3.2	5.4	0.7	1.2	3.5	0.0	-1.4	0.9
2020 I	-0.2	-2.1	3.1	0.3	-1.4	0.4	0.2	16.0	-1.0	10.9	5.4	0.6	-15.0	0.8
II	0.7	0.2	1.5	0.0	-1.0	0.3	1.0	0.7	2.0	-1.5	-1.3	1.4	2.2	2.0
III	0.7	-1.0	2.7	0.0	-1.0	0.3	1.0	4.8	2.8	1.6	-0.3	0.7	-0.2	3.6
IV	1.5	-0.3	1.8	1.5	-1.6	0.8	2.3	2.1	0.7	-2.5	3.7	0.1	1.9	1.7
2021 I	-0.7	-0.8	1.3	0.3	-1.5	0.3	-0.4	1.1	-1.2	1.3	0.4	0.6	-1.1	0.5

(a) Period with available data.
Source: Bank of Spain.

Chart 15.1 - Balance of payments: Current and capital accounts

EUR Billions, 12-month cumulated

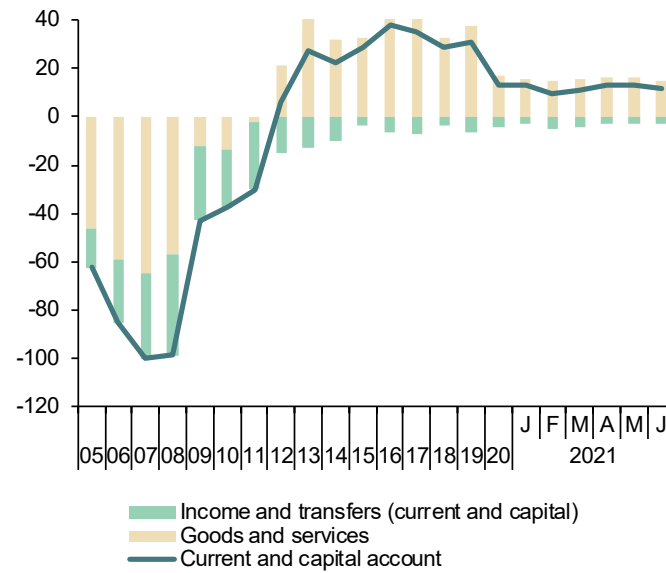Income and transfers (current and capital)
Goods and services
Current and capital account

Chart 15.2 - Balance of payments: Financial account

EUR Billions, 12-month cumulated

Bank of Spain   Direct investment
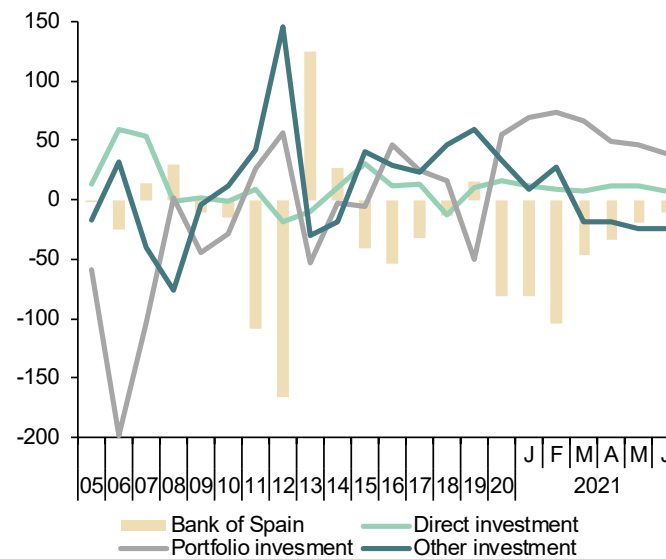Portfolio invesment   Other investment

Table 16

Competitiveness indicators in relation to EMU

		Relative Unit Labour Costs in manufacturing (Spain/Rest of EMU) (a)			Harmonized Consumer Prices			Producer prices			Real Effective Exchange Rate in relation to developed countries
		Relative hourly wages	Relative hourly productivity	Relative ULC	Spain	EMU	Spain/EMU	Spain	EMU	Spain/EMU	
		1998=100			2015=100			2015=100			1999 1=100
2014		102.2	99.8	102.5	100.6	100.0	100.7	102.1	102.8	99.3	112.2
2015		99.4	100.0	99.3	100.0	100.0	100.0	100.0	100.0	100.0	107.8
2016		98.1	96.8	101.3	99.7	100.3	99.4	96.9	97.9	98.9	108.0
2017		97.7	96.5	101.3	101.7	101.8	99.9	101.2	100.7	100.5	109.7
2018		97.0	94.9	102.3	103.5	103.6	99.9	103.8	103.3	100.4	110.5
2019		96.6	95.9	100.7	104.3	104.8	99.5	103.4	103.7	99.8	109.1
2020		94.6	96.8	97.7	103.9	105.1	98.9	99.8	101.2	98.6	108.5
2021 (b)		--	--	--	105.7	106.9	98.9	107.7	106.3	101.3	108.7
2019	III	--	--	--	104.0	105.1	99.0	103.1	103.4	99.7	108.6
	IV	--	--	--	105.0	105.3	99.6	102.8	103.4	99.5	108.9
2020	I	--	--	--	103.6	104.7	98.9	101.6	102.8	98.8	107.8
	II	--	--	--	104.5	105.5	99.1	97.3	99.9	97.4	108.6
	III	--	--	--	103.4	105.1	98.4	99.7	100.6	99.2	108.2
	IV	--	--	--	104.1	105.0	99.1	100.4	101.4	99.0	109.3
2021	I	--	--	--	104.1	105.8	98.4	104.1	104.1	100.1	108.2
	II	--	--	--	106.9	107.4	99.5	109.5	107.2	102.2	109.5
2021	Jun	--	--	--	107.5	107.7	99.8	111.3	108.4	102.7	109.7
	Jul	--	--	--	106.2	107.6	98.7	113.3	110.5	102.5	108.0
	Aug	--	--	--	106.7	108.0	98.8	--	--	--	--
		Annual percentage changes					Differential	Annual percentage changes		Differential	Annual percentage changes
2014		-1.7	0.2	-1.9	-0.2	0.4	-0.6	-1.3	-1.5	0.2	-1.1
2015		-2.8	0.3	-3.1	-0.6	0.0	-0.6	-2.0	-2.8	0.8	-3.9
2016		-1.3	-3.2	2.0	-0.3	0.3	-0.6	-3.1	-2.1	-1.0	0.2
2017		-0.4	-0.3	0.0	2.0	1.5	0.5	4.5	2.8	1.7	1.5
2018		-0.7	-1.7	1.0	1.7	1.7	0.0	2.5	2.6	-0.1	0.8
2019		-0.5	1.1	-1.6	0.8	1.2	-0.4	-0.3	0.3	-0.6	-1.3
2020		-2.0	0.9	-3.0	-0.3	0.3	-0.6	-3.3	-2.5	-0.8	0.6
2021 (c)		--	--	--	1.8	1.7	0.1	7.9	4.8	3.1	0.6
2019	II	--	--	--	1.1	1.4	-0.3	0.8	1.1	-0.3	-1.2
	III	--	--	--	0.4	1.0	-0.6	-1.8	-0.6	-1.2	-1.3
	IV	--	--	--	0.5	1.0	-0.5	-1.8	-0.9	-0.9	-1.4
2020	I	--	--	--	0.7	1.1	-0.4	-2.1	-1.2	-0.9	-1.1
	II	--	--	--	-0.6	0.2	-0.8	-6.5	-3.8	-2.7	-1.1
	III	--	--	--	-0.6	0.0	-0.6	-3.3	-2.8	-0.5	-0.3
	IV	--	--	--	-0.8	-0.3	-0.5	-2.3	-2.0	-0.3	0.4
2021	I	--	--	--	0.5	1.1	-0.6	2.5	1.2	1.3	0.4
	II	--	--	--	2.3	1.8	0.5	12.5	7.3	5.2	0.9
2021	Jun	--	--	--	2.5	1.9	0.6	13.3	8.3	5.0	0.6
	Jul	--	--	--	2.9	2.2	0.7	13.8	10.0	3.8	0.4
	Aug	--	--	--	3.3	3.0	0.3	--	--	--	--

(a) EMU excluding Ireland and Spain. (b) Period with available data. (c) Growth of available period over the same period of the previous year.
Sources: Eurostat, Bank of Spain and Funcas.

Chart 16.1 - Relative Unit Labour Costs in manufacturing (Spain/Rest of EMU)
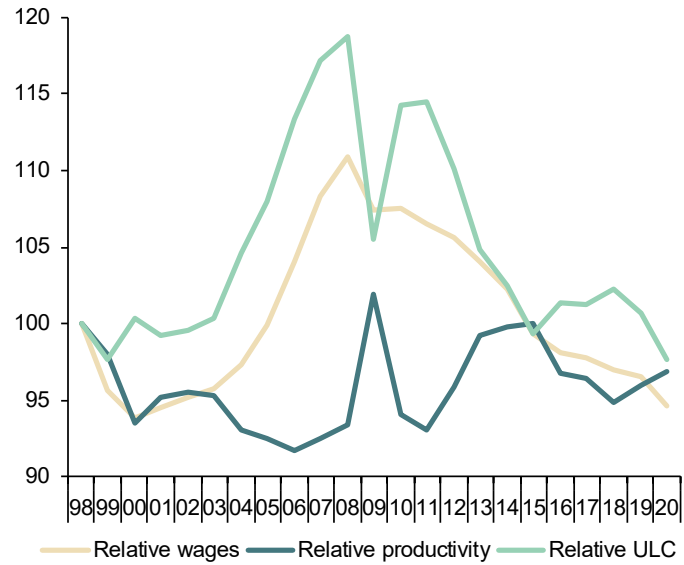
1998=100

Relative wages — Relative productivity — Relative ULC

Chart 16.2 - Harmonized Consumer Prices

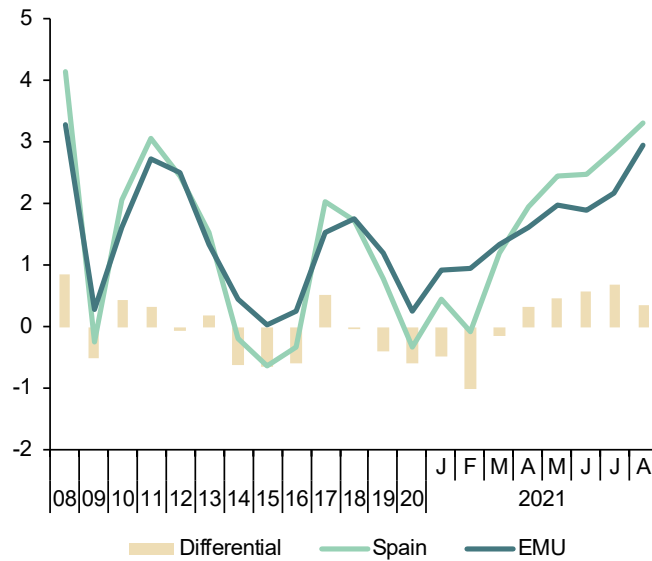Annual growth in % and percentage points

Differential — Spain — EMU

Table 17a

Imbalances: International comparison (I)

(In yellow: European Commission Forecasts)

	Government net lending (+) or borrowing (-)			Government consolidated gross debt			Current Account Balance of Payments (National Accounts)		
	Spain	EMU	USA	Spain	EMU	USA	Spain	EMU	USA
	Billions of national currency								
2008	-50.7	-208.1	-1,084.5	440.6	6,700.8	10,844.6	-98.8	-49.8	-677.1
2009	-120.6	-578.4	-1,896.6	569.5	7,440.5	12,535.2	-43.7	63.4	-368.7
2010	-102.2	-598.4	-1,863.1	649.2	8,199.1	14,316.3	-39.2	61.4	-431.3
2011	-103.6	-415.0	-1,709.1	743.0	8,658.8	15,518.1	-29.0	89.5	-461.7
2012	-110.7	-365.9	-1,493.3	889.9	9,114.9	16,740.3	0.9	226.7	-441.3
2013	-71.8	-300.1	-977.3	977.3	9,429.4	17,597.5	20.8	282.2	-360.4
2014	-61.1	-250.8	-910.4	1,039.4	9,674.6	18,328.2	17.5	316.7	-365.6
2015	-55.8	-208.5	-837.2	1,070.1	9,792.7	19,089.9	21.8	359.8	-423.7
2016	-48.0	-159.5	-1,003.6	1,104.6	9,973.5	19,986.4	35.4	389.5	-407.4
2017	-35.1	-103.9	-839.2	1,145.1	10,066.3	20,642.2	32.2	408.9	-391.5
2018	-29.9	-53.2	-1,282.7	1,173.4	10,167.6	21,972.3	23.2	399.7	-467.8
2019	-35.6	-75.4	-1,419.1	1,188.8	10,255.0	23,188.6	26.4	365.1	-502.8
2020	-123.1	-820.4	-3,365.4	1,345.6	11,334.6	26,673.0	7.4	342.1	-613.4
2021	-91.1	-951.1	-3,634.5	1,434.1	12,242.3	30,851.3	-0.7	367.3	-774.1
2022	-67.4	-483.4	-1,645.8	1,512.5	12,755.8	32,218.7	3.6	387.7	-818.1
	Percentage of GDP								
2008	-4.6	-2.2	-7.4	39.7	69.6	73.7	-8.9	-0.5	-4.6
2009	-11.3	-6.2	-13.1	53.3	80.2	86.8	-4.1	0.7	-2.6
2010	-9.5	-6.3	-12.4	60.5	86.0	95.5	-3.7	0.6	-2.9
2011	-9.7	-4.2	-11.0	69.9	88.4	99.8	-2.7	0.9	-3.0
2012	-10.7	-3.7	-9.2	86.3	92.7	103.4	0.1	2.3	-2.7
2013	-7.0	-3.0	-5.8	95.8	94.9	104.8	2.0	2.8	-2.1
2014	-5.9	-2.5	-5.2	100.7	95.2	104.6	1.7	3.1	-2.1
2015	-5.2	-2.0	-4.6	99.3	93.1	104.7	2.0	3.4	-2.3
2016	-4.3	-1.5	-5.4	99.2	92.2	106.6	3.2	3.6	-2.2
2017	-3.0	-0.9	-4.3	98.6	89.7	105.6	2.8	3.6	-2.0
2018	-2.5	-0.5	-6.2	97.4	87.7	106.6	1.9	3.4	-2.3
2019	-2.9	-0.6	-6.6	95.5	85.8	108.2	2.1	3.1	-2.3
2020	-11.0	-7.2	-16.1	120.0	100.0	127.4	0.7	3.0	-2.9
2021	-7.6	-8.0	-16.0	119.6	102.4	135.6	-0.1	3.1	-3.4
2022	-5.2	-3.8	-6.8	116.9	100.7	133.7	0.3	3.1	-3.4

Source: European Commission Forecasts, Spring 2021.

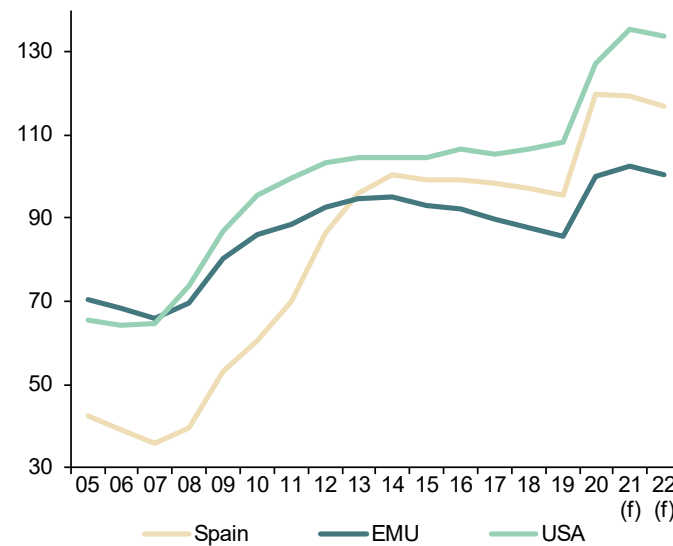**Chart 17a.1 - Government deficit**

Percentage of GDP

(f) European Commission forecast.

Chart 17a.2 - Government gross debt

Percentage of GDP

(f) European Commission forecast.

Table 17b

Imbalances: International comparison (II)

	Household debt (a)			Non-financial corporations debt (a)		
	Spain	EMU	USA	Spain	EMU	USA
	Billions of national currency					
2005	656.2	4,769.8	12,031.8	954.1	7,018.0	8,151.5
2006	783.5	5,192.2	13,317.1	1,171.9	7,620.4	8,971.7
2007	879.3	5,561.1	14,240.3	1,371.6	8,401.5	10,104.4
2008	916.7	5,774.6	14,109.4	1,460.0	9,061.5	10,678.6
2009	908.9	5,881.9	13,950.0	1,473.5	9,149.0	10,161.4
2010	905.2	6,023.2	13,762.4	1,498.0	9,324.1	10,027.1
2011	877.9	6,106.4	13,633.6	1,458.3	9,695.2	10,271.6
2012	840.9	6,099.7	13,567.9	1,339.2	9,871.9	10,814.1
2013	793.6	6,060.8	13,790.8	1,267.9	9,873.2	11,327.3
2014	757.8	6,068.5	13,912.2	1,207.7	10,329.5	12,095.6
2015	733.3	6,132.0	14,079.6	1,183.7	10,885.9	12,904.4
2016	718.5	6,236.7	14,492.3	1,166.5	11,255.9	13,556.6
2017	711.0	6,398.7	15,031.5	1,153.2	11,462.1	14,513.3
2018	709.6	6,586.6	15,505.6	1,145.6	11,811.7	15,464.4
2019	708.6	6,811.9	16,011.1	1,156.7	12,089.1	16,211.9
2020	701.3	--	16,638.2	1,209.4	--	17,705.9
	Percentage of GDP					
	Percentage of GDP					
2005	70.8	56.5	92.3	102.9	83.1	62.5
2006	78.0	58.4	96.4	116.7	85.7	64.9
2007	81.8	59.2	98.5	127.5	89.5	69.9
2008	82.6	60.0	95.9	131.6	94.2	72.6
2009	85.0	63.4	96.5	137.8	98.7	70.3
2010	84.4	63.2	91.8	139.6	97.8	66.9
2011	82.5	62.3	87.7	137.1	99.0	66.1
2012	81.6	62.0	83.8	129.9	100.4	66.8
2013	77.8	61.0	82.2	124.3	99.4	67.5
2014	73.4	59.7	79.4	117.0	101.6	69.0
2015	68.0	58.3	77.2	109.8	103.5	70.8
2016	64.5	57.7	77.3	104.7	104.1	72.3
2017	61.2	57.0	76.9	99.2	102.2	74.3
2018	58.9	56.8	75.2	95.1	101.9	75.0
2019	56.9	57.1	74.7	92.9	101.3	75.6
2020	62.5	--	79.5	107.8	--	84.6

(a) Loans and debt securities.

Sources: Eurostat and Federal Reserve.

Chart 17b.1 - Household debt

Percentage of GDP

Spain EMU USA

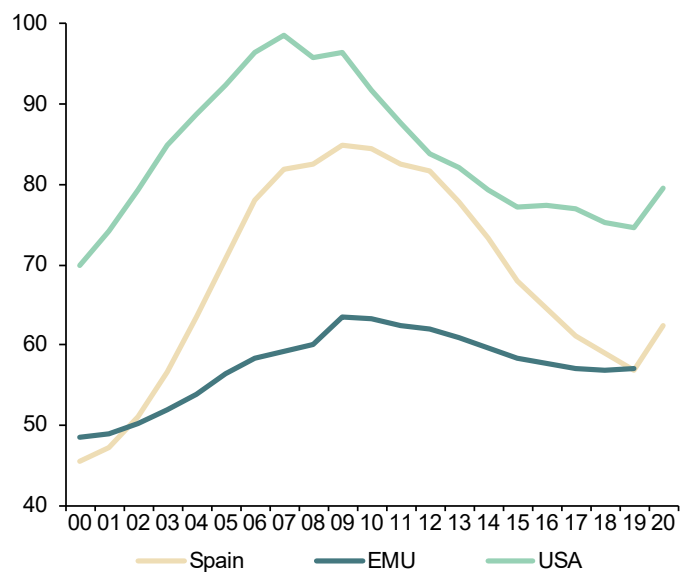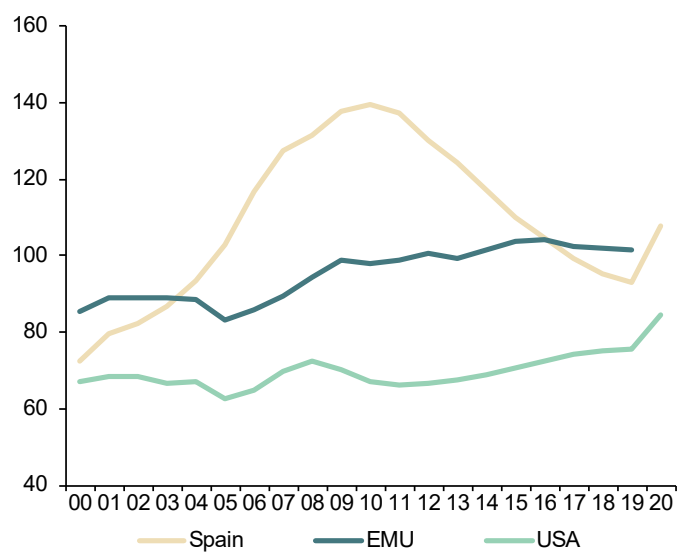**Chart 17b.2 - Non-financial corporations debt**

Percentage of GDP

Spain EMU USA

50 Financial System Indicators

Updated: September 15th, 2021

<table>
<tr><th colspan="3">Highlights</th></tr>
<tr><th>Indicator</th><th>Last value available</th><th>Corresponding to:</th></tr>
<tr><td>Bank lending to other resident sectors (monthly average % var.)</td><td>1.6</td><td>June 2021</td></tr>
<tr><td>Other resident sectors' deposits in credit institutions (monthly average % var.)</td><td>2.3</td><td>June 2021</td></tr>
<tr><td>Doubtful loans (monthly % var.)</td><td>-1.8</td><td>June 2021</td></tr>
<tr><td>Recourse to the Eurosystem L/T (Eurozone financial institutions, million euros)</td><td>2,213,741</td><td>August 2021</td></tr>
<tr><td>Recourse to the Eurosystem L/T (Spanish financial institutions, million euros)</td><td>290,442</td><td>August 2021</td></tr>
<tr><td>Recourse to the Eurosystem (Spanish financial institutions million euros) - Main refinancing operations</td><td>34</td><td>August 2021</td></tr>
<tr><td>"Operating expenses/gross operating income" ratio (%)</td><td>53.94</td><td>March 2021</td></tr>
<tr><td>"Customer deposits/employees" ratio (thousand euros)</td><td>11,353.55</td><td>March 2021</td></tr>
<tr><td>"Customer deposits/branches" ratio (thousand euros)</td><td>94,303.53</td><td>March 2021</td></tr>
<tr><td>"Branches/institutions" ratio</td><td>113.15</td><td>March 2021</td></tr>
</table>

A. Money and Interest Rates

Indicator	Source	Average 2001-2018	2019	2020	2021 August	2021 September 15	Definition and calculation
1. Monetary Supply (% chg.)	ECB	5.1	5.0	12.3	-	-	M3 aggregate change (non-stationary)
2. Three-month interbank interest rate	Bank of Spain	1.5	-0.383	-0.545	-0.550	-0.548	Daily data average
3. One-year Euribor interest rate (from 1994)	Bank of Spain	1.9	-0.249	-0.499	-0.501	-0.489	End-of-month data
4. Ten-year Treasury bonds interest rate (from 1998)	Bank of Spain	3.6	0.6	0.03	0.2	0.3	Market interest rate (not exclusively between account holders)
5. Corporate bonds average interest rate	Bank of Spain	3.9	-	-	-	-	End-of-month straight bonds average interest rate (> 2 years) in the AIAF market

Comment on "Money and Interest Rates": The ECB has announced that monetary policy will continue to be expansionary, but it has also slowed down the path of the Pandemic bond-buying program. Relatedly, the Fed is expected to start tapering this year. Interbank rates slightly increased in the first half of September. The 1-year interbank rate went from -0.501% in August to -0.489% by September 15th, and the 3-month Euribor increased from -0.550% to -0.548% over the same period. As for the Spanish 10-year bond yield, it increased to 0.3%.

B. Financial Markets

Indicator	Source	Average 2001-2018	2019	2020	2021 June	2021 July	Definition and calculation
6. Outright spot treasury bills transactions trade ratio	Bank of Spain	22.1	288.7	28.8	24.26	30.47	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
7. Outright spot government bonds transactions trade ratio	Bank of Spain	19.8	87.2	18.5	14.66	13.48	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
8. Outright forward treasury bills transactions trade ratio	Bank of Spain	0.5	0.01	0.34	0.04	0.04	(Traded amount/outstanding balance) x100 in the market (not exclusively between account holders)
9. Outright forward government bonds transactions trade ratio	Bank of Spain	0.6	1.2	0.63	0.48	0.30	(Traded amount/outstanding balance) in the market (not exclusively between account holders)
10. Three-month maturity treasury bills interest rate	Bank of Spain	0.5	-0.54	-0.54	-0.62	-0.60	Outright transactions in the market (not exclusively between account holders)
11. Government bonds yield index (Dec1987=100)	Bank of Spain	727.5	1.311.87	1.289.02	-	-	Outright transactions in the market (not exclusively between account holders)
12. Madrid Stock Exchange Capitalization (monthly average % chg.)	Bank of Spain and Madrid Stock Exchange	0.1	1.2	-0.6	2.79	-0.74	Change in the total number of resident companies
13. Stock market trading volume. Stock trading volume (monthly average % var.)	Bank of Spain and Madrid Stock Exchange	2.6	-7.4	10.7	9.59	-26.17	Stock market trading volume. Stock trading volume: change in total trading volume
14. Madrid Stock Exchange general index (Dec 1985=100)	Bank of Spain and Madrid Stock Exchange	1,007.1	881.6	718.9	874.6	852.20 (a)	Base 1985=100
15. Ibex-35 (Dec 1989=3000)	Bank of Spain and Madrid Stock Exchange	9,703.6	8,812.9	7,347.3	8,821.2	8,635.40 (a)	Base dec1989=3000
16. Madrid Stock Exchange PER ratio (share value/profitability)	Bank of Spain and Madrid Stock Exchange	15.6	13.2	15.1	20.1	6.5 (a)	Madrid Stock Exchange Ratio "share value/ capital profitability"
17. Long-term bonds. Stock trading volume (% chg.)	Bank of Spain and Madrid Stock Exchange	-	-	-	-	-	Variation for all stocks

B. Financial Markets (continued)

Indicator	Source	Average 2001-2018	2019	2020	2021 June	2021 July	Definition and calculation
18. Commercial paper. Trading balance (% chg.)	Bank of Spain and AIAF	-	-	-	-	-	AIAF fixed-income market
19. Commercial paper. Three-month interest rate	Bank of Spain and AIAF	-	-	-	-	-	AIAF fixed-income market
20. IBEX-35 financial futures concluded transactions (% chg.)	Bank of Spain	0.9	-14.4	5.1	5.2	7.2	IBEX-35 shares concluded transactions
21. IBEX-35 financial options concluded transactions (%chg.)	Bank of Spain	12.9	30	35.4	16.6	-35.7	IBEX-35 shares concluded transactions

(a) Last data published: September 15th, 2021.

Comment on "Financial Markets": The stock market followed a decreasing trend in the first half of September, mostly related to tensions in the energy sector. The IBEX-35 fell to 8,635 points, and the General Index of the Madrid Stock Exchange to 852. During July (last month available), there was an increase in transactions of outright spot T-bills to 30.47 and a fall of spot government bonds transactions to 13.48. There was an increase in Ibex-35 futures of 7.2% while options fell by 35.7%.

C. Financial Saving and Debt

Indicator	Source	Average 2008-2017	2018	2019	2020 Q4	2021 Q1	Definition and calculation
22. Net Financial Savings/GDP (National Economy)	Bank of Spain	-1.8	2.4	2.5	1.1	0.9	Difference between financial assets and financial liabilities flows over GDP
23. Net Financial Savings/GDP (Households and non-profit institutions)	Bank of Spain	1.9	0.1	2.2	7.3	8.0	Difference between financial assets and financial liabilities flows over GDP
24. Debt in securities (other than shares) and loans/GDP (National Economy)	Bank of Spain	269.1	280.7	282.0	335.3	340.2	Public debt. non-financial companies debt and households and non-profit institutions debt over GDP
25. Debt in securities (other than shares) and loans/GDP (Households and non-profit institutions)	Bank of Spain	64.2	58.9	56.9	62.5	62.8	Households and non-profit institutions debt over GDP
26. Households and non-profit institutions balance: financial assets (quarterly average % chg.)	Bank of Spain	0.8	-1.6	5.9	1.8	1.8	Total assets percentage change (financial balance)
27. Households and non-profit institutions balance: financial liabilities (quarterly average % chg.)	Bank of Spain	-1.4	0.1	0.3	0.3	-0.6	Total liabilities percentage change (financial balance)

Comment on "Financial Savings and Debt": During 2021Q1, the financial savings to GDP in the overall economy increased by 0.9% of GDP. There was an increase in the financial savings rate of households of 8%. The debt to GDP ratio of the economy reached 340.2%. Finally, there was an increase in the stock of financial assets on households' balance sheets of 1.8% and a 0.6% fall in the stock of financial liabilities.

D. Credit institutions. Business Development

Indicator	Source	Average 2001-2017	2018	2019	2021 May	2021 June	Definition and calculation
28. Bank lending to other resident sectors (monthly average % var.)	Bank of Spain	6.1	-4.7	0.2	-0.1	1.6	Lending to the private sector percentage change for the sum of banks, savings banks and credit unions.
29. Other resident sectors' deposits in credit institutions (monthly average % var.)	Bank of Spain	7.0	0.7	0.3	0.9	2.3	Deposits percentage change for the sum of banks, savings banks and credit unions.
30. Debt securities (monthly average % var.)	Bank of Spain	9.95	-0.9	-0.3	0.05	1.9	Asset-side debt securities percentage change for the sum of banks, savings banks and credit unions.
31. Shares and equity (monthly average % var.)	Bank of Spain	9.3	-8.8	0.5	0.1	-2.8	Asset-side equity and shares percentage change for the sum of banks, savings banks and credit unions.
32. Credit institutions. Net position (difference between assets from credit institutions and liabilities with credit institutions) (% of total assets)	Bank of Spain	-2.2	-0.6	-1.6	-0.1	0.2	Difference between the asset-side and liability-side "Credit System" item as a proxy of the net position in the interbank market (month-end).
33. Doubtful loans (monthly average % var.)	Bank of Spain	-0.3	-2.3	-1.7	0.2	-1.8	Doubtful loans. Percentage change for the sum of banks, savings banks and credit unions.
34. Assets sold under repurchase (monthly average % var.)	Bank of Spain	2.6	-1.4	-1.1	5.8	18.1	Liability-side assets sold under repurchase. Percentage change for the sum of banks, savings banks and credit unions.
35. Equity capital (monthly average % var.)	Bank of Spain	7.8	-4.1	0.3	0.1	-0.7	Equity percentage change for the sum of banks, savings banks and credit unions.

Comment on "Credit institutions. Business Development": The latest available data as of June show an increase in bank credit to the private sector of 1.6%. Data also show an increase financial institutions' deposit-taking of 2.3%. Holdings of debt securities grew 1.9%. Doubtful loans fell by 1.8% compared to the previous month.

E. Credit institutions. Market Structure and Eurosystem Refinancing

Indicator	Source	Average 2000-2017	2018	2019	2020 December	2021 March	Definition and calculation
36. Number of Spanish credit institutions	Bank of Spain	194	124	122	113	112	Total number of banks, savings banks and credit unions operating in Spanish territory
37. Number of foreign credit institutions operating in Spain	Bank of Spain	75	82	83	78	79	Total number of foreign credit institutions operating in Spanish territory
38. Number of employees	Bank of Spain	246,618	189,280	187,472	175,185	175,185 (a)	Total number of employees in the banking sector
39. Number of branches	Bank of Spain	40,047	28,643	27,320	22,589	21,612	Total number of branches in the banking sector
40. Recourse to the Eurosystem: long term (total Eurozone financial institutions) (Euro millions)	Bank of Spain	318,141	527,317	762,540	1,774,798	2,213,741 (b)	Open market operations and ECB standing facilities. Eurozone total
41. Recourse to the Eurosystem: long term (total Spanish financial institutions) (Euro millions)	Bank of Spain	65,106	138,455	170,445	260,971	290,442 (b)	Open market operations and ECB standing facilities. Spain total
42. Recourse to the Eurosystem (total Spanish financial institutions): main refinancing operations (Euro millions)	Bank of Spain	20,270	1,408	96	3	34 (b)	Open market operations: main long term refinancing operations. Spain total

(a) Last data published: December 2020.

(b) Last data published: August 2021.

Comment on "Credit institutions. Market Structure and Eurosystem Refinancing": In August 2021, recourse to Eurosystem funding by Spanish credit institutions reached 290.4 billion euros.

MEMO ITEM: From January 2015 the ECB also offers information on the asset purchase programs. The amount borrowed by Spanish banks in these programs reached 551 billion euros in August 2021 and 4.3 trillion euros for the entire Eurozone banking system.

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

Indicator	Source	Average 2000-2017	2018	2019	2020 Q4	2021 Q1	Definition and calculation
43. "Operating expenses/gross operating income" ratio	Bank of Spain	48.8	54.39	53.30	45.15	53.94	Operational efficiency indicator. Numerator and denominator are obtained directly from credit institutions´ P&L accounts
44. "Customer deposits/ employees" ratio (Euro thousands)	Bank of Spain	3,911.03	9,461.19	9,574.38	11,013.27	11,353.55	Productivity indicator (business by employee)
45. "Customer deposits/ branches" ratio (Euro thousands)	Bank of Spain	24,735.07	68,190.72	74,450.04	89,305.57	94,303.53	Productivity indicator (business by branch)

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

Indicator	Source	Average 2000-2017	2018	2019	2020 Q4	2021 Q1	Definition and calculation
46. "Branches/institutions" ratio	Bank of Spain	198.71	131.36	123.09	117.23	113.15	Network expansion indicator
47. "Employees/branches" ratio	Bank of Spain	6.19	7.2	7.7	8.1	7.7	Branch size indicator
48. "Equity capital" (monthly average % var.)	Bank of Spain	0.09	-0.79	0.25	1.29	-2.3	Credit institutions equity capital variation indicator
49. ROA	Bank of Spain	0.43	0.57	0.59	0.07	0.3	Profitability indicator, defined as the "pre-tax profit/average total assets"
50. ROE	Bank of Spain	5.88	4.25	6.96	0.95	3.6	Profitability indicator, defined as the "pre-tax profit/equity capital"

Comment on "Credit institutions. Efficiency and Productivity, Risk and Profitability": During 2021Q1, there was a relative increase in the profitability of Spanish banks after the worst effects of COVID-19.

Social Indicators

Population

	Total population	Average age	65 and older (%)	Life expectancy at birth (men)	Life expectancy at birth (women)	Dependency rate	Dependency rate (older than 64)	Foreign-born population (%)	New entries (foreign-born)	New exits (born in Spain)
2008	46,157,822	40.8	16.5	78.2	84.3	47.5	24.5	13.1	701,997	33,053
2010	47,021,031	41.1	16.9	79.1	85.1	48.6	25.0	14.0	441,051	39,211
2012	47,265,321	41.6	17.4	79.4	85.1	50.4	26.1	14.3	344,992	51,666
2014	46,771,341	42.1	18.1	80.1	85.7	51.6	27.4	13.4	368,170	66,803
2015	46,624,382	42.4	18.4	79.9	85.4	52.4	28.0	13.2	417,655	74,873
2016	46,557,008	42.7	18.6	80.3	85.8	52.9	28.4	13.2	492,600	71,508
2017	46,572,132	42.9	18.8	80.4	85.7	53.2	28.8	13.3	592,604	63,754
2018	46,722,980	43.1	19.1	80.5	85.9	53.6	29.3	13.7	715,255	56,745
2019	47,026,208	43.3	19.3	80.9	86.2	53.7	29.6	14.4	827,052	61,338
2020	47,450,795	43.6	19.4			53.5	29.8	15.2		
2021●	47,344,649	43.8	19.7			53.4	30.2	15.4		
Sources	EPC	EPC	EPC	ID INE	ID INE	EPC	EPC	EPC	EVR	EVR

ID INE: Indicadores Demográficos INE.

EPC: Estadística del Padrón Continuo.

EVR: Estadística de Variaciones Residenciales.

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

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

● Provisional data.

Households and families

	Households				Nuptiality					
	Households (thousands)	Average household size	Households with one person younger than 65 (%)	Households with one person older than 65 (%)	Marriage rate (Spanish)	Marriage rate (foreign population)	Divorce rate	Mean age at first marriage, men	Mean age at first marriage, women	Same sex marriages (%)
2008	16,742	2.71	12.0	10.2	8.5	8.4	2.39	32.4	30.2	1.62
2010	17,174	2.67	12.8	9.9	7.2	7.9	2.21	33.2	31.0	1.87
2012	17,434	2.63	13.7	9.9	7.2	6.7	2.23	33.8	31.7	2.04
2014	18,329	2.51	14.2	10.6	6.9	6.5	2.17	34.4	32.3	2.06
2015	18,376	2.54	14.6	10.7	7.3	6.5	2.08	34.8	32.7	2.26
2016	18,444	2.52	14.6	10.9	7.5	6.8	2.08	35.0	32.9	2.46
2017	18,512	2.52	14.2	11.4	7.4	7.0	2.11	35.3	33.2	2.67
2018	18,581	2.51	14.3	11.5	7.1	6.6	2.04	35.6	33.4	2.90
2019	18,697	2.52	14.9	11.2	7.1	6.7	1.95	36.0	33.9	3.90●
2020	18,794	2.52	15.0	11.4	3.8	4.1				
2021■	18,880	2.51								
Sources	LFS	LFS	EPF	EPF	ID INE	ID INE	ID INE	ID INE	ID INE	MNP

Table 2 (Continued)

Households and families

	Fertility					
	Median age at first child, women	Total fertility rate (Spanish women)	Total fertility rate (Foreign women)	Births to single mothers (%)	Abortion rate	Abortion by Spanish-born women (%)
2008	29.3	1.36	1.83	33.2	11.8	55.6
2010	29.8	1.30	1.68	35.5	11.5	58.3
2012	30.3	1.27	1.56	39.0	12.0	61.5
2014	30.6	1.27	1.62	42.5	10.5	63.3
2015	30.7	1.28	1.66	44.4	10.4	65.3
2016	30.8	1.27	1.72	45.8	10.4	65.8
2017	30.9	1.25	1.71	46.8	10.5	66.1
2018	31.0	1.20	1.65	47.3	11.1	65.3
2019	31.1	1.17	1.59	48.4	11.5	64.1
2020	31.2	1.12	1.45			
Sources	ID INE	ID INE	ID INE	ID INE	MSAN	MSAN

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

Marriage rate: Number of marriages per thousand population.

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

Divorce rate: Number of divorces per thousand population.

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

● *Provisional data.*

■ *Data refer to January-June.*

Table 3

Education

	Educational attainment				Students involved in non-compulsory education					Education expenditure	
	Population 16 years and older with primary education (%)	Population 30-34 with primary education (%)	Population 16 years and older with tertiary education (%)	Population 30-34 with tertiary education (%)	Pre-primary education	Secondary education	Vocational training	Under-graduate students	Post-graduate studies (except doctorate)	Public expenditure (thousands of €)	Public expenditure (% GDP)
2008	32.1	9.2	16.1	26.9	1,763,019	629,247	472,604	1,377,228	50,421	51,716,008	4.63
2010	30.6	8.6	17.0	27.7	1,872,829	672,213	555,580	1,445,392	104,844	53,099,329	4.91
2012	28.5	7.5	17.8	26.6	1,912,324	692,098	617,686	1,450,036	113,805	46,476,414	4.47
2014	24.4	6.1	27.2	42.3	1,840,008	690,738	652,846	1,364,023	142,156	44,846,415	4.32
2015	23.3	6.6	27.5	40.9	1,808,322	695,557	641,741	1,321,698	171,043	46,597,784	4.31
2016	22.4	6.6	28.1	40.7	1,780,377	687,595	652,471	1.303.252	190,143	47,578,997	4.25
2017	21.4	6.6	28.5	41.2	1,767,179	676,311	667,984	1,287,791	209,754	49,458,049	4.24
2018	20.5	6.4	29.2	42.4	1,750,106	667,287	675,971	1,290,455	217,840	50.807.185	4.23
2019	19.3	6.3	30.3	44.7	1,747,087	673,171	714,292	1,309,791●	234,214●	53,052,700	4.26
2020	17.7	6.1	31.3	44.8							
2021■	16.6	5.6	32.2	46.5							
Sources	LFS	LFS	LFS	LFS	MECD	MECD	MECD	MECD	MECD	MECD	INE National Accounts

LFS: Labor Force Survey.

MECD: Ministerio de Educación, Cultura y Deporte.

INE: Instituto Nacional de Estadística.

● *Provisional data.*

■ *Data refer to January-June.*

Table 4

Social protection: Benefits

| | Contributory benefits* | | | | | | | Non-contributory benefits | | | |
| | | Retirement | | Permanent disability | | Widowhood | | | Social Security | | |
	Unemployment total	Total	Average amount (€)	Total	Average amount (€)	Total	Average amount (€)	Unemployment	Retirement	Disability	Other
2008	1,100,879	4,936,839	814	906,835	801	2,249,904	529	646,186	265,314	199,410	63,626
2010	1,471,826	5,140,554	884	933,730	850	2,290,090	572	1,445,228	257,136	196,159	49,535
2012	1,381,261	5,330,195	946	943,296	887	2,322,938	602	1,327,027	251,549	194,876	36,310
2014	1,059,799	5,558,964	1000	929,484	916	2,348,388	624	1,221,390	252,328	197,303	26,842
2015	838,392	5,641,908	1,021	931,668	923	2,353,257	631	1,102,529	253,838	198,891	23,643
2016	763,697	5,731,952	1,043	938,344	930	2,364,388	638	997,192	254,741	199,762	21,350
2017	726,575	5,826,123	1,063	947,130	936	2,360,395	646	902,193	256,187	199,120	19,019
2018	751,172	5,929,471	1,091	951,838	946	2,359,931	664	853,437	256,842	196,375	16,472
2019	807,614	6,038,326	1,138	957,500	975	2,361,620	712	912,384	259,570	193,122	14,997
2020	1,828,489	6,094,447	1,162	952,704	985	2,352,680	725	1,017,429	261,325	188,670	13,373
2021	991,205■	6,148,745■	1,187■	948,884■	994■	2,352,927■	739■	998,594■	261,783♦	185,279♦	12,272♦
Sources	INEM	INSS	INSS	INSS	INSS	INSS	INSS	INEM	IMSERSO	IMSERSO	IMSERSO

INEM: Instituto Nacional de Empleo.

INSS: Instituto Nacional de la Seguridad Social.

IMSERSO: Instituto de Mayores y Servicios Sociales.

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

■ Data refer to January-August.

◆ Data refer to January-July.

Table 5

Social protection: Health care

| | Expenditure | | | | Resources | | | | Satisfaction* | | Time on waiting list (days) | |
	Total (% GDP)	Public (% GDP)	Total expenditure ($ per inhabitant)	Public expenditure (per inhabitant)	Medical specialists per 1,000 inhabitants	Primary care doctors per 1,000 people asigned	Specialist nurses per 1,000 inhabitants	Primary care nurses per 1,000 people asigned	With the working of the health system	With medical history and tracing by family doctor or pediatrician	Non-urgent surgical procedures	First specialist consultations per 1,000 inhabitants
2008	8.29	6.10	2,774	2,042	1.8	0.8	3.0	0.6	6.4	7.0	71	59
2010	9.01	6.74	2,886	2,157	1.8	0.8	3.2	0.6	6.6	7.3	65	53
2012	9.09	6.55	2,902	2,095	1.8	0.8	3.1	0.6	6.6	7.5	76	53
2014	9.08	6.36	3,057	2,140	1.8	0.8	3.1	0.7	6.3	7.5	87	65
2015	9.16	6.51	3,180	2,258	1.9	0.8	3.2	0.7	6.4	7.5	89	58
2016	8.98	6.34	3,248	2,293	1.9	0.8	3.3	0.6	6.6	7.6	115	72
2017	8.80	6.25	3,370	2,385	1.9	0.8	3.4	0.6	6.7	7.5	106	66
2018	8.90	6.20	3,323	2,341	2.0	0.8	3.5	0.7	6.6	7.5	129	96
2019	9.00	6.40	3,616	2,560		0.8		0.7			115	81
Sources	OECD	OECD	OECD	OECD	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS	INCLASNS

OECD: Organisation for Economic Co-operation and Development.

INCLASNS: Indicadores clave del Sistema Nacional del Salud.

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

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Notes

✑ funcas