FINANCIAL STABILITY REPORT

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BANCO DE ESPAÑA
Eurosistema

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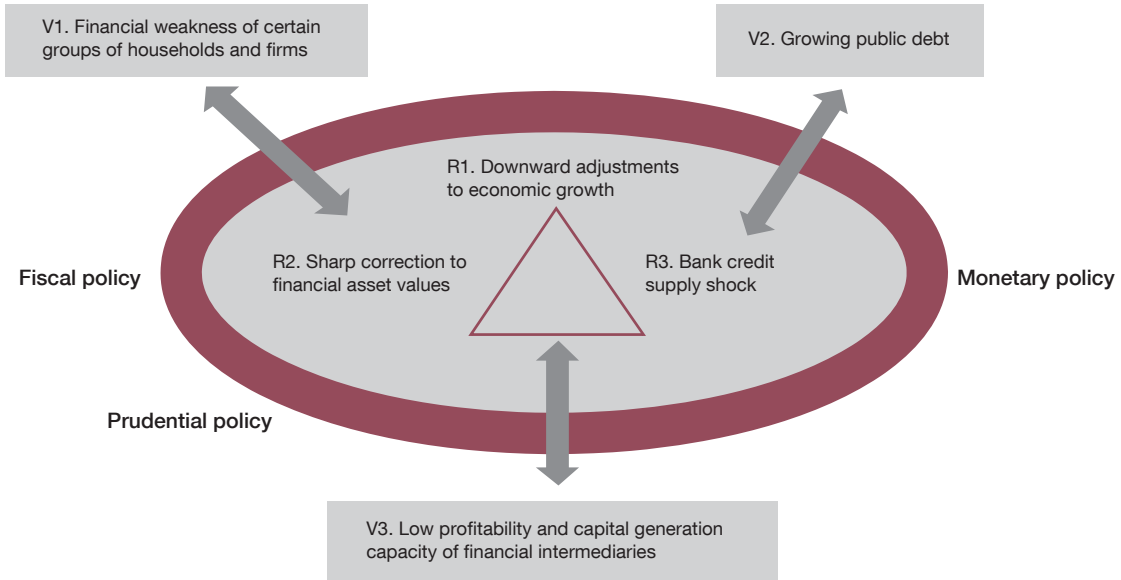
THE STABILITY OF THE SPANISH FINANCIAL SYSTEM: MAIN VULNERABILITIES AND RISKS

THE STABILITY OF THE SPANISH FINANCIAL SYSTEM: MAIN VULNERABILITIES AND RISKS

Since the last edition of the Financial Stability Report (FSR), published last October, the medical advances against the pandemic have improved the prospects of an end to the health crisis and, as a result, the economic outlook. That said, notable risks to financial stability persist. The economic crisis triggered by the outbreak of the pandemic has weakened the financial position of certain segments of households and firms. It has also reduced the profitability and the capital generation capacity of financial intermediaries, in particular in the banking sector. The mitigating response by the authorities, without which the recession would have been deeper and longer lasting, has significantly increased public debt. As a result of these developments, the Spanish economy's vulnerability to the possible materialisation of various perceived risks has increased. These include, notably, the risk of less favourable economic activity developments, the activity outlook still being subject to the uncertainty over the course of the pandemic. Also, recent financial market developments entail the possibility of sharp financial asset price corrections and adverse bank credit supply shocks (see Figure 1). The materialisation of these risks may hamper financial intermediation and weigh on real activity, compounding the effects of the pandemic.

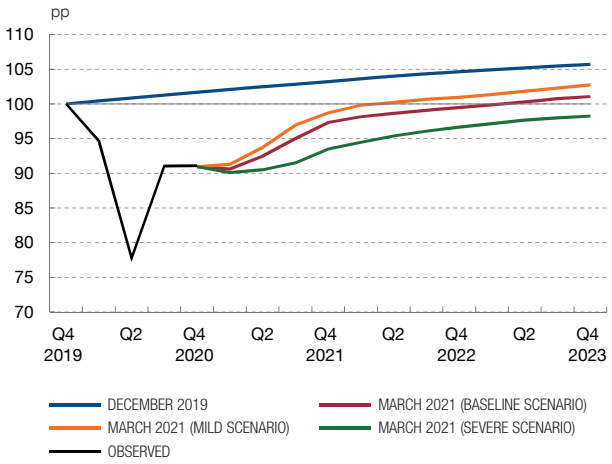
Figure 1
THE STABILITY OF THE SPANISH FINANCIAL SYSTEM: MAIN VULNERABILITIES AND RISKS (a)



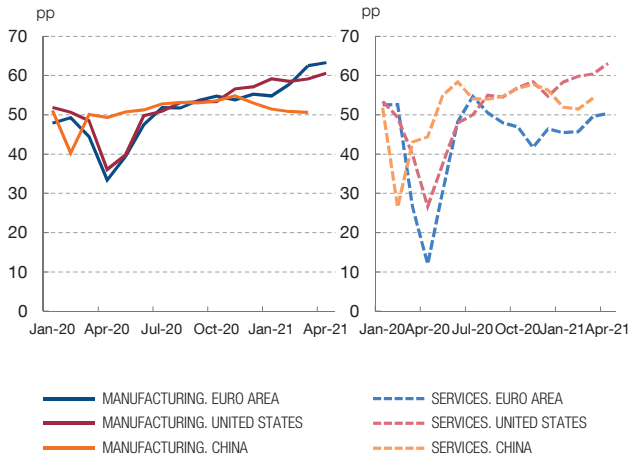
SOURCE: Banco de España.

a In this report, the vulnerabilities (V) are defined as those economic and financial conditions that increase the impact or probability of materialisation of the risks (R) to financial stability. The latter are identified in turn with adverse changes in economic and financial conditions, with an uncertain probability of occurring, which hamper or prevent financial intermediation, with negative consequences for real economic activity. Both concepts are interrelated, since the materialisation of risks can alter the level of vulnerabilities existing. The mitigating effects of the various economic policies (fiscal, monetary, prudential) improve the economic and financial conditions, and reduce the probability and expected impact of the materialisation of risks.

1 REAL GDP SPAIN. LEVEL (a)
(2019 Q4 = 100)



2 MANUFACTURING AND SERVICES PMI BY GEOGRAPHICAL AREA



SOURCES: Eurostat y Banco de España.

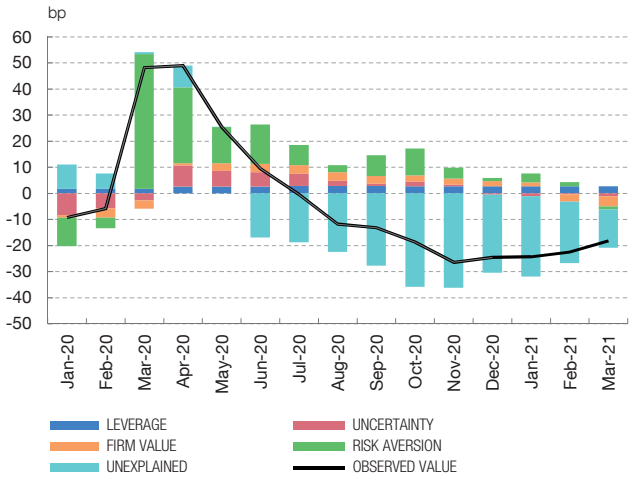
a A baseline scenario is projected for the Spanish economy, along with two altternative scenarios (mild and severe), which differ according to the assumptions regarding the pandemic and its medium-term consequences. For further information see Macroeconomic projections 2021-2023, March 2021.

There follows a brief description of what are currently perceived to be the main risks to financial stability and their interaction with the Spanish economy's vulnerabilities.

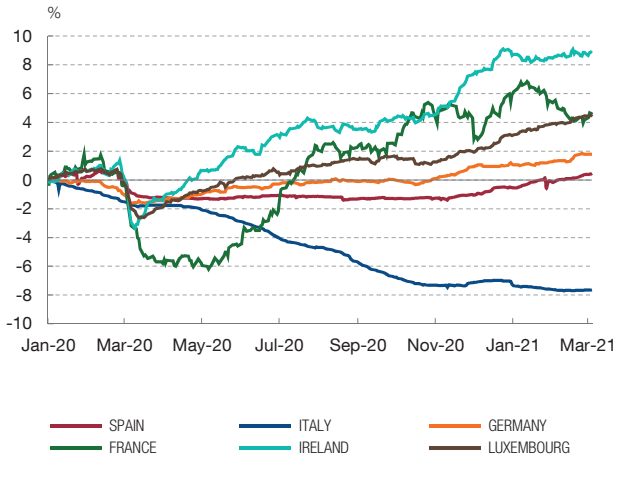
The main identified risks are:

— **R1. Downside risks to the economic growth outlook remain.** The approval by the health authorities of vaccines for the SARS-CoV-2 coronavirus, and the progress of their dispensation, has reduced the probability of the most unfavourable medium-term scenarios. However, developments in the last two quarters have been adversely affected by the need for fresh containment measures. Assuming that the progressive administration of vaccines will allow containment measures to be gradually withdrawn, so that they have practically disappeared by the end of 2021, Spanish economic growth will accelerate in the second half of the year and remain robust in 2022. In any event, a less favourable pandemic trajectory cannot be ruled out. This would increase the persistence of its negative economic effects, in the form of destruction of the productive system, higher unemployment and, thus, lower incomes for households and firms and a deterioration in their ability to pay their debts and, consequently, higher default rates on loans and other debt. Such adverse developments would lead to a less vigorous economic recovery than envisaged in the baseline projection scenarios (see Chart 1) and, foreseeably, an increase in its heterogeneity across geographical areas, industries and population groups (see Chart 2).

3 BREAKDOWN OF CORPORATE RISK PREMIA (a)
INVESTMENT GRADE. EURO AREA



4 INVESTMENT FUND FLOWS (b)



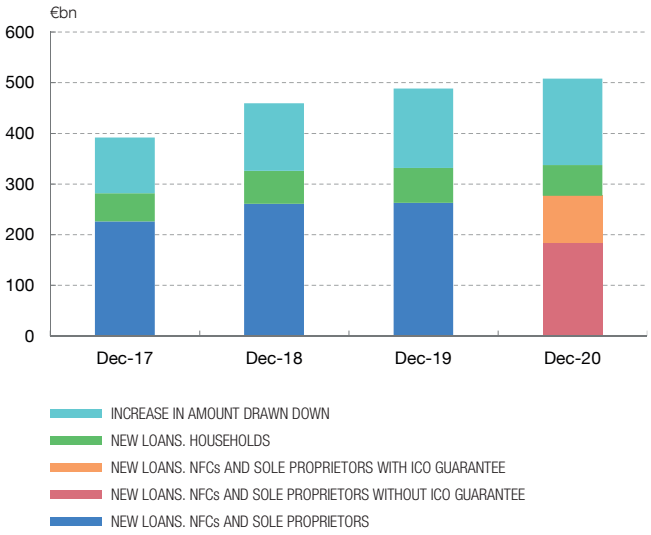
SOURCES: Datastream and Refinitiv.

a The breakdown is based on a weighted average of different corporate bond valuation models. Risk aversion is the first component of VIX and VSTOXX. The unexplained factor is the difference between the observed value and the value predicted by the corporate bond model. The observed value of the risk premia and the breakdowns are calculated as deviations relative to the historical average of the period November 2001 to March 2021.
b Cumulative change in investment fund net capital inflows and outflows, as a percentage of the total net assets of the funds of each country on 15 January 2020, drawing on a representative sample of funds domiciled in euro area countries.

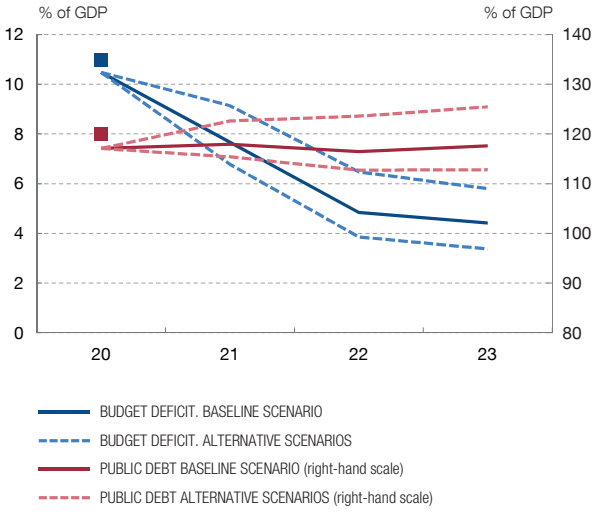
— **R2. Recent international financial market developments mean that a financial asset value correction cannot be ruled out.** The price of risky assets on international financial markets has been driven by lower risk aversion and improved growth expectations, despite the uncertainty over economic performance and the weak financial position of some agents. For certain asset classes in certain geographical areas, prices are higher than would be expected according to the historical relationship with their fundamentals (see Chart 3). Among the possible triggers for a potential abrupt correction of these overvaluations, the role of long-term interest rates, which have already increased in recent months, particularly in the United States, stands out. These interest rates may be subject to further upward pressure, in particular if there are further increases in inflation expectations in the United States that are passed through to other economic areas. Asset value corrections could also arise from downward revisions by investors to their expectations of future economic growth, to the corporate sector's ability to pay its debts or to the duration of public support programmes. Also, the presence of close interconnections between financial markets, as well as between different types of intermediaries, would facilitate the transmission of an initial correction in those markets with greater signs of over-valuation to others. Accordingly, the overall impact could be large and pervasive, affecting all the different types of financial intermediaries (see Chart 4).

— **R3. Possible adverse bank credit supply shocks.** The banking sector has supplied abundant financing during the crisis (see Chart 5), in the face

5 VOLUME OF NEW CREDIT IN THE PAST 12 MONTHS. HOUSEHOLDS, NFCs AND SOLE PROPRIETORS



6 BANCO DE ESPAÑA FORECASTS OF PUBLIC DEFICIT AND DEBT (a) (b)



SOURCES: IGAE and Banco de España.

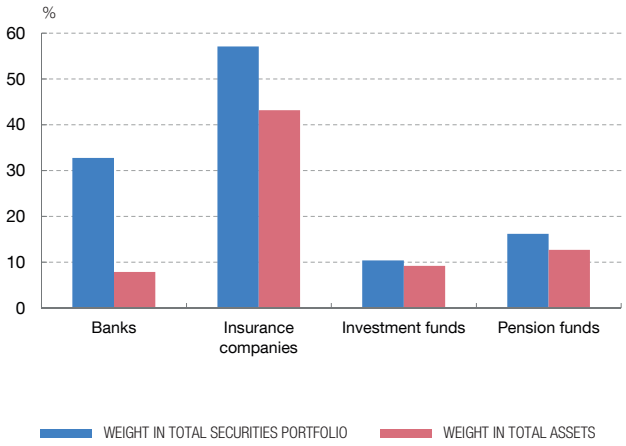
a The budget deficit and government debt estimates for 2020 and 2021-2023 do not include the assumption of Sareb debt by the general government, a fact known after the preparation of the forecasts.
b Macroeconomic scenarios of the Banco de España projections published on March 23, 2021. The squares of 2020 correspond to the data published by the IGAE six days later.

of a significant increase in the liquidity needs of households and firms as a result of their reduced revenues. The supply of bank credit has been fostered by the numerous monetary, fiscal and regulatory policy support measures adopted. Looking ahead, the negative effects of the possible materialisation of downside risks to economic activity and of the deterioration in the credit quality of households and firms could be exacerbated by a credit supply contraction, especially given the doubts regarding the incentives for financial institutions to use the available capital buffers.

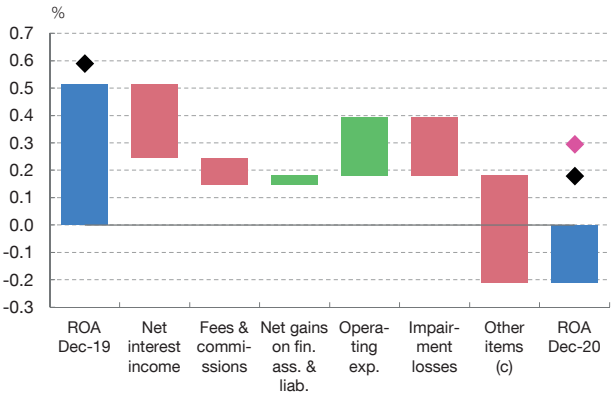
Turning to the Spanish economy's vulnerabilities, the main ones are:

— **V1. The weak financial position of certain segments of households and firms.** The persistence of the pandemic continues to have negative effects on firms' revenues, especially in those activities most affected by the crisis. Against a background of rising corporate indebtedness in recent quarters, this jeopardises the viability of some firms, constrains investment and employment plans and exposes firms to a deterioration in financing conditions. In the case of households, the increase in the saving rate and the reduction in the volume of credit at aggregate level mask the existence of segments that have seen their financial fragility increase significantly. The materialisation of the risks mentioned above would generate a further reduction in the ability of households and firms to repay their debts, increasing the credit default rate and leading to further deterioration in the banking sector's financial position.

7 HOLDINGS OF SECURITIES ISSUED BY SPANISH GENERAL GOVERNMENT. 2020 Q4 (a)



8 BREAKDOWN OF THE CHANGE IN PROFIT OF SPANISH DEPOSIT INSTITUTIONS Consolidated net profit as a percentage of ATA (b)



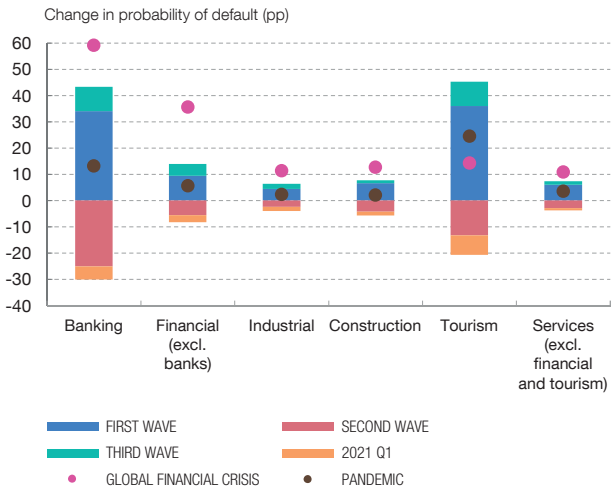
SOURCES: Securities Holding Statistics by Sector and Banco de España.

a Government bond holdings are shown according to their market value at the end of 2020 Q3. The information relates to resident financial sectors, at unconsolidated level.
b The red (green) colour of the bars indicates a negative (positive) contribution of the item concerned to the change in consolidated profit for December 2020 with respect to December 2019. The black diamonds show ROA excluding the goodwill adjustments recorded in 2019 (-€2.8 billion) and 2020 (-€12.2 billion) and the deferred tax asset adjustment in 2020 (-€2.5 billion). The pink diamond shows ROA in 2020 excluding, in addition to the adjustments already mentioned, the decline in value due to accounting reclassification of a significant institution (-€5.6 billion) and the positive extraordinary profit for 2020 (€1.2 billion).
c Includes the goodwill adjustment and other extraordinary adjustments.

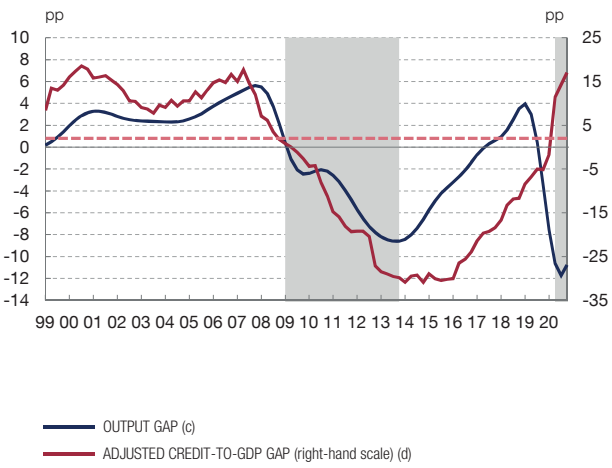
— **V2. The significant increase in government debt.** The corollary of the economic deterioration arising from the health crisis and the application of public support measures to mitigate its impact has been a substantial increase in the general government deficit and debt in 2020 (see Chart 6). The action of the European Central Bank during the crisis, including a new pandemic asset purchase programme, for public debt in particular, has so far maintained highly favourable financing conditions for the public sector. However, the increase in indebtedness along with the elevated structural general government deficit has increased the Spanish economy's vulnerability to possible changes in financing conditions and in investor sentiment, which may be passed through to other economic agents (see Chart 7).

— **V3. Low bank profitability and capital generation capacity.** The economic crisis caused by the pandemic has put downward pressure on the profitability of financial intermediaries, particularly as a result of provisioning requirements, lower net interest income and intangible asset impairment (see Chart 8). To date, the impact can be considered contained, given the magnitude of the activity shock, as a consequence of the important economic policy measures adopted. In fact the non-performing loan ratio has remained steady and capital levels have increased over the past year. However, the materialisation of the risks mentioned would put further upward pressure on credit risk and would increase the volume of

9 CHANGE IN THE IMPLIED PROBABILITY OF DEFAULT OF EUROPEAN FIRMS BY SECTOR SINCE THE OUTBREAK OF THE PANDEMIC AND IN THE GLOBAL FINANCIAL CRISIS (a)



10 OUTPUT GAP AND CREDIT-TO-GDP GAP (b)



SOURCE: Banco de España.

a The chart depicts the change in the aggregate probability of default by sector in percentage points, after weighting each firm's probability by its market value within the relevant sector or country. The brown dot represents the change between the average pre-pandemic value (January-February 2020) and the value at end-2021 Q1. The stacked bars depict the change attributable to the first wave of the pandemic (March-May 2020), to the period between the first and second waves (June-November 2020), to the third wave (December 2020-February 2021) and to the period of 2021 Q1 after the third wave (February-March 2021). The pink dot represents the peak change in 2008-2009 with respect to the 2006-2007 average.

b The vertical shaded bands represent the period of the last financial crisis in Spain (2009 Q1-2013 Q4) and the crisis unleashed by the pandemic as from 2020 Q2. The December 2020 data are provisional. The broken red horizontal line depicts the CCyB activation threshold of 2 pp for the credit-to-GDP gap.

c The output gap is the percentage difference between actual GDP and its potential value. Values calculated at constant 2010 prices. See Cuadrado, P. and Moral-Benito, E. (2016), Potential growth of the Spanish economy, Occasional Paper No 1603, Banco de España.

d The adjusted credit-to-GDP gap is calculated as the difference in percentage points between the actual ratio and its long-term trend, calculated by applying a one-sided Hodrick-Prescott filter with a smoothing parameter equal to 25,000. This value best fits the financial cycles observed historically in Spain (see Galán, J.E. (2019), Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited, Occasional Paper Nº. 1906, Banco de España).

non-performing loans and the negative effects on bank profitability (see Chart 9). Moreover, bank profitability was already low before the crisis as a result of various factors, including: the existence of over-capacity, despite significant capacity reductions in recent years; the balance sheet clean-up, which is also well advanced, although still relevant for some institutions and assets; and the challenges of a low (or even negative) interest rate environment, which may hamper the generation of net interest income. These challenges are compounded by those arising from adaptation to digitalisation and the emergence of new competitors.

Economic policy (monetary and fiscal) is the main factor mitigating the identified risks and must remain sufficiently expansionary until the recovery takes hold. To avoid intensifying the vulnerabilities that affect financial stability, it seems essential that economic policy should be appropriately adapted to the health and economic situation (see Chart 10) and to the uneven persistence of the damage to the productive system across sectors and population groups. To this end, a broad set of instruments is needed that can be flexibly adapted to the rate

of recovery of activity in each sector, as well as the outlook for its future viability. A premature withdrawal of support may aggravate the economy's vulnerabilities and financial stability risks.

In the current context, economic policy needs to focus especially on supporting those firms that are viable but face financial difficulty and the most severely affected population groups. In line with this objective, various measures have recently been adopted, including, among others, the extension of guarantee scheme durations and payment holidays and direct financial aid to compensate businesses and the self-employed for the fall in their turnover, in the sectors and geographical areas most affected, and to recapitalise firms. The effectiveness of these schemes will depend on their rapid and homogeneous implementation and on the distribution mechanisms allowing assistance to be selectively focused on viable firms with solvency problems. The volume and use of the committed funds also need to be flexible, so they can be adapted to the course of the pandemic and the possible materialisation of risks.

At the same time, there is a pressing need for implementation of an ambitious programme of structural reforms to enhance the growth potential of the economy and for a fiscal consolidation plan to be designed that can be gradually implemented when the recovery takes hold. The European NGEU funds may be particularly important for these objectives, provided that projects capable of increasing the growth potential of the economy are prioritised.

In the banking supervisory and regulatory sphere, the priority must continue to be the identification and mitigation of the risks arising from the crisis. We supervisory authorities have continued to stress that it is appropriate for capital buffers to be used by banks for credit impairment recognition and to continue providing solvent credit to households and firms. Banks will have sufficient time to comply once again with their capital requirements and the start of the process of reconstitution will never be before the main effects of the pandemic have dissipated. At the same time, given the uncertainty still persisting, that the impact of the pandemic has not yet been fully manifest in bank balance sheets and that banks continue to have the benefit of various public support measures, we have recommended that banks act with extreme prudence in their dividend distribution policies. Also, banks must pursue a policy of early recognition of impairment losses, ensuring that this is appropriate and timely, as stipulated in supervisory guidelines. Finally, the results of new supervisory stress tests will be published in the middle of the year which will help to calibrate the resilience of the sector to possible adverse macroeconomic scenarios.

We supervisors and regulators must also ensure that the resilience of the financial sector is maintained in the face of the new risks that emerge. In this respect, it should be noted that the Basel III global reforms, which all members of

the Basel Committee on Banking Supervision, including the European ones, have committed to, are still to be fully and timely implemented. As regards new risks, the need to address those arising from the greater importance at global level of non-bank intermediation, which is being analysed by the Financial Stability Committee, stands out. Also notable are those relating to the impact of digitalisation and climate change. Regarding the latter, early and decisive policy intervention can facilitate an energy transition that is orderly and predictable, mitigating physical and transition risks with a high impact on financial stability. We supervisors must ensure that banks correctly assess these risks and incorporate them into their management. Lastly, it should be noted that in February the Banco de España presented for public consultation a project to amend Circular 2/2016 on the supervision and solvency of credit institutions, in order to introduce the new macroprudential instruments recently provided by national primary legislation. These will allow the Banco de España to establish a countercyclical capital buffer requirement in specific sectors, limits on the sectoral concentration of lending relative to bank capital and requirements for credit standards (e.g. the loan-to-collateral value ratio).

1

RISKS LINKED TO THE MACRO-FINANCIAL ENVIRONMENT

The first chapter of the FSR analyses the macro-financial environment of the Spanish economy in the recent period and that of the countries with which it shares the closest trade and financial ties, highlighting the most significant risks. These risks remain partially linked to the course of the pandemic, despite the vaccine roll-out having reduced the likelihood of the most adverse medium-term scenarios. However, the continuation of the pandemic into the quarters immediately following this publication increases the probability of more persistent effects on the financial capacity of households and firms, and on the productive system itself. Against this backdrop, an adequate economic policy response stands as the main mitigating factor. In the financial markets, prices of risk-bearing assets have risen in recent months, buoyed by an improving macroeconomic outlook following the emergence of effective vaccines against the coronavirus. However, high valuations for certain assets have generated some concern regarding the sustainability of these prices, particularly if less favourable macro-financial scenarios were to materialise. In the residential property market, sales have declined markedly relative to 2019, while prices have continued to show a degree of downward rigidity. Lastly, vulnerability has increased markedly due to the crisis weakening the financial position of the various non-financial sectors, particularly general government, while the deterioration in the private sector (households and firms) has focused on certain specific segments.

1.1 Macroeconomic environment

1.1.1 Systemic and materially important countries for the Spanish economy and banking system

Global economic activity recovered in 2020 H2, but was adversely affected by the worsening of the pandemic from late 2020 onwards. Having slumped in 2020 H1, global activity surged in Q3 thanks to the easing of the containment measures and the support provided by economic policies. However, the recovery lost steam from the end of the last year, in the face of the worsening of the pandemic and the reintroduction of restrictions. The effect of the pandemic has been uneven across regions, owing to differences in how it has unfolded, the containment measures implemented, the degree of exposure to the hardest-hit sectors and the economic policies introduced. In 2020, world GDP declined by 3.3%, with marked regional differences (see Charts 1.1.1 and 1.1.2). Among the advanced economies, euro area GDP shrank by 6.7%, with the services sector being particularly affected[1]

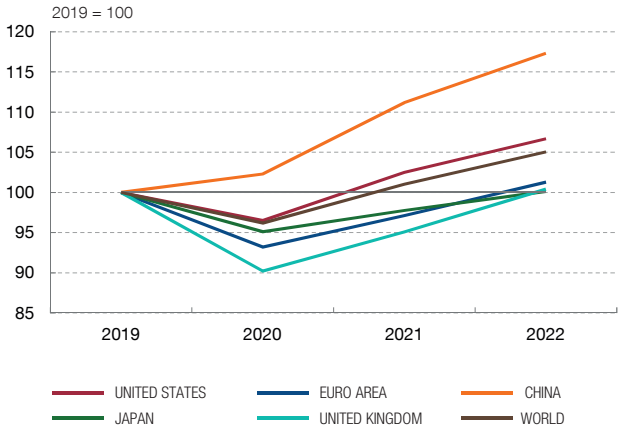
1 See A. L. Gómez and A. Río, (2021) "The uneven impact of the health crisis on the economies of the euro area in 2020", Occasional Paper, Banco de España, forthcoming.

Chart 1.1

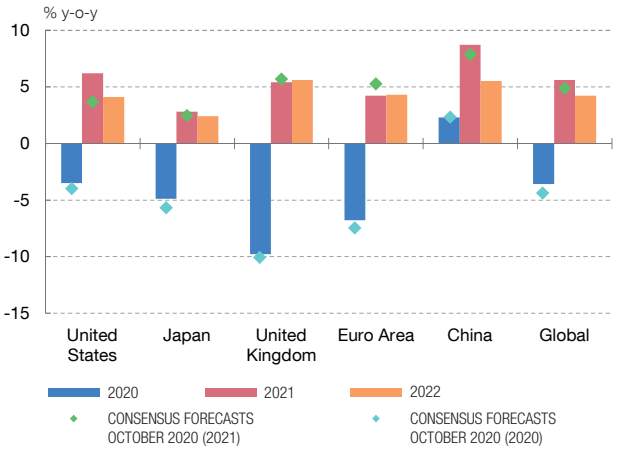
THE BASELINE SCENARIO OF A GRADUAL RECOVERY IN GLOBAL ECONOMIC ACTIVITY IN 2021-2022 IS GROUNDED ON EXPECTATIONS OF A DECLINING INCIDENCE OF COVID-19 AND THE ADEQUATE APPLICATION OF ECONOMIC POLICIES

The impact of the pandemic has been uneven across regions, shaped by the course of the pandemic, exposure to the most affected sectors (mainly the services sector) and the support measures provided in economic policies. The development of effective vaccines has improved the outlook, although the spread of variants of the virus represents a downside risk. Emerging financial markets registered a recovery in recent months, which was likewise reflected in exchange rate movements, which moderated from February onwards.

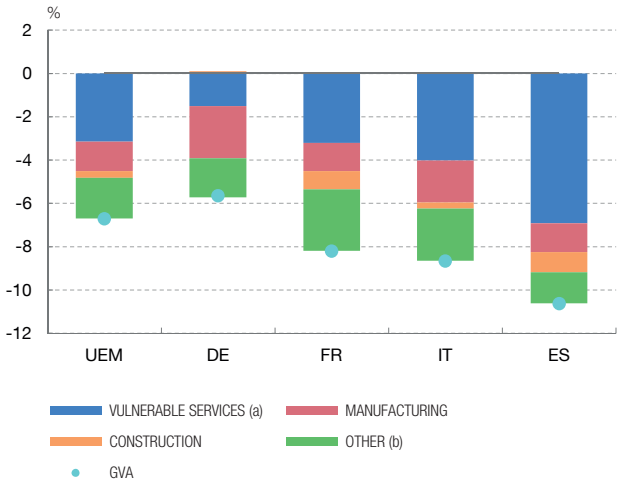
1 GDP CHANGE FOR MAIN AREAS (2019-2022)
Consensus Forecast February 2021



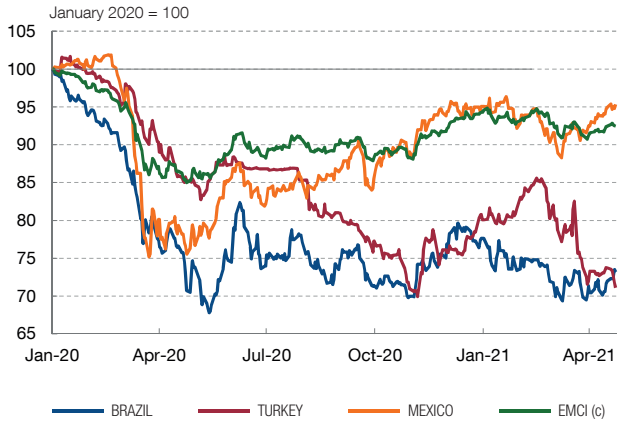
2 GDP GROWTH FORECASTS (2020-2022)
Consensus Forecast February 2021



3 EURO AREA GVA AND CONTRIBUTIONS
Change 2020



4 EMERGING ECONOMIES: EXCHANGE RATES AGAINST THE DOLLAR



SOURCES: Consensus Forecast, national statistics, Reuters and Eurostat.

a Vulnerable services include those most exposed to the containment measures (22.4% of total euro area GVA): wholesale and retail trade, transportation and hospitality (G-I) and artistic and entert. activities and other services (R-U).
b Other = primary (A); energy; non-market services (O-Q); other market services (communications; financial and insurance act., real estate act. and professional, scientific and auxiliary act.).
c Aggregate index of exchange rates of emerging market economies vis-à-vis the dollar. A fall means depreciation.

(see Chart 1.1.3). Spanish GDP declined by a notable 10.8%, while GDP in Germany fell by 5.3%. The contraction stood at 3.5% in the United States, 4.9% in Japan and 9.8% in the United Kingdom. Among the emerging economies, the most adverse effects were felt in Latin America, where GDP fell by 7% on average. By contrast, activity in China, the first economy to be affected by the pandemic, grew 2.3%.

The economic outlook has improved thanks to the availability of vaccines, but some uncertainty persists as to the course of the health situation and the intensity of the recovery. Following a weak start to 2021 due to the worsening of the pandemic, the recovery is expected to accelerate in H2 as those sectors that require greater social interaction are revived by progress in the vaccination programmes. Added to this would be the additional stimuli provided through economic policies, such as the extension of support measures for households and firms in most euro area countries and in the United States.[2] In Europe, plans to bolster the economy using funds from the Next Generation EU (NGEU) programme, which have yet to be determined, will prove most effective if the funds are allocated to high value-added investments and are supplemented by reforms to strengthen potential growth. The analysts' consensus expects the world economy to grow at a rate close to 6% in 2021 and above 4% in 2022 (see Chart 1.1.2). The consensus figures for the euro area, which are in line with those of the ECB's March projection exercise, forecast GDP growth of around 4% in both years, meaning pre-pandemic activity levels would not be reached until 2022 H2.

In the near term, the risks for the world economy remain associated with the pandemic and in particular with the headway made in the vaccination programme. Looking ahead, there is still a risk that solvency problems will emerge for non-financial corporations after the crisis. The downside risks revolve, first, around the spread of new and more resistant variants of the virus or a delay in the vaccination process, which may lead to fresh social distancing measures. Second, insufficient support from economic policies, or the premature withdrawal thereof, could result in solvency problems for businesses. Likewise, the potential spillover effects of an increase in long-term interest rates in the United States, against the backdrop of the impact had by fiscal expansion on activity and inflation in this country, could lead to a tightening of financial conditions in other economic areas that are in a different cyclical position. Lastly, high government and private indebtedness could curtail spending and hinder the recovery process. On the positive side, the outlook could be improved by more favourable progress in the vaccination programme. Meanwhile, the possibility of a no-deal Brexit, which was among the risks identified in the previous FSR, has faded thanks to the withdrawal agreement between the United Kingdom and the European Union.

The main emerging economies where Spanish banks have a significant presence[3] likewise recorded a recovery in 2020 H2, which lost momentum in early 2021. Broadly speaking, emerging markets recovered much of the losses

2 See Box 3 "Analysis of US fiscal policy plans", *Quarterly Report on the Spanish Economy 2021 Q1.*

3 Each year the Banco de España identifies a list of non-EU/EEA countries (third countries) that are materially significant for the Spanish banking system, based on the volume and weight of the Spanish banking system's international exposures. This exercise is conducted pursuant to the recommendations of the European Systemic Risk Board (ESRB). In 2020, six emerging countries were identified in this category: Mexico, Brazil, Turkey, Chile, Peru and Colombia.

registered from March 2020. Capital inflows increased from November onwards and, in some segments and regions, offset the outflows recorded in the first months of 2020. However, several of these countries have recently seen long-term interest rates increase, as a result of rising long-term interest rates in advanced economies, and currency depreciation. Financial conditions and capital flows towards emerging economies may be adversely affected if these trends continue going forward. In this regard, the main emerging countries in terms of Spanish banking exposures find themselves affected both by pandemic-related risks and those relating to macro-financial imbalances:

— In Mexico, GDP fell by 8.5% in 2020, more than the Latin American average, partly owing to less fiscal stimulus,[4] greater exposure to tourism and the sharp decline in the US manufacturing sector in the early stages of the pandemic.[5] The Mexican economy is also exposed to a potential tightening of global financial conditions, along with local factors such as uncertainty stemming from proposed reforms to the energy sector[6] and to the Banco de México Law.[7] These could undermine investor confidence and the country's credit rating, which remains adversely affected by the PEMEX situation. On the positive side, Mexico may be among the economies to benefit most from the fiscal stimulus in the United States via its trade and remittances channels.

— In Brazil, by contrast, GDP fell by a more moderate 4.1%, owing to less stringent restrictions on movement and sizeable monetary, and particularly fiscal, support. The outlook for 2021, however, is less auspicious, since much of the credit support programmes and fiscal stimuli, particularly transfers to households, have expired[8] and a monetary tightening has begun, which is discounted to last until 2022. The weaker relative performance of the Brazilian real is also a reflection of the continuing political tensions over the reforms and fiscal adjustment needed to tackle the high level of government debt (see Chart 1.1.4).

— Turkey was one of the few countries to record GDP growth in 2020 (1.8%), thanks in part to the support measures introduced, particularly for credit.

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4 See the IMF policy response tracker: *Policy Responses to COVID-19*.

5 See Banco de España (2020), *Report on the Latin American economy. First half of 2020,* for a description of the pandemic transmission channels in the region.

6 On 1 February 2021, the Mexican government submitted a bill to reform Mexico's Electricity Industry Law, with the aim of changing the order in which electricity is dispatched to the national grid to favour the State-owned utility company (Comisión Nacional de Electricidad) over private sector firms. The reform may contravene the free trade agreement with the United States and Canada (USMCA).

7 In December 2020, the Mexican Senate passed a bill to amend the Banco de México Law. The amendment would force the central bank to buy foreign currencies that commercial banks are unable to put into the financial system. The central bank has argued that the reform would jeopardise its reputation and independence.

8 The Brazilian government did not reintroduce transfers to households that expired at the end of 2020 (4.4% of GDP), and replaced them with an income support program of a much lower amount (0.6% of GDP).

However, these stimuli exacerbated the country's macro-financial imbalances, such as high inflation and reliance on external financing. This has been reflected in the depreciation of the lira and diminishing reserves, leaving the country considerably vulnerable to a tightening of global financial conditions. Against this backdrop, the Turkish central bank shifted towards a more restrictive monetary policy (see Chart 1.1.4) so as to keep inflation and depreciation pressures in check.[9] More recently, the dismissal of the head of the country's central bank triggered a further sharp depreciation of the lira and capital outflows, resulting in significant financial turmoil.

1.1.2 Spain

As in the rest of the world, the developments in the Spanish economy since the spring of 2020 have been entirely conditioned by COVID-19. In 2020, Spanish GDP registered an annual average contraction of -10.8%, the steepest drop in recent history. The impact was concentrated in H1, followed by an incipient recovery from Q3 onwards (see Chart 1.2). During this period, private consumption and investment were severely weighed down by the drop in income, heightened uncertainty and the restrictions to contain the pandemic. Foreign trade flows have also plunged, leading the external balance to make a net negative contribution to GDP growth in real terms. The decline in tourism exports has been particularly severe, heavily affected by the restrictions on international travel.

The upturn in activity was robust in 2020 Q3, but ground to a halt in Q4 as a result of adverse epidemiological developments. In any event, the recovery has been only partial thus far. Reduced control over the spread of the virus during the winter months negatively affected the confidence of households and firms, with the attendant adverse bearing on aggregate demand, and led to more stringent restrictions on mobility and economic activity,[10] with additional negative effects. However, these had a far smaller impact on GDP than in Q2, thanks to economic agents adapting to the new environment. Nevertheless, at the turn of the year Spain was still among the economies hardest hit by the pandemic, with quarterly GDP in 2020 Q4 down 8.9% on pre-crisis levels, while that gap for the euro area as a whole stood at more than 4% (see Chart 1.2).

In the near term, economic activity growth is expected to be modest until the population has been immunised. Under the baseline scenario of the Banco de España's most recent projections, GDP would grow robustly in 2021 H2 thanks to

9 In addition, the Turkish central bank and banking supervisory authority began to unwind the stimulus measures for lending.

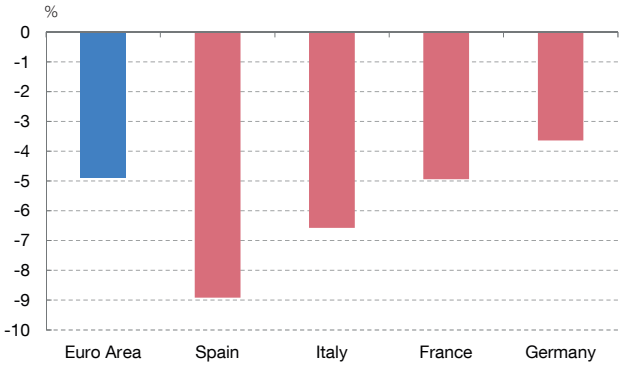
10 See Ghirelli, Gonzalez, Herrera and Hurtado, "Weather, mobility and the evolution of the COVID-19 pandemic", *Working Paper* No 2109, Banco de España.

Chart 1.2

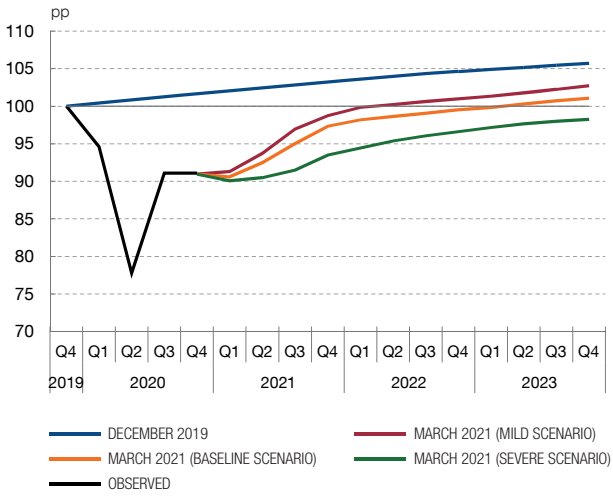
AMONG THE EUROPEAN COUNTRIES, THE PANDEMIC HAS HAD A PARTICULARLY SEVERE IMPACT ON SPAIN'S GDP, WHICH UNDER THE BASELINE SCENARIO WOULD RECOVER PRE-CRISIS LEVELS IN 2023

Spanish GDP declined 10.8% year-on-year in 2020, the sharpest drop in its recent history and larger than that of comparable European countries. The impact was concentrated in H1, with an incipient, albeit incomplete, recovery as of Q3. Thus, in the last quarter of 2020, economic activity in Spain stood considerably below pre-pandemic levels (-8.9%). Under the baseline scenario of the projections, based on the gradual disappearance of the pandemic's adverse economic effects, Spain would recover the GDP level observed prior to the onset of the crisis in 2023 H2. As a result of the uncertainty as to precisely how the health situation will unfold and the degree of permanence of the economic impacts felt in 2020, additional scenarios have been considered, generating a range of possible GDP trajectories around the baseline projection.

1 REAL GDP. DECLINE FROM PRE-CRISIS LEVEL (a)



2 REAL GDP LEVEL, SPAIN (b)
(2019 Q4 = 100)



SOURCES: Eurostat and Banco de España.

a GDP year-on-year change in 2020 Q4.
b A baseline scenario and two alternative scenarios (mild and severe) are projected for the Spanish economy. These alternative scenarios differ from the baseline scenario in terms of the course of the pandemic and the medium-term consequences thereof. For more infomation, please see March 2021 Macroeconomic Projections in Spain 2021-2023.

headway in the vaccination process, the use of NGEU funds[11] and the international economic performance. Spanish GDP would grow by 6% in 2021 under this baseline scenario, with the recovery in activity continuing in 2022 and 2023 (see Chart 1.2.2).

However, owing to the very high level of uncertainty, two alternative scenarios were envisaged. Uncertainty regarding the duration of the health crisis appears to have diminished given the anticipated progress in the vaccination process. Nonetheless, doubts persist regarding the extent of the pandemic's potential negative economic effects beyond the short term, which is not entirely unconnected with the duration of the pandemic itself. Resolute and coordinated action through economic policy, providing private agents with income and liquidity, has been a key factor in limiting the damage to the productive system. However, it will not succeed

11 See Box 1 "Macroeconomic projections for the Spanish economy (2021-2023)", *Quarterly report on the Spanish economy* March 2021.

in preventing such damage altogether, particularly if the health crisis persists for an extended period of time. The scenarios also differ in another respect: the degree of persistence of the behavioural changes prompted by COVID-19 among economic agents. To this end, different assumptions were considered regarding household spending decisions in Spain and the rest of the world (through tourism exports).

The additional risks for the baseline scenario include more adverse epidemiological developments (particularly in the near term), uncertainty over the resilience of households, and the scale of the incipient structural changes that the pandemic may have accelerated. First, potential epidemiological developments that are more adverse than anticipated (for instance, relating to new, more contagious and more vaccine-resistant strains of the virus) could jeopardise the pace of the recovery in 2021, owing to their direct negative effects on aggregate demand as a result of impaired confidence and the need to introduce more stringent restrictions on movement. Second, despite the forcefulness of the measures introduced (particularly the schemes to preserve employment in the near term and to provide liquidity to firms, added to which would be the impact of the NGEU programme in 2021), the prolongation of the health crisis increases the likelihood of a downturn in the labour market and of rising business insolvencies, causing persistent damage to the productive system. A further source of uncertainty is the pandemic accelerating certain pre-existing structural transformation processes, such as digitalisation, which would require a reallocation of economic resources of an unknown magnitude.

1.2 Financial markets and the real estate sector

1.2.1 Financial markets

Since the cut-off date of the last FSR, the development of effective vaccines against COVID-19 and progress in the vaccination process on a global scale have driven price gains for risk-bearing assets on international financial markets, despite the new waves of the virus that were exacerbated by the emergence of new strains. Following the uptick in risk aversion in late October, triggered by the worsening of the pandemic in Europe and uncertainty over the outcome of the presidential elections in the United States, the publication of data on vaccine effectiveness in early Novermber and, since the beginning of this year, the progress of the vaccination campaign have generated optimism among investors. This has been reflected in gains on stock market indices, declining credit risk premia and a decrease in asset price volatility, likewise supported by the elimination of other risk scenarios, such as the United Kingdom withdrawing from the European Union without an agreement[12] (see Charts 1.3.1, 1.3.2 and 1.3.3).

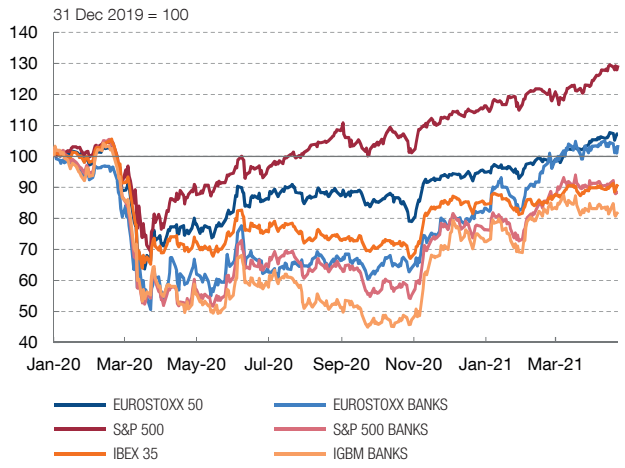
12 There was sporadic volatility increase on the S&P 500 (VIX) index towards the end of January, linked to coordinated transactions by retail investors; since mid-February, volatility increased on US sovereign bond options (MOVE) owing to steepening at the long end of the yield curve.

Chart 1.3

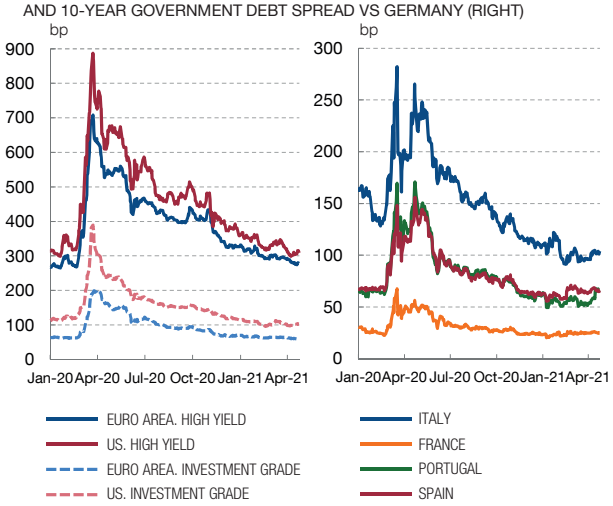
MEDICAL ADVANCES AGAINST COVID-19 HAVE FAVOURED THE REVALUATION OF RISK-BEARING ASSETS IN RECENT MONTHS, ALTHOUGH DOUBTS HAVE BEEN RAISED OVER THEIR SUSTAINABILITY IN SOME CASES

The development of effective vaccines against COVID-19 and progress in their distribution have generated optimism among investors, which has been reflected by rising stock market indices, declining credit risk premiums and narrowing sovereign debt spreads in the euro area, along with lower volatility for asset prices. Rising equity prices have lifted US stock markets to very high levels relative to the companies' cyclically adjusted earnings.

1 STOCK MARKET INDICES

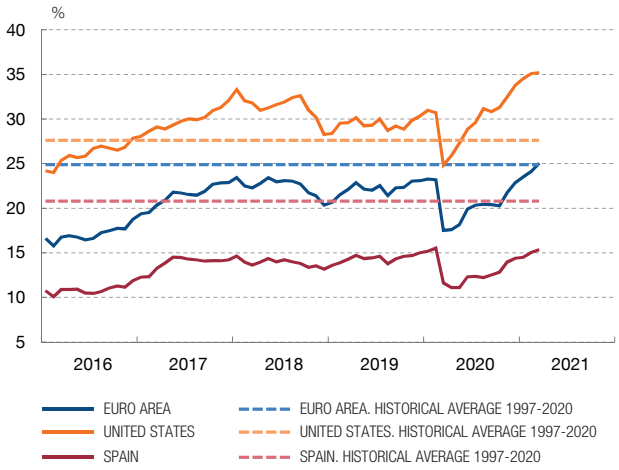


2 CORPORATE BOND SPREADS AGAINST THE SWAP CURVE (LEFT) (a) AND 10-YEAR GOVERNMENT DEBT SPREAD VS GERMANY (RIGHT)



3 VOLATILITY

4 CYCLICALLY ADJUSTED PER (c)



SOURCES: Robert J. Shiller and Thomson Reuters Datastream.

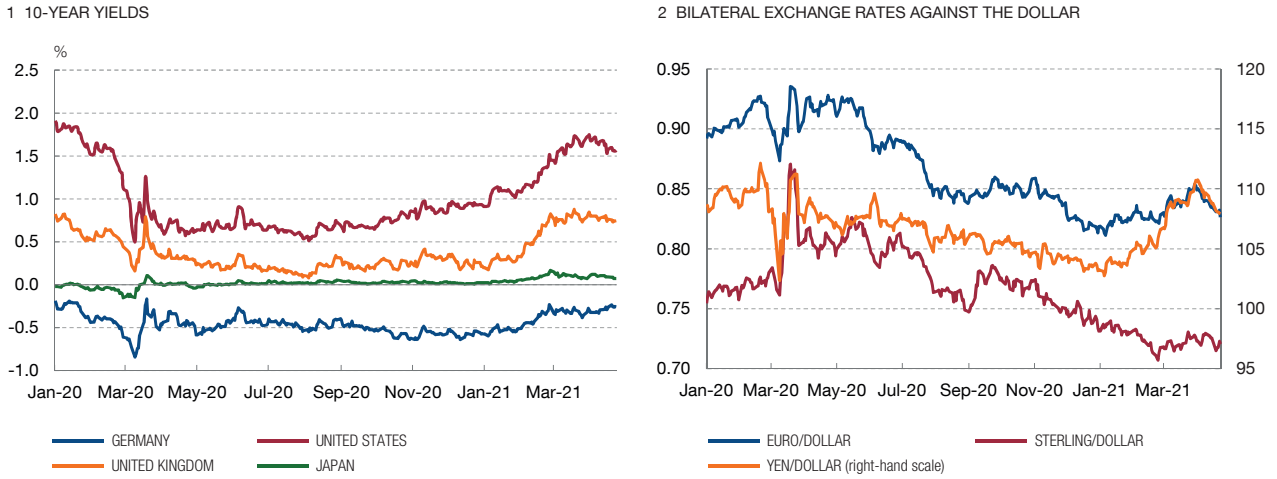
a High yield: ICE Bank of America Merrill Lynch High Yield index. Investment grade: ICE Bank of America Merrill Lynch Corporate index.
b Average three-month volatility of USD/EUR, USD/GBP and JPY/USD.
c The cyclically adjusted PER is calculated as the ratio between the share price and the 10-year moving average for earnings.

Long-term yields on higher-rated sovereign debt have risen in the year to date, particularly in the United States. These developments have been shaped by lower risk aversion, more favourable economic expectations, an increase in expected inflation and fiscal spending packages, which will require new issuances by treasuries. Because these act as safe-haven assets, the returns demanded on them declined significantly during the height of the uncertainty at the onset of the

Chart 1.4

LONG-TERM YIELDS HAVE RISEN FOR HIGHER-RATED SOVEREIGN BONDS AND THE US DOLLAR HAS CEASED ITS DEPRECIATION SINCE THE TURN OF THE YEAR

The long-term yields of higher-rated sovereign bonds have risen, especially in the United States and the United Kingdom, shaped by lower risk aversion, more favourable economic expectations, an increase in expected inflation and the fiscal spending packages. Lower risk aversion has also helped the US dollar to continue its depreciation in the final stages of 2020, although that trend seems to have reversed since the start of 2021 owing to improved economic recovery expectations in the United States.



SOURCE: Thomson Reuters Datastream.

pandemic. With the exception of Japan, these yields remain below the levels observed in early 2020 (see Chart 1.4.1). This lower risk aversion has also been conducive to the sustained depreciation of the US dollar, which also acts as a safe-haven asset, although that trend looks to be reversing this year due to better expectations for economic recovery in the United States (see Chart 1.4.2).

In euro area sovereign bond markets, long-term yield spreads between countries have continued at reduced levels in the first quarter of 2021. This has been driven by the ECB purchase programmes, particularly the PEPP (which was extended in December following the recalibration of monetary policy instruments), and by the agreement on the EU's recovery fund (see Chart 1.3.2).

In the final stretch of 2020, the strongest gains on stock market indices came in those sectors that had experienced the largest losses since the onset of the pandemic. Accordingly, prices in the banking sector have accumulated stronger gains since early November than other sectors, such as telecommunications or technology. In keeping with these developments, and as a consequence of the different sectoral composition of the stock markets, European indices, particularly the IBEX 35, have posted more robust gains than the S&P 500.[13] However, the indices of more cyclical sectors (including the banking index) and some of the

13 In particular, the banking sector has a weight of approximately 5% on the S&P 500, 6% on the EURO STOXX 50 and 22% on the IBEX 35, while the weight of the technology sector is 28%, 13% and 6%, respectively.

European overall indices remain below pre-crisis levels. By contrast, the US index has reached all-time highs (see Chart 1.3.1).

In recent months, corporate credit risk premia have declined more sharply in the high-yield segment than in the investment-grade segment, all the segments now standing close to pre-pandemic levels. This performance appears to have been underpinned by central banks' asset purchase programmes and by lower risk aversion (see Chart 1.3.2). In the United States, where the central bank includes investment-grade and high-yield bonds in its purchase programme, issuances of both types of instrument ended 2020 at record highs, while in the euro area and Spain this was only true of the investment-grade segment. Since the beginning of 2021, US and euro area issuances in the high-yield segment already exceed those of previous years.

The number of corporate bond credit rating downgrades has declined significantly in recent months, although a slight rebound was observed in March. This reduction has also been observed in the case of Spanish companies. Since the onset of the crisis, the cumulative number of downgrades worldwide and in the euro area is lower than that observed in the equivalent period following the collapse of Lehman Brothers in September 2008. Nonetheless, a notable proportion of issuances with BBB rating continues to have a negative outlook.

The rapid recovery in the prices of risk-bearing assets in certain segments has raised concerns regarding their sustainability, particularly if certain risks materialise. Price corrections could be triggered for some assets – particularly those with the most evident signs of high valuations – by a worsening of the epidemiological situation, a downward revision of corporate earnings expectations or a premature withdrawal of State support measures. In particular, the cyclically adjusted price-to-earnings ratio (PER) of S&P 500 firms is currently high, standing above its historical average. This is largely due to the price performance of a handful of large firms, particularly in the technology sector. By contrast, equity prices in the euro area and Spain do not appear high compared to the cyclically adjusted earnings of the listed companies (see Chart 1.3.4). The credit risk premia on corporate debt markets are low relative to the historical relationship with their fundamentals, particularly in the high-yield segment, which may be linked, among other factors, to the effect of asset purchase programmes run by central banks (see Box 1.1).

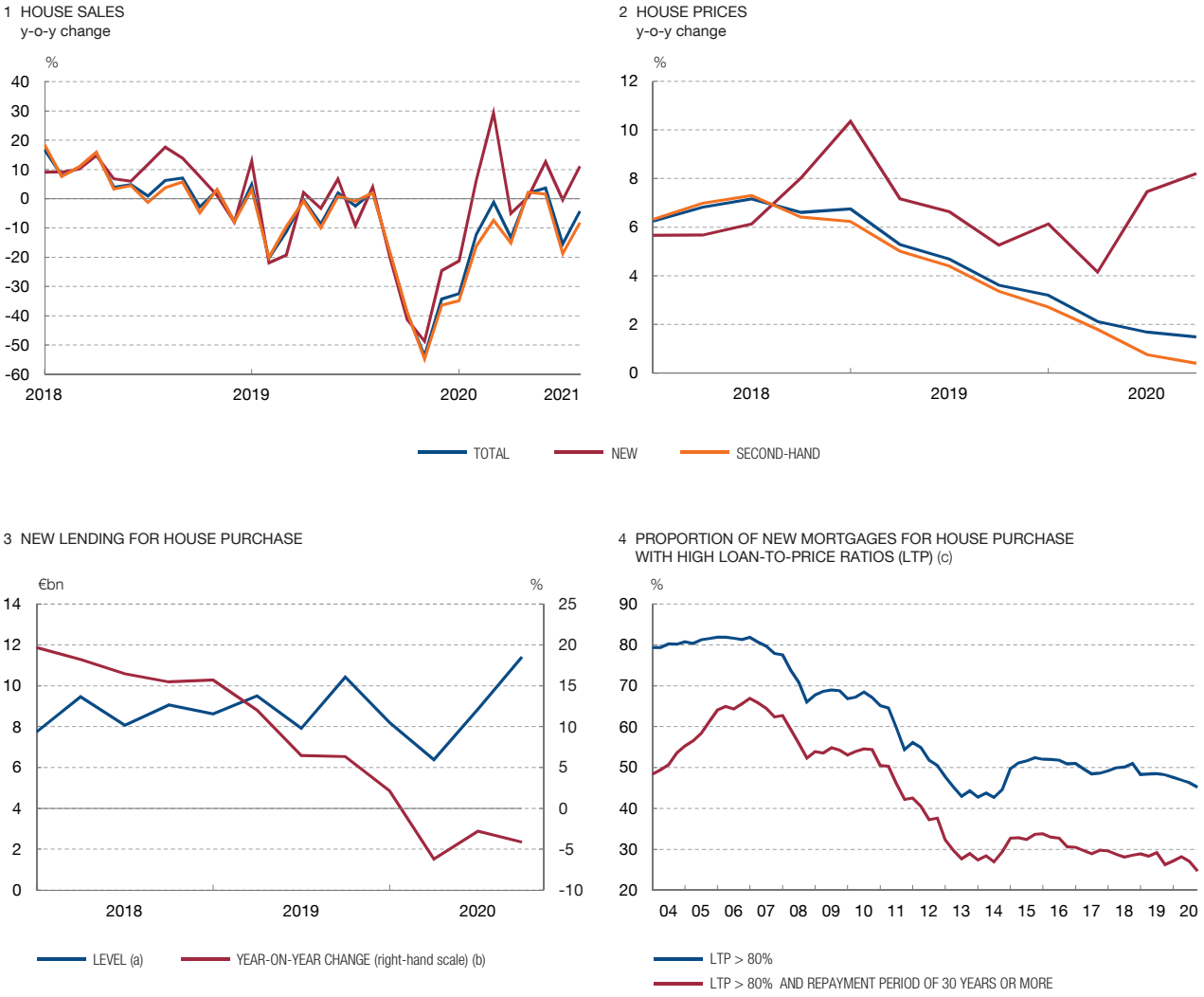
1.2.2 The real estate market in Spain

House sales fell by 17.7% in 2020, weighed down by a sharp fall-off during the initial months of the pandemic. Following the stringent lockdown last spring, house sales began a gradual recovery trajectory that extended until the end of the year, underpinned by the release of the demand that was pent up during the first

Chart 1.5

PROPERTY TRANSACTIONS HAVE BEEN IMPACTED BY THE COURSE OF THE PANDEMIC, AS HAS NEW LENDING FOR ITS PURCHASE, WHILE PRICES HAVE CONTINUED TO DECELERATE

House sales ended 2020 with a negative balance, weighed down by the slump in transactions during the early months of the pandemic. Despite this context, house prices did not record widespread declines, but rather continued the pre-existing slowdown. The new housing segment registered a more favourable trend, which may reflect a certain shift in the preferences of agents. New lending for house purchase recovered significantly in 2020 H2, partially offsetting the decline recorded during the spring lockdown. Lending standards for new mortgages appear to have tightened slightly in recent quarters.



SOURCES: INE, Colegio de Registradores and Banco de España.

a Cumulative three-month data.
b Quarterly data. Four-quarter average.
c The loan-to-value data are incomplete and relate to a sample.

wave of COVID-19. This upward trajectory in transactions in 2020 H2 did not continue into early 2021; sales declined year-on-year in January and February (see Chart 1.5). The less favourable developments in transactions in the first two months of the year were concentrated in the second-hand housing and the multi-family housing segments. By regions, this reduced buoyancy was largely seen in the regions that tend to present higher transaction volumes. Meanwhile, sales of new or single-family

homes have demonstrated greater resilience since the start of the recovery than those of second-hand or multi-family housing. This pattern could continue if the apparent shift in buyer preferences – towards larger homes with open spaces and located in peripheral areas of cities – takes root, insofar as new or single-family housing is able to adapt flexibly to these changes.

House prices continued the trend slowdown that began prior to the pandemic, with no across-the-board declines observed thus far. The house price index rose 1.5% year-on-year in 2020 Q4, with a notable acceleration in new-build prices (8.2%), which may, at least in part, reflect investment decisions taken before the crisis as well as the above-mentioned shift in demand trends (see Chart 1.5.2). By contrast, second-hand house prices continued to slow (0.4%). The resilience of residential property prices to date stands in contrast to the sharp declines observed during the global financial crisis. Several factors are behind this. First, the current crisis was not prompted by an oversized real estate sector or the financial excesses thereof. Further, forced property sales have so far been kept in check thanks to the introduction of income protection mechanisms – such as mortgage moratoria and furlough schemes – for those households most affected by the crisis, together with the far more stringent credit standards for house purchase in recent years and lower levels of indebtedness. Lastly, prior to the onset of the pandemic there were no clear widespread signs of property market overvaluation. The future evolution of house prices is also affected by the uncertainty about the intensity of the recovery in economic activity.

In the real estate credit market, new loans for house purchase have also recovered somewhat, while credit standards appear to have tightened slightly. 2020 H2 saw a significant recovery in the volume of mortgage loans for house purchase, which helped to partially offset the heavy fall-off in such lending in the months following the outbreak of the pandemic (see Chart 1.5.3). However, this performance has been accompanied by a slight tightening of credit standards. Accordingly, the proportion of new loans with a loan-to-price ratio (LTP) of over 80% has declined (see Chart 1.5.4). Among these, the share of mortgages with long repayment periods has decreased. Moreover, the interest rate spread against the risk-free reference rate held practically unchanged in 2020. These developments suggest that institutions remain somewhat cautious when it comes to granting such credit.

The crisis has affected the commercial real estate market more acutely than the residential market, which is consistent with its greater sensitivity to the business cycle and changes vis-à-vis commercial distribution channels, with online sales accounting for a larger share. The number of transactions has plunged and prices have declined across the board, albeit moderately. Against this backdrop, new mortgages secured by commercial real estate show no sign of recovery and credit standards have tightened. This is reflected in, for instance, the decline in the share of mortgages with a high LTP ratio.

1.3 The non-financial sectors

1.3.1 Non-financial corporations and households

The COVID-19 crisis is having a severe impact on corporate earnings. On the information available for the sample of firms contributing to the Central Balance Sheet Data Office Quarterly Survey (CBQ), which are predominantly large firms, the percentage of companies with a negative ROA[14] increased to 34% in 2020, up 8 pp compared to 2019[15] (see Chart 1.6.1). According to the microsimulations conducted,[16] the drop in profitability was particularly steep for SMEs and, in particular, in the hospitality and entertainment, motor vehicles, wholesale and retail trade and transportation and storage sectors.

The degree of financial pressure borne by firms as a result of their indebtedness also seems to be increasing. The aggregate debt-to-GDP ratio increased by 12 pp over 2020 (see Chart 1.6.2). Slightly two-thirds of this increase would be due to the decline in output. These developments also appear to have resulted in an increase, albeit far more muted, in the interest burden ratio, thanks to low financing costs. On CBQ data, the performance of firm-level debt in 2020 indicates that the heightened financial pressure borne by this sector owes more to their lower earnings than their increased net debt.[17] Box 1.2 examines the uneven developments in bank debt across firms that presented different financial characteristics prior to the outbreak of the crisis. Box 1.3 explores measures geared towards boosting firms' solvency, in reaction to these recent developments.

The degree of final pressure on households also appears to be rising, particularly among those households most affected by the crisis. However, the public support measures seem to have helped to considerably mitigate these effects thus far. According to the Spanish Survey of Household Finances,[18] the percentage of more vulnerable households was higher in the sectors hardest hit by the pandemic.[19] In any event, social transfers in the form of unemployment

14 Return on assets = (ordinary net profit + financial costs) / assets net of non-interest-bearing liabilities.

15 See "The impact of the COVID-19 crisis on the financial position of non-financial corporations in 2020: CBSO-based evidence", Analytical Article, *Economic Bulletin* 4/2020, Banco de España.

16 Microsimulations were conducted based on corporate information sourced from the integrated CBSO database for 2018 and 2019 to estimate the behaviour of firms in 2020.

17 See Box "Recent developments in the indebtedness of the non-financial corporate sector" in the Analytical Article "Results of non-financial corporations to 2020 Q4. Preliminary year-end data", *Economic Bulletin,* 1/2021, Banco de España.

18 The latest available Spanish Survey of Household Finances relates to 2017. However, the household-level information that the survey provides on wealth distribution among Spanish households tends to be relatively stable over time.

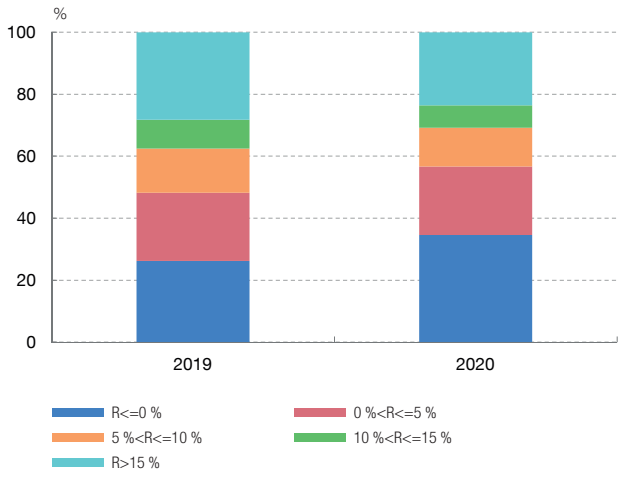
19 See "The financial position of the workers most affected by the pandemic: an analysis drawing on the Spanish Survey of Household Finances", Analytical Article, *Economic Bulletin* 3/2020, Banco de España.

Chart 1.6

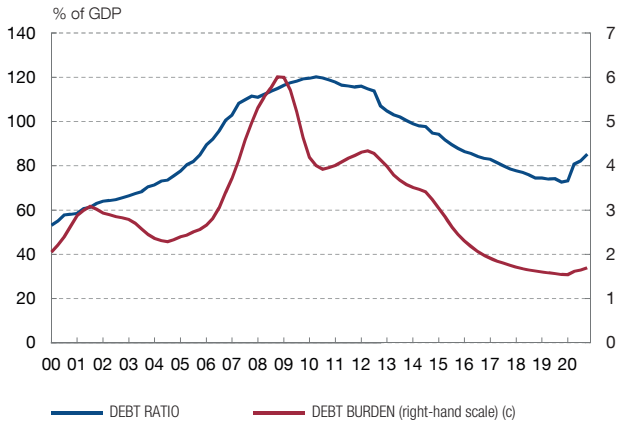
THE COVID-19 CRISIS HAS ADVERSELY AFFECTED THE PROFITABILITY OF FIRMS, WHICH HAVE INCREASED THEIR INDEBTEDNESS AFTER A DECADE OF DELEVERAGING

The COVID-19 crisis has entailed a sharp deterioration in corporate earnings. On the information available for the sample of firms reporting to the Central Balance Sheet Data Office Quarterly Survey, the percentage of them with a negative ordinary return on assets increased to 34% in 2020, up 8 pp on the previous year. Firms' liquidity needs have been largely covered by recourse to credit, supported by the measures deployed by authorities, which, together with a sharp contraction of GDP, has resulted in an increase in the debt ratio and, to a lesser extent, debt burden for the first time in a decade.

1 PERCENTAGE OF FIRMS PER RETURN ON ASSET RANGE (a) (b)



2 DEBT RATIO AND DEBT BURDEN



SOURCE: Banco de España.

a The data are from the Central Balance Sheet Data Office Quarterly Survey (CBQ). Return on assets = (Ordinary net profit + Financial costs) / Assets net of non-interest-bearing borrowing.
b R: ordinary return on net assets.
c The debt burden of firms only includes interest payments, given the difficulty of reliably estimating the amount of repayment instalments.

benefits, furlough schemes[20] and the minimum living income[21] have helped cushion the drop in income for these households. Likewise, the moratoria on the debt burden of households most affected by the crisis, along with those on rent payments and energy consumption, seem to have eased the pressure on these lower income households, albeit temporarily. Both the aggregate debt ratio and the debt burden in terms of gross disposable income (GDI) increased slightly in 2020. This owed to the decline in GDI (which was concentrated among certain groups) being largely offset by the decrease in the outstanding stock of credit and financial costs (see Chart 1.7.1).

Despite the crisis, the aggregate wealth of households has continued to rise thanks to saving and the increase in real estate assets, although there is a high

20 At end-March 2021, the number of individuals subject to furlough schemes (ERTE by their Spanish acronym) stood at 743,628.

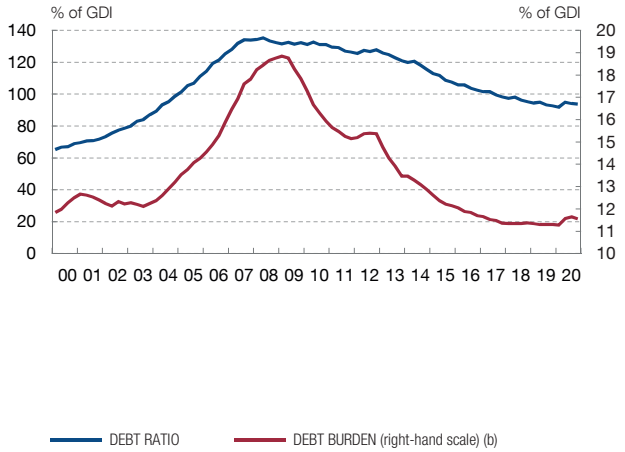
21 In March 2020, the minimum living income had been granted to more than 203,000 households comprising 565,000 individuals.

Chart 1.7

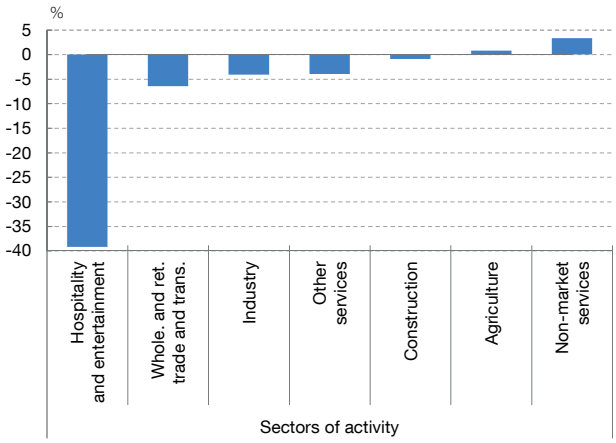
ALTHOUGH HOUSEHOLDS CONTINUE REDUCING THEIR DEBT, THE FALL IN INCOME HAS DRIVEN UP THE AGGREGATE DEBT RATIO OF THIS SECTOR

Despite the pandemic, Spanish households have continued reducing their debt in aggregate terms. However, the decline in income, which has been concentrated among workers with the closest ties to those industries hardest hit by restrictions on social interaction, has driven up the debt-to-GDI ratio.

1 DEBT RATIO AND DEBT BURDEN



2 ACTUAL SOCIAL SECURITY REGISTRATIONS, MARCH 2021 (b)
Change compared with February 2020



SOURCE: Banco de España.

a The debt burden of households comprises interest payments and debt repayments.
b Social Security registrations are seasonally adjusted.

degree of heterogeneity in income and wealth levels within the sector. The household saving rate reached record highs, with most of the funds channelled towards deposits. However, in all probability, the growth in the most liquid wealth was concentrated among the least vulnerable households. The negative impact on households' employment income has varied markedly depending on the sector of employment (see Chart 1.7.2). Box 1.2 also examines the heterogeneous response to the COVID-19 crisis of bank debt among individuals with different characteristics in terms of income, employment status and other attributes that provide insight into the fragility of their income.

1.3.2 General government in Spain

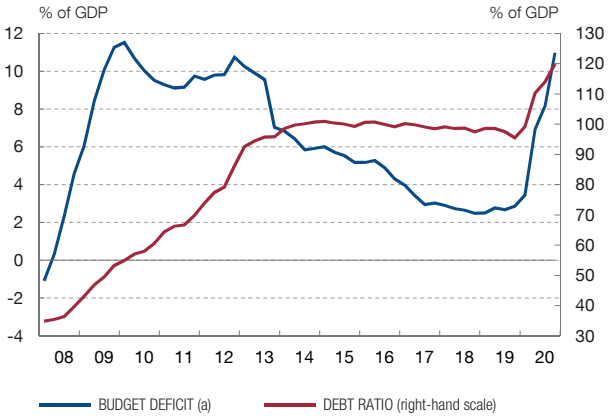
The year 2020 ended with a pronounced deterioration of public finances in Spain owing to the effects of the pandemic and the associated containment measures. At end-2020, the general government deficit stood at 11% of GDP, notably up on the 2.9% recorded in 2019, and public debt reached 120 % of GDP (see Chart 1.8.1). The reclassification of SAREB as part of the public

Chart 1.8

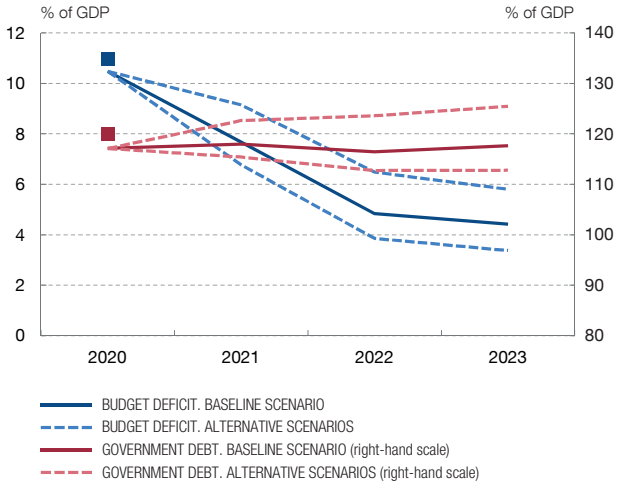
THE COVID-19 PANDEMIC HAS NOTABLY IMPAIRED THE GENERAL GOVERNMENT FINANCIAL POSITION IN SPAIN

The resolute action taken by fiscal authorities in 2020 has been effective in counteracting the adverse economic effects of COVID-19. However, the resulting deterioration of public finances means greater vulnerability to potential additional shocks. In the short term, favourable financing conditions and European fund programmes should allow the expansionary fiscal policy stance to continue. The main risk for public finances continues to be a setback in resolving the health crisis that gives rise to more pronounced and persistent effects on economic activity. In the medium term, once the effects of the crisis are overcome, a credible and sustained consolidation process is required.

1 GENERAL GOVERNMENT FINANCIAL POSITION



2 BANCO DE ESPAÑA FORECASTS OF PUBLIC DEFICIT AND DEBT (b) (c)



SOURCES: IGAE and Banco de España.

a Four-quarter cumulative data.
b The budget deficit and government debt estimates for 2020 and 2021-2023 do not include the assumption of Sareb debt by the general government, a fact known after the preparation of the forecasts.
c Macroeconomic scenarios of the Banco de España projections published on March 23, 2021. The squares of 2020 correspond to the data published by the IGAE six days later.

sector[22] contributes 0.9 pp to the rise in deficit and 3 pp to the increase in public debt. The rest is explained by both a decline in revenue (-5%) and, above all, an increase in spending (10%). The former was marked by the impact of the fall-off in activity on tax bases and by the tax moratoria introduced to help firms experiencing liquidity problems; in the case of personal income tax, these were partly offset by the general government measures to support the income of private agents. In turn, spending increased as a result of the measures adopted in response to COVID-19.

The latest Banco de España projections, published in March and closed before the publication of the 2020 year end data[23], pointed to a gradual correction of

22 The reclassification follows the criterion of Eurostat and it takes place after a negative evolution of its financial situation, marked by a continuous series of losses in later years. In accounting terms, this operation is registered as a transfer of capital from the public sector to the rest of resident agents in 2020, for the negative net accounting value of SAREB, and a rise in public debt, for an amount equal to the liabilities of SAREB.

23 See Macroeconomic scenarios for the Spanish economy (2021-2023).

the general government balance in 2021-2023. The persistence of COVID-19 has led to the extension until 30 May 2021 of the extraordinary measures relating to furlough schemes and temporary discontinuation of activity schemes for the self-employed. The expiries of loan guarantee facilities have also been extended and new direct support measures for firms have been introduced. Later, a new package of measures has been approved to support firm solvency, including direct aid, for a total amount of €11 billion. However, a series of factors will help partially correct the deficit this year. First, a significant recovery in government receipts is expected thanks to the projected improvement in economic activity, especially in 2021 H2, and, to a lesser extent, increased tax revenue stemming from the new income measures budgeted for 2021. Second, the progressive disappearance of the bulk of the measures approved in 2020 should result in far more moderate spending growth.

Overall, in 2021 the general government balance could stand between -6.8% and -9.1% of GDP, depending on whether the macroeconomic scenario is closer to the baseline scenario or the severe scenario envisaged by the Banco de España in March (see Chart 1.8.2). The correction of the imbalance in public finances looks set to continue in 2022 and 2023 thanks to the expected cyclical improvement. Nonetheless, under any of the scenarios the deficit would remain above 3% of GDP in 2023. Government debt will hold at very high levels under any of the envisaged scenarios.

The European authorities' response to the crisis will constitute one of the main catalysts for activity in the short and medium term. The monetary measures adopted by the ECB have helped ward off tensions in the sovereign debt markets, making for highly favourable financing conditions. In the fiscal realm, the launch of the NGEU, which could finance investment projects for up to €140 billion in Spain in the next six years, will allow the country's fiscal policy to maintain an expansionary stance.

Thereafter, rebuilding Spanish public finances will require considerable effort. Authorities should devise, without further delay, a credible and sufficient fiscal consolidation programme over a long period, with implementation commencing once the health and economic crisis ends. This is needed to curb the spread of vulnerabilities from general government to other economic sectors and to foster long-term growth.

1.3.3 Financial flows vis-à-vis the rest of the world and the international investment position

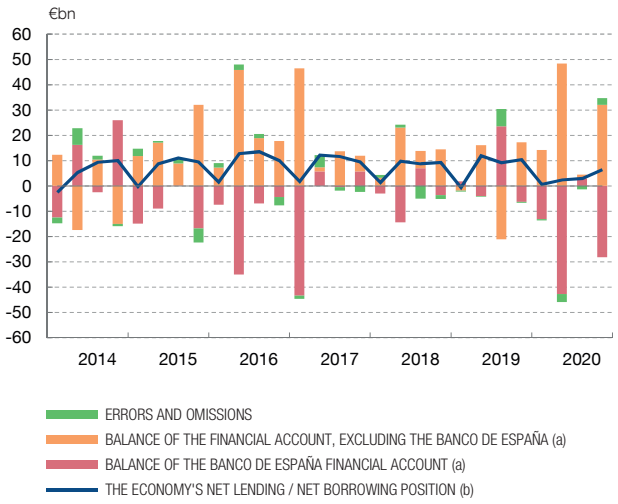
In the second half of 2020, acquisitions of foreign assets by residents moderated very significantly relative to the first half of the year, while non-residents disinvested in the Spanish economy. This resulted in a reduction in the financial account surplus of the Spanish economy's balance of payments in half

Chart 1.9

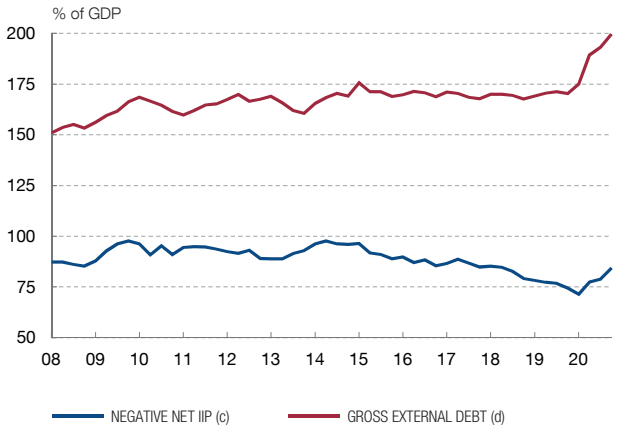
IN RECENT QUARTERS, THE SPANISH ECONOMY'S NEGATIVE NET INTERNATIONAL INVESTMENT POSITION AND GROSS EXTERNAL DEBT IN TERMS OF GDP HAVE RISEN, WITH THE LATTER REACHING RECORD HIGHS

In 2020 H2, the current account surplus in the Spanish economy, excluding the Banco de España, moderated with respect to H1. This owed to purchases of foreign assets by resident sectors standing well below those of H1. The negative net international investment position (IIP) grew in GDP terms owing primarily to the decline in output. For its part, Spain's gross external debt in terms of GDP rose in 2020 to record highs due to the decline in output, but also as a result of the rise in external liabilities flows, specifically of the Banco de España and general government, and valuation effects.

1 THE ECONOMY'S NET LENDING/NET BORROWING POSITION AND FINANCIAL TRANSACTIONS WITH THE REST OF THE WORLD



2 NEGATIVE NET IIP AND GROSS EXTERNAL DEBT



SOURCE: Banco de España.

a Net change in assets less net change in liabilities.
b A positive (negative) value in the series denotes a credit (debit) position.
c The negative net IIP is the difference between the value of the external liabilities of the resident sectors and that of the assets to the rest of the world.
d External debt comprises the balance of all liabilities that entail future repayment of principal, interest or both (i.e. all financial instruments, except equity securities, financial derivatives and monetary gold bullion).

(€33.6 billion, down from €62.5 billion in the first half of 2020), excluding Banco de España (see Figure 1.9.1). On the asset side, this different behaviour in the first and second half of the year is mainly explained by the disinvestments in the heading of *another investment* worth €47.1 billion (compared to investments of €62.3 billion in the first half of the year), in particular in short-term deposits of monetary financial institutions. On the liability side, the disinvestments of long-term government debt (€23.6 billion) and of short-term deposits from monetary financial institutions (€25.7 billion) stand out. The financial account of Banco de España again presented a debtor position, although smaller in the second half of 2020 than in the first, linked to purchases of Eurosystem assets (the APP and PEPP programmes). This translated into a bulging increase in the TARGET debtor balance throughout 2020, worth €108 billion.

The Spanish economy's negative net international investment position (IIP) increased slightly in 2020 (€ 19.6 billion), while gross external debt has

increased considerably. In 2020, the negative net IIP rose by 10 pp of GDP to 84.4%, as a result not only of the increase in the numerator, but especially because of the decrease in the denominator (see Chart 1.9.2). The country's gross external debt grew in the same period by €115.2 billion, triggered by the rise in the Banco de España's external liabilities flows and, to a lesser extent, those of general government, and by the increase in the market value of these instruments. Gross external debt stood at 199.7% of GDP, an all-time high and up 29.3 pp on the figure at end-2019. The current favourable financial conditions make it easier to finance Spain's external debt, although the high level of such debt represents an element of vulnerability to a potential tightening of conditions on international financial markets. While the composition of the debt, with the public sector accounting for a large share and lengthy average repayment periods, helps mitigate these risks to some extent, its high level could magnify the impact of the financial stability risks considered in this FSR.

Box 1.1

RECENT DEVELOPMENTS IN CORPORATE RISK PREMIA AND THEIR DETERMINANTS

This box analyses the extent to which recent developments in corporate credit risk premia in the euro area and in the United States, both for the investment-grade and high-yield segments, are explained by the historical relationship with their fundamentals. This is done using corporate bond valuation models based on four factors: expected enterprise value, the uncertainty around this value, corporate sector leverage and the degree of investor risk aversion.[1] The risk premia are measured for each segment as the corporate bond yield spread over the swap curve in the euro area and in the United States.[2] The enterprise value is proxied by the average earnings per share expected by analysts for the firms comprising the corresponding area's stock market index (EURO STOXX 50 or S&P 500) in a 2 or 3-year time frame, while the uncertainty is captured using the standard deviation of the analysts' forecasts for those earnings. Leverage is measured through the debt-to-GDP ratio of the non-financial business sector in each area[3] and, lastly, investor risk aversion is proxied by the implied volatility of the stock market indices (VIX and VSTOXX).[4] The model is estimated at a monthly frequency for the period from January 2001 to March 2021. As was to be expected, the models estimated suggest that an increase in expected earnings leads to lower risk premia, while an increase in uncertainty, leverage or risk aversion causes the risk premia to rise.[5]

Charts 1 to 4 show, in deviations relative to the historical average and based on the models estimated, the breakdown of the credit risk premia for both segments (investment-grade and high-yield) and for both areas (euro area: Charts 1 and 2; United States: Charts 3 and 4) in 2020 and Q1 2021.[6] The results show that prior to the pandemic these risk premia stood below their historical average in most segments. The portion unexplained by the model[7] was negative in the United States and was larger in absolute size for high-yield bonds in that region. This means that these risk premia stood below the values explained by their fundamentals, which is probably why some analysts viewed risk premia compression as a financial stability risk.

Following the outbreak of the crisis, most factors contributed to an increase in credit risk premia, especially investor risk aversion, particularly in the high-yield segments. With the exception of euro area investment-grade corporate bonds, the increases observed in these risk premia during the initial months of the crisis were more moderate than the historical relationship with their fundamentals would suggest. This is captured in the charts as a more negative unexplained component, which became very large in both market segments in the United States and in the euro area high-yield market.

Over the subsequent months, the explained component tended to gradually decrease, driven largely by the lower risk aversion and lower uncertainty, which has a larger impact in the high-yield segments. These changes in the explanatory variables appear to be partly linked to the support policies deployed by the economic authorities during the crisis. However, part of their impact, in particular the effect of the central bank asset purchase programmes, is not reflected, which would account for why the unexplained portion became more negative.

The latest figures show that those unexplained components, in absolute value, stood at around 15 bp and 112 bp in the investment-grade and high-yield segments, respectively, in the euro area, and at 115 bp and 185 bp in corresponding segments in the United States. In the US markets, these levels are close to the peak for the series since 2001 and are higher than those observed in the years prior to the global financial crisis.

In short, the current levels of credit risk premia are lower than might be expected judging by the historical

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1 For further details on the model, see J. M. Gálvez and I. Roibás (2021), "Asset price misalignments in financial markets: an empirical analysis", *Working Paper,* Banco de España (forthcoming).

2 Specifically, the ICA Merrill Lynch high yield (B) and investment grade (AAA-AA) indices for the euro area and the United States are used.

3 For the United States, the corporate debt information published on the website of the Federal Reserve Bank of St. Louis (FRED) is used, and for the euro area, the corporate debt information published by Eurostat.

4 In particular, the first main component of the VIX and VSTOXX is taken, which explains 73% of the change in both.

5 The estimated coefficients for the corporate bond valuation models are significant at 1%.

6 The estimated value of the corporate credit risk premium is calculated as a weighted average of the value estimated by the various models, which include the explanatory variables of enterprise value and uncertainty over different time frames (2 or 3 years), where the weightings reflect the predictive power of each model (in terms of R^2).

7 Although in the charts the portion not explained by the model is calculated in the form of deviations relative to the average, it is important to note that, by construction, the average of this component is close to 0.

RECENT DEVELOPMENTS IN CORPORATE RISK PREMIA AND THEIR DETERMINANTS (cont'd)

Chart 1
BREAKDOWN OF CORPORATE RISK PREMIA (a)
INVESTMENT GRADE. EURO AREA

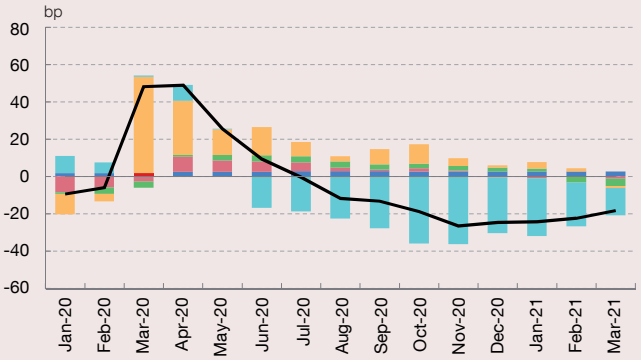


Chart 2
BREAKDOWN OF CORPORATE RISK PREMIA (a)
HIGH YIELD. EURO AREA

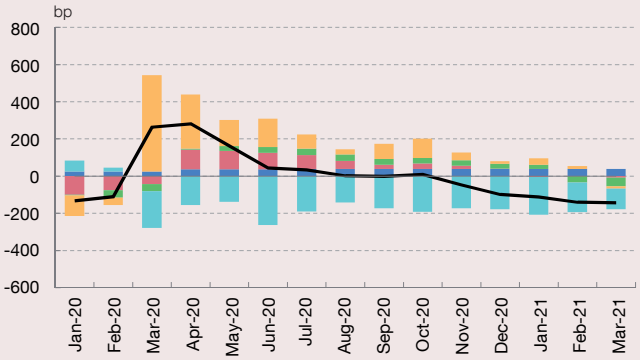


Chart 3
BREAKDOWN OF CORPORATE RISK PREMIA (a)
INVESTMENT GRADE. UNITED STATES

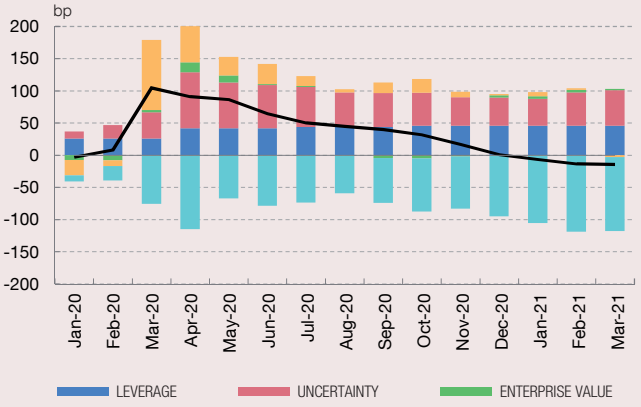
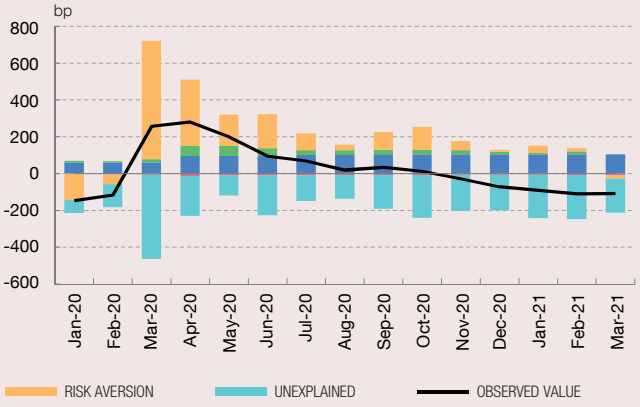


Chart 4
BREAKDOWN OF CORPORATE RISK PREMIA (a)
HIGH YIELD. UNITED STATES



SOURCE: Datastream.

a The breakdowns are based on a weighted average of different corporate bond valuation models. Risk aversion is the first component of VIX and VSTOXX. The unexplained factor is the difference between the observed value and the value predicted by the corporate bond model. The observed value of the risk premia and the breakdowns are calculated as deviations relative to the historical average of the period January 2001 to March 2021 (for the United States) and the period November 2001 to March 2021 (for the euro area).

relationship between these and their explanatory variables, particularly in the case of US corporate bonds and those of the euro area high-yield segment. Much of this could be attributable to the public support measures, monetary policy in particular, or more optimistic expectations for future economic growth than those reflected in the variables of the models used. Thus, any potential adverse changes to investor expectations regarding the economic performance or the duration of the public support measures could lead to corrections in corporate bond prices, which would have a negative impact on the financing conditions for the issuers of these securities and on the value of bondholders' portfolios.

Box 1.2

HETEROGENEITY IN DEVELOPMENTS IN THE BANK DEBT OF INDIVIDUALS AND FIRMS DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic is having a highly uneven impact both on firms and on individuals, depending on their links with the economic activities more or less affected by the health situation. However, the differences that existed prior to the crisis, in terms of financial strength (for firms) or income level, wealth and job stability (for individuals), interact with the income shock prompted by the pandemic and could generate differential effects in terms of financing needs and impairment of ability to pay.

Those agents whose income is relatively more impaired may have to resort to more debt to cover their short-term expenses, which would mean, ceteris paribus, an increase in the financial exposures assumed by the funding providers, but it would avert second-round effects on economic activity by sustaining consumption and investment, and would increase the likelihood of firms and jobs being preserved.

However, if the deterioration of longer-term expectations for income generation proves sufficiently severe, a contraction of solvent demand for credit, or a more restrictive supply-side response in the face of heightened risk perception, could lead to a reduction of debt in these sectors. Ceteris paribus, the credit exposures immediately assumed by financial intermediaries with these counterparties would be lower, but the possibility of business closures and sharp contractions in consumption by some households could increase. Consequently, determining which of these two potential theoretical patterns is predominating is an empirical matter.

Although the support measures, such as payment moratoria and ICO guarantees for business credit (analysed in greater detail in Boxes 2.1 and 2.2), may facilitate access to bank credit for the most affected agents, the ultimate distribution by type of firm and household will again depend on the relative behaviour of supply and demand.

The Banco de España's Central Credit Register (CCR), in combination with other data sources such as the Banco de España's Central Balance Sheet Data Office and the Mercantile Registries (CBB database), contains sufficiently disaggregated information to conduct a preliminary study on the heterogeneity in the response of the bank debt of different types of individuals and firms to the COVID-19 pandemic.

As Chart 1 shows, there are significant differences in credit growth across the sectors of activity, with the rate of change standing 5.8 pp higher in the most pandemic-sensitive sectors.[1] The use of ICO guarantees appears to be associated with higher growth in lending to firms (close to 30 pp higher both for all sectors and for the most sensitive sectors).[2] The business characteristics assessed were the firms' age, capital ratio (equity-to-assets), average cost of debt, ROA and labour productivity (net revenue per employee).[3] For each of these, the firms were divided into two groups – high and low – pursuant to their position relative to the median of the distribution, calculating the weighted rate of change of the relevant variable for each of the two groups.

It can be observed that the rate of change in credit has been somewhat higher for younger firms; higher also for firms that have a lower average cost of debt and those that are more profitable or more productive; and considerably higher for less indebted firms (see Chart 1). These differences in behaviour across non-financial corporations with different levels of financial strength are more pronounced when only the sectors most sensitive to the effects of the pandemic are analysed. All of which would suggest that, broadly speaking, it was not the most vulnerable firms that increased their bank debt most in the past year; instead priority appears to have been given to containing financial risks, increasing the exposure to stronger firms. Significant demand-side factors are likewise evident in the stronger credit growth in sensitive sectors and among the youngest firms (older firm age appears to be associated with lower growth). These results also suggest that, in the absence of support measures, lending to the more vulnerable firms would have presented a larger negative growth differential.

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1 In this study, the following sectors are considered sensitive: manufacturing (excluding the manufacture of food products, beverages and tobacco); retail and wholesale trade; repair of vehicles; transportation and storage; hospitality; and arts, entertainment and recreation. This is an a priori sensitivity classification based on the nature of the activity, rather than an ex-post measure of the degree of impact in 2020.

2 Chart 3 of Box 2.1 examines the differences in the characteristics of the firms that have made use of ICO guarantees relative to the general population of firms, showing that the former generally present a higher risk profile.

3 The CBB database information corresponds to 2018 (the latest date available with a representative sample of firms), but based on the macroeconomic data it seems reasonable to assume that the financial position of firms held stable in 2018-2019. This data availability also means that the study only covers firms that existed prior to 2020.

Box 1.2

HETEROGENEITY IN DEVELOPMENTS IN THE BANK DEBT OF INDIVIDUALS AND FIRMS DURING THE COVID-19 PANDEMIC (cont'd)

Chart 1
YEAR-ON-YEAR CHANGE IN BANK CREDIT IN 2020
DIFFERENCES BY CHARACTERISTICS OF FIRMS, ID, Business in Spain (a)

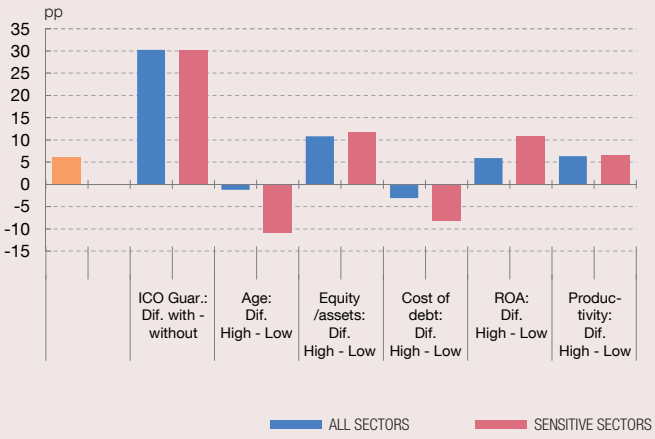
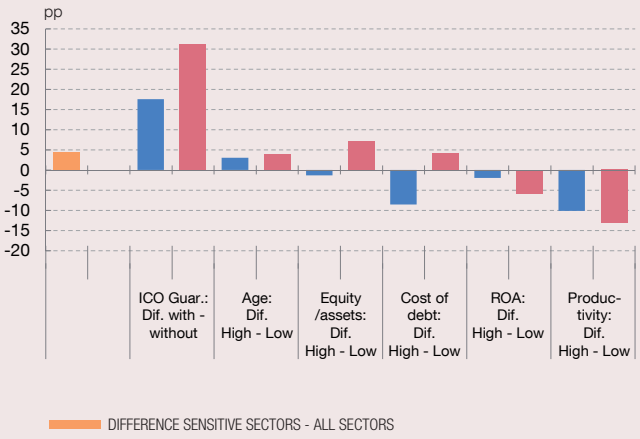


Chart 2
YEAR-ON-YEAR CHANGE IN PROBLEM BANK CREDIT IN 2020
DIFFERENCES BY CHARACTERISTICS OF FIRMS, ID, Business in Spain (a) (c)



ALL SECTORS · SENSITIVE SECTORS · DIFFERENCE SENSITIVE SECTORS - ALL SECTORS

Chart 3
YEAR-ON-YEAR CHANGE IN BANK CREDIT IN 2020
DIFFERENCES BY CHARACTERISTICS OF INDIVIDUALS
ID, Business in Spain (b)

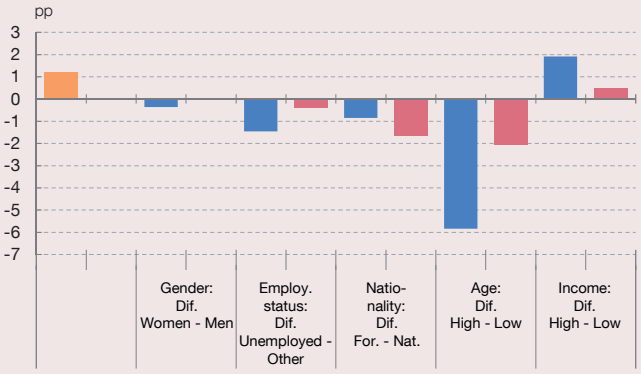
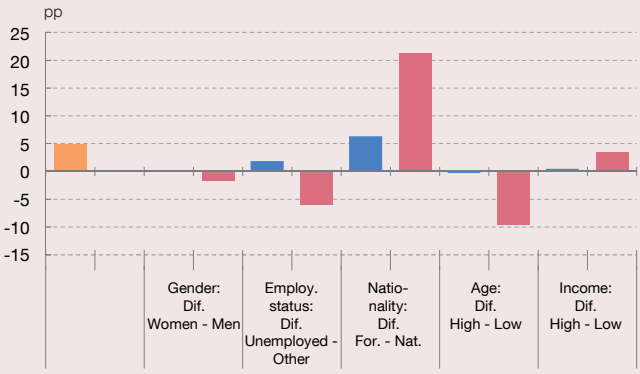


Chart 4
YEAR-ON-YEAR CHANGE IN PROBLEM BANK CREDIT IN 2020
DIFFERENCES BY CHARACTERISTICS OF INDIVIDUALS
ID, Business in Spain (b) (c)



TOTAL · WITH MORATORIA · DIFFERENCE WITH - WITHOUT MORATORIA

SOURCES: CIRBE, CBBE, INE and Banco de España.

a The differences are presented in pp for the rates of change between non-financial corporations classified into two groups (high and low) based on their position relative to the median for each financial variable within the study sample (e.g. high (low) ROA if above (below) the median). The financial characteristics are taken from the CBB database (last complete sample for 2018, meaning that the variables reflect the pre-crisis financial situation). The ICO Guarantee indicator divides the sample firms into those with and those without an ICO-backed loan. For this study, the sensitive sectors are manufacturing (excluding the manufacture of food products, beverages and tobacco); retail and wholesale trade; repair of vehicles; transportation and storage; hospitality; and arts, entertainment and recreation.

b The differences are presented in pp for the rates of change between individuals classified according to characteristics relating to their income and ability to pay. Each characteristic is dichotomous or allows the individuals to be classified into two groups (high and low) based on their position relative to the median. The Moratoria indicator identifies whether the individual has benefitted from a loan moratorium at any time in 2020. The income of the individual is attributed through matching with INE data on income by postcode. The differences based on the characteristics of individuals are compared both for the overall total and for individuals that have made use of at least one moratorium.

c Problem assets are those considered non-performing or with past-due payments, even when for less than 30 days. In Chart 2, for the sensitive sectors as a whole, the sample has been corrected for outliers since the sample available is smaller.

Box 1.2

HETEROGENEITY IN DEVELOPMENTS IN THE BANK DEBT OF INDIVIDUALS AND FIRMS DURING THE COVID-19 PANDEMIC (cont'd)

In terms of problem loans, which in this analysis are considered to be non-performing and past-due loans,[4] the growth differences for ROA and productivity stand out, with the better-positioned firms in each of these metrics recording lower rates of change (see Chart 2).[5] It is likewise observed that there has been a greater ex-post materialisation of credit risk among those firms that have made use of ICO guarantees. In the sensitive sectors, the association between greater financial strength (for instance, higher ROA or productivity) and a lower rate of change in problem loans is even more evident than in the overall population of firms. In sensitive sectors, firms with a higher cost of debt show a distinctly poorer performance in terms of loans. However, in some cases the disruption caused by the pandemic could mean that the pre-crisis financial position has less ex-post explanatory power for the credit risk assumed.[6] For example, across all sectors of activity, higher growth in problem loans is observed for firms that had a lower ex-ante cost of debt.

A similar exercise has been conducted for individuals, assessing the effect of age, gender, employment status, nationality and income level (proxied by the average income in the postcode area of residence), since there is previous evidence in the literature that young people, women, foreign workers and, naturally, the unemployed could have experienced the largest reductions in income during this crisis. In some cases, this owes to the type of a large part of the employment contracts among these groups and, in others, to their presence in the most affected sectors.

Chart 3 shows how the unemployed, foreigners, older individuals and lower-income earners have registered a larger decline in total credit. By contrast, there are no significant gender-based differences. The existence of moratoria has been conducive to a more favourable change in the stock of credit (with growth 1.2 pp higher for those individuals benefitting from moratoria). This is particularly true in these more vulnerable groups, where a less negative differential performance is observed, with the exception of foreigners, whose total credit declined to a greater extent among those making use of moratoria.

With regard to developments in non-performing and past-due loans (see Chart 4), relevant growth differences are only observed for the unemployed (with higher rates of change than other individuals) and foreigners. Overall, it seems that the individuals most economically affected by the pandemic have seen their bank credit decrease more than others, while, by contrast, this group has also recorded a smaller reduction in credit risk. Among the individuals who made use of moratoria, it is observed that unemployment and lower income are associated with lower rates of change in problem assets, which would indicate that the moratoria are preventing the emergence of credit problems in some of the more vulnerable segments. By contrast, the rate of change in problem loans among foreigners with access to moratoria has been relatively high.

Certain limitations of this analysis should be acknowledged. First, developments in bank debt do not offer a full picture of changes in the financial situation of households and firms. Further, the entire population of bank loans is not available due to the reporting threshold of €6,000 (cumulative by holder in the CCR) and the need to match the CCR with the CBB database – to which not all firms report – in order to segment credit by the firms' financial positions. However, this sample is sufficiently representative to assess whether any cross-sector imbalances in credit developments exist before they materialise to a significant degree.

The analysis indicates that developments in credit in 2020 would largely be shaped by risk considerations, with relatively weaker credit growth in the more vulnerable segments of firms and individuals, which also registered a poorer performance in terms of growth of problem loans. The analysis in this box, further complemented by Boxes 2.1 and 2.2, indicates that the existence of support programmes, such as the ICO guarantees and credit moratoria, appears to have had a significant effect in containing, but not cancelling out, these trends. In other words, in the absence of the support programmes, the groups of firms and households with a higher risk profile would probably have experienced credit constraints. Going forward, close monitoring is required to identity any potential credit constraints for viable firms, which could affect the path of economic recovery.

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4 The identification of Stage 2 credit – a more precise category than past-due for identifying loans whose quality has deteriorated significantly since initial arrangement but are not yet classified as non-performing – was introduced in the CCR in 05/2020. It is therefore not possible to study credit growth in this category with respect to 2019 and a past-due classification is used instead.

5 The finding that troubled assets declined most at those firms with a higher cost of debt appears to owe to the absence of other controls in this stylised analysis, and may be explained by these being the oldest outstanding payments or by the use of support measures to keep these troubled assets in check.

6 In Chart 2, the sample used for the sensitive sectors is corrected for outliers, i.e. large firms with a relatively favourable pre-crisis financial position that became troubled as a result of the crisis. Since aggregate reclassifications to troubled status remain moderate, the influence of the outliers increases. As more quarters of data become available, it will be possible to estimate the differences between the groups more robustly.

Box 1.3

BUSINESS SOLVENCY SUPPORT MEASURES

The economic literature highlights the fact that high corporate indebtedness can weigh down on investment, generating adverse effects on productivity and economic growth.[1] High indebtedness also entails a risk to financial stability. The COVID-19 crisis has given rise to an increase in corporate indebtedness which, against the backdrop of a still-uncertain outlook, may ultimately generate solvency problems in specific company segments.

Against this background, Royal Decree-Law 5/2021[2] envisages a series of extraordinary measures aimed at supporting business viability: (1) a specific-purpose direct aid fund totalling €7 billion,[3] (2) a range of tools to facilitate the restructuring processes of loans with a public guarantee to firms and the self-employed who should need it, including a facility worth €3 billion, (3) a recapitalisation fund of €1 billion for pandemic-affected companies and (4) the extension until end-2021 of the suspension of the obligation for insolvent debtors to initiate bankruptcy proceedings.

Regarding the direct aid, it poses at least two fundamental design challenges: (i) selection of aid recipient firms and (ii) incentives structure for participating firms. Not having an appropriate selection criterion could give rise to a poor redistribution of productive resources, keeping low-productivity firms going or providing support to companies that do not need it to reduce their debt level. Conversely, an unsuitable design could leave out companies that are viable but facing solvency problems. The heterogeneity of the distribution of business productivity, profitability and the debt ratio prior to the COVID-19 crisis (see Charts 1 and 2) points to a very different potential impact of the programme depending on the firms that are the ultimate recipients.

The introduction of sector-based eligibility criteria, by firm size and with regional compartmentalisation elements, in Royal Decree-Law 5/2021 is related to some extent to these optimal selection criteria; but their implementation will determine to what extent the criteria are ultimately observed, given that the level of indebtedness is not explicitly taken into account. This is a key measure for assessing business solvency. Further, it cannot be ruled out that there are viable companies with solvency problems arising from the crisis that are operating in sectors not among those most affected by the crisis and which could, therefore, remain outside the aid-eligible set. However, the subsequent amendment of the aid programme, empowering regional governments to extend the granting of aid to other sectors not initially envisaged in Royal decree-law 5/2021, limits this possibility.[4]

Furthermore, the direct aid fund is intended for solvent companies and individual entrepreneurs (in accordance with the criterion of not having filed negative personal or corporate income tax bases in 2019), under a commitment to maintain activity. This requirement of a positive tax base in 2019 correlates to productivity, but it is a backward-looking and partial measure that could leave out young firms or companies that were to undertake major investment projects that year.[5]

The swift and uniform implementation of this aid is particularly significant in this setting, and the distribution mechanisms should be adjusted to selectively target the aid precisely on companies that are viable but have solvency problems. Flexibility in the volume and use of the committed funds is also necessary, to adapt them to the course the pandemic is following and to any future materialisation of risks.

The second course of action, namely the restructuring of bank debt backed by the ICO, seeks to alleviate the financial burden on viable firms with specific solvency problems. It does this, first, by extending the term of the guaranteed loan, converting it into a participating loan,[6]

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1 See Myers, S. C., 1977, Determinants of Corporate Borrowing, Journal of Financial Economics, Vol. 5, Issue 2, pp. 147-175.

2 See publication in BOE of Real Decreto-ley 5/2021.

3 This fund would provide for the coverage of overheads (utilities, suppliers, etc.) and, should anything be left over after covering these expenses, also for new debt commitments entered into after March 2020.

4 The announcement on 20 April 2021 of the Resolution of the Council of Ministers authorises the regional governments and the city-enclaves of Ceuta and Melilla to grant aid to companies in sectors other than the 95 initially established under Royal Decree-Law 5/2021 on the basis of the percentage of employment in such sectors under furlough schemes, and of the persistence of the use of furlough schemes since the start of the pandemic.

5 The announcement on 20 April 2021 of the Resolution of the Council of Ministers has subsequently authorised the granting of aid, exceptionally, to companies with negative tax bases in 2019.

6 A participating loan is a financial instrument mid-way between a debt instrument and a capital instrument. Some of its advantageous characteristics for the borrower include: (1) consideration as equity for the purposes of mercantile legislation, which will help in avoiding or delaying the winding up of the company, (2) in the case of winding up, its seniority in terms of payment is behind that of ordinary creditors and (3) accrued interest, fixed and variable alike, is generally deductible for corporate income tax purposes.

Chart 1
DISTRIBUTION OF THE PRE-PANDEMIC PRODUCTIVITY OF NON-FINANCIAL CORPORATIONS (a)

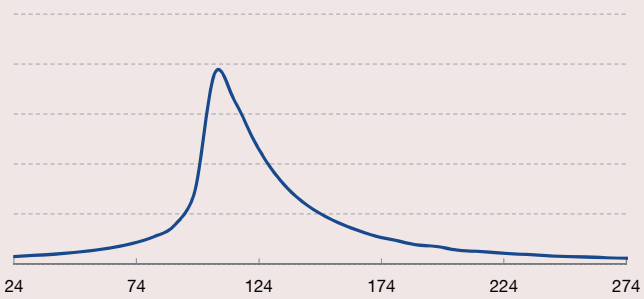
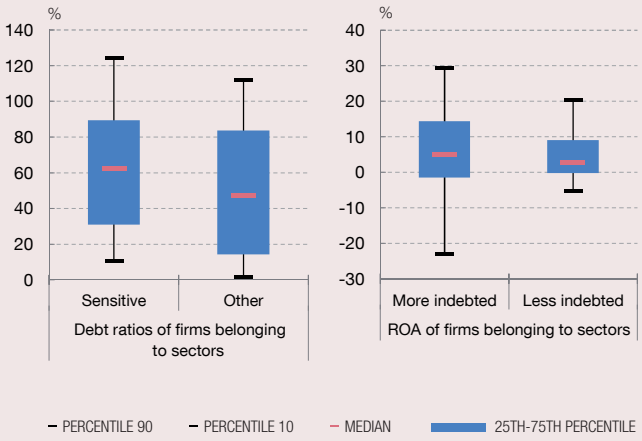


Chart 2
DISTRIBUTION OF NON-FINANCIAL CORPORATIONS' PRE-PANDEMIC DEBT AND PROFITABILITY RATIOS (b)



SOURCES: CBB Database, CCR and Banco de España.

a Productivity is measured as the ratio of gross value added to personnel costs (as a percentage). The data are for 2018, the latest year for which a representative sample is available in the CBB Database. The density function is proxied using a kernel estimator, which provides for a continuous and smoothed representation.
b The debt ratio shown corresponds to the sum of current and non-current liabilities over total assets. The sectors most sensitive to the COVID-19 crisis belong to manufacturing activities (excluding the food, beverages and tobacco industries), transport and storage, hospitality, wholesale and retail trade, and vehicle repair and other services (artistic, recreational and entertainment activities). The most (least) indebted sectors are those that have a debt ratio higher (lower) than the 75th (25th) percentile of the distribution of sectors according to the two-digit CNAE classification.

and, exceptionally, through the reduction of its principal. The facility set aside for this purpose, in coordination with the lender institutions, is subject to the lenders assuming their proportional share and to subscription of a code of good practices. The code of good practices should retain the capacity banks have to use the greater information they have on their borrowers.

The third component of the decree, the recapitalisation fund, complements the actions of the SEPI-managed fund for strategic firms in the sphere of medium-sized firms.

In short, these measures have the potential to contribute to preserving the productive system; but their implementation is complex and their impact will hinge on a correct selection of the participating companies. Moreover, the quicker their implementation is, the greater their effectiveness will be. In this regard, the relatively simple selection mechanism in the measures adopted would have the potential virtue of facilitating their quick implementation. Finally, it should be borne in mind that, if the macroeconomic situation proves worse than expected, it might be necessary to recalibrate their size and the selection criteria.

2

RISKS TO THE FINANCIAL SECTOR AND ITS RESILIENCE

Chapter 2 of this FSR focuses on analysing developments in the Spanish banking sector and in the other financial intermediaries during 2020, a year in which the COVID-19 pandemic has had a significant impact on the financial system, albeit an impact which the economic policy response has largely cushioned. Thus, lending grew in Spain during the year and NPLs continued to decline. However, this was largely conditioned by the credit support schemes implemented (State guarantees and loan moratoria), which will need to be monitored closely. The impact of the pandemic on banking activity and the economic outlook, along with several extraordinary adjustments, gave rise to negative profitability in the banking sector in 2020, albeit unevenly across institutions. However, this unfavourable profitability performance did not translate into a worsening of the sector's solvency, and capital ratios increased, underpinned in part by the reform of European capital requirements and by the authorities' recommendation on dividend distribution restrictions. As regards the non-bank financial sector, the net flows contributed to investment funds stabilised in the second half of the year, although these intermediaries were exposed to the risk of abrupt changes in financial market conditions. Interconnections between financial sub-sectors through common holdings of marketable securities, particularly those on the edge of investment grade, are a potential propagation channel for this risk.

2.1 Deposit institutions

2.1.1 Balance sheet structure, risks and vulnerabilities

Credit risk

The outstanding balance of deposit institutions' lending to the private sector in Spain grew in 2020 as a whole, although less buoyantly in the second half of the year. The year-on-year growth rate stood at 3.5%,[1] although credit expansion was particularly strong in Q2, coinciding with heightened deployment of the ICO guarantee scheme for loans to firms (see Chart 2.1).[2] This is the first time bank lending has grown in Spain since 2008, reflecting the banking sector's ability to meet households' and firms' liquidity needs and the effect of the economic policy measures

1 In December 2020 growth was affected by a corporate transaction consisting of the absorption of an SLI into a significant deposit institution (DI). In any event, excluding this transaction, growth for 2020 as a whole was 2,9%.

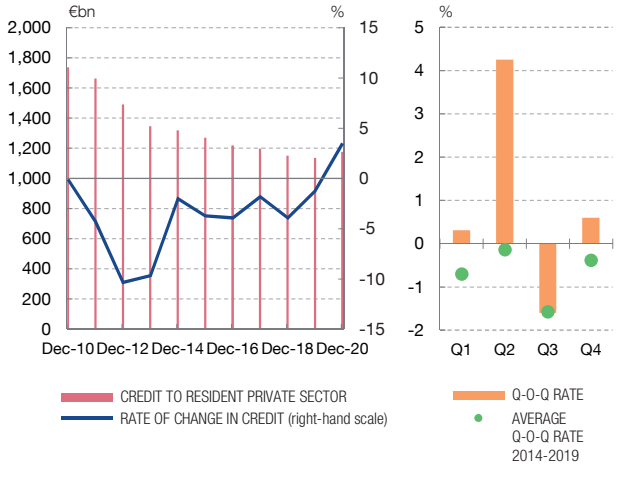
2 Royal Decree-Law 8/2020 of 17 March 2020 approved a State guarantee facility of up to €100 billion to help preserve employment and mitigate the economic effects of the health crisis. Royal Decree-Law 25/2020 approved a second facility to cover funding needs for new investments. Royal Decree-Law 34/2020 extended the application deadlines and improved the conditions of the previously approved guarantee facilities.

Chart 2.1

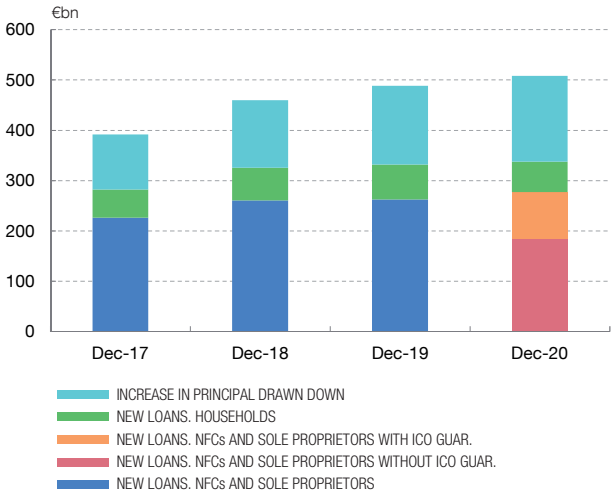
THE SUPPORT MEASURES HAVE SUSTAINED THE FLOW OF NEW CREDIT IN 2020, THUS CONTRIBUTING TO THE GROWTH OF THE STOCK IN THE YEAR, WHICH WAS CONCENTRATED IN Q2

The stock of credit of deposit institutions (DIs) to the private sector resident in Spain grew by 3.5% in 2020, although there was some sluggishness in H2. The volume of new credit granted was 4.1% higher than in 2019. Business lending with ICO guarantees accounted for 34% of the credit drawn down on new loans to non-financial corporations and sole proprietors, thus critically contributing to preventing the contraction of lending to the private sector.

1 CREDIT VOLUME AND YEAR-ON-YEAR RATE OF CHANGE BUSINESS IN SPAIN, ID



2 VOLUME OF NEW CREDIT IN THE PAST 12 MONTHS. HOUSEHOLDS, NFCs AND SOLE PROPRIETORS Business in Spain, ID



SOURCE: Banco de España.

taken to mitigate the negative effects of the crisis, in particular the credit support schemes (ICO guarantees and moratoria).

Total new lending granted in 2020 to households and to non-financial corporations (NFCs) and sole proprietors exceeded that granted in 2019 by 4.1%. However, behaviour was mixed: lending to NFCs and sole proprietors increased by 6.6% and that to households decreased by 5.6%. The volume of credit drawn in transactions linked to the ICO guarantee facilities represented 18% of total new lending granted by deposit institutions in Spain in 2020 (see Chart 2.1) and 34% of new lending granted to NFCs and sole proprietors. These developments have also been sustained more broadly by the raft of fiscal and monetary measures adopted in response to the COVID-19 crisis.

Non-performing loans to the resident private sector continued to decrease in 2020, albeit to a lesser extent than in previous years. The stock of problem assets of this kind declined by 3.8% year-on-year (see Chart 2.2), compared with the decreases recorded in 2018 (-29.1%) and 2019 (-19.1%). The severe contraction of the Spanish economy as a result of the COVID-19 pandemic explains the worse relative performance of NPLs in the past year, with a rebound in Q2 followed by a return to the downward path associated with certain sales of these portfolios.

The net flow of NPLs was less negative than in the previous year, with comparable rates of NPL inflows and outflows. Inflows into NPLs decreased slightly with respect to 2019 but recoveries and outflows to write-offs also declined. This, together with fewer asset sale transactions, has given stability to the balance of NPLs. In contrast with the two previous economic crises in Spain, when NPLs rose strongly during the first year, with a smaller economic contraction, to date an increase in these problem assets has not been recorded during the current crisis (see Chart 2.2). It is highly likely that there will be a significant increase in new NPLs in the coming quarters that outflows will be unable to offset.

The NPL ratio also continued to decline, once again more moderately than in recent years, confirming the change in its determinants observed since mid-2020. The moderate fall in the balance of NPLs in the numerator of the ratio, along with the aforementioned growth of loans in the denominator, caused the NPL ratio to continue its downward trend of recent years, to stand at 4.4% (0.4 pp less than in December 2019). If the current pace of growth of lending does not hold, or NPLs increase owing to the worsening of economic agents' financial conditions, the NPL ratio could rise in the coming months, especially in the sectors hardest hit by the pandemic.

The economic policy support measures adopted to mitigate the negative effects of the pandemic would largely explain the lower sensitivity of NPLs to changes in activity. As discussed in Chapter 1, measures such as furlough schemes, tax moratoria and public guarantee and debt moratoria schemes are specifically designed to improve firms' ability to pay and have proved to be effective to date. However, part of the effects of these measures could be merely temporary, and, as mentioned earlier, if economic activity remains stalled for some time, especially in certain sectors, this would ultimately give rise to greater increases in NPLs owing to the worsening of firms' and households' solvency over the coming quarters. This deterioration of the credit portfolio could condition the supply of credit by banks, impacting the strength of the recovery. In this connection, ongoing monitoring of exposures linked to the public guarantee scheme for loans to firms (see Box 2.1) and the debt moratoria scheme (see Box 2.2) is necessary to measure the scope and duration of their mitigating effects.

There were also some signs of credit quality impairment, of varying intensity, in the performance of refinanced and Stage 2 loans, and in non-performing loans in specific segments. While forborne loans continued to fall year-on-year in 2020, these declines have been much more moderate since the onset of the pandemic, possibly indicating banks' greater recourse to them to mitigate payment difficulties encountered by some borrowers. Stage 2 loans, which signal impairment more specifically, increased substantially in 2020, especially in Q4.[3] Also notable is the pick-up in the growth of non-performance in the consumer portfolio in 2020.

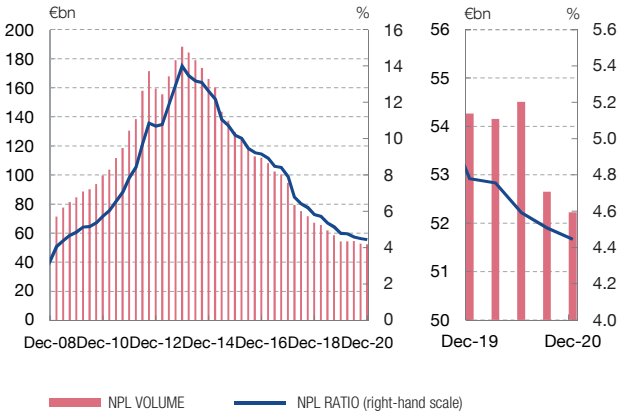
3 Pursuant to Circular 4/2017, a loan is classified as a Stage 2 exposure when credit risk has increased significantly since initial recognition, even though no event of default has occurred.

Chart 2.2

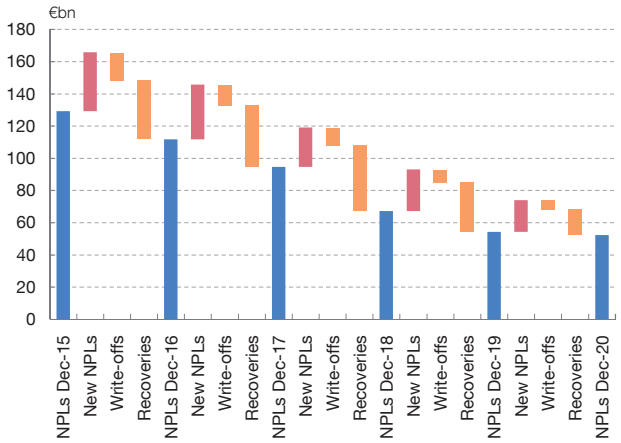
NPLS MODERATED THEIR FALL WITH RESPECT TO OTHER YEARS, AND THE NPL RATIO CONTINUED TO DECLINE OWING TO THE GROWTH OF CREDIT, ALTHOUGH THERE ARE SOME EARLY SIGNS OF IMPAIRMENT

NPLs decreased less than in prior years owing to the impact of the COVID-19 pandemic, which translated into fewer recoveries that hardly offset the inflow of new NPLs. Compared with past crises, which affected non-performing assets more rapidly, in the current crisis this impact is being cushioned by the measures adopted to mitigate the effects of the pandemic. Also, the NPL ratio continued to decline, also owing to the growth observed in credit. However, the rate of growth of forbearance slowed and Stage 2 loans and non-performance in specific segments, such as consumption, increased substantially, signalling the possibility of a future increase in non-performing loans.

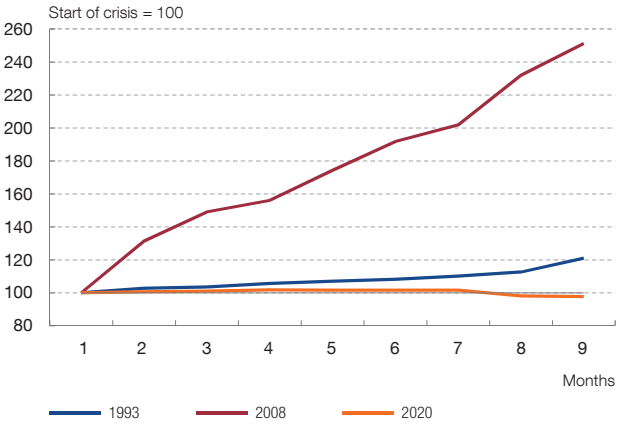
1 RESIDENT PRIVATE SECTOR'S NPLs AND NPL RATIO
Business in Spain, ID



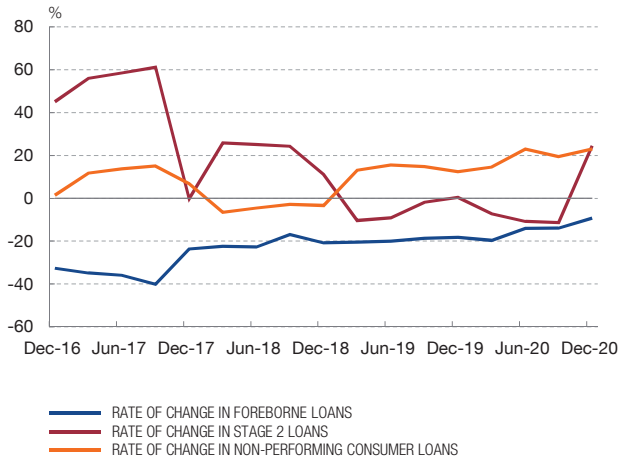
2 NPL INFLOWS AND OUTFLOWS (a)



3 CHANGES IN NPLs SINCE THE START OF EACH CRISIS



4 SIGNS OF EARLY IMPAIRMENT IN RESIDENT PRIVATE SECTOR LOANS
Business in Spain, ID



SOURCE: Banco de España.

a NPL recoveries include NPL loans reclassified as performing, foreclosed assets and possible NPL portfolios sold to third parties.

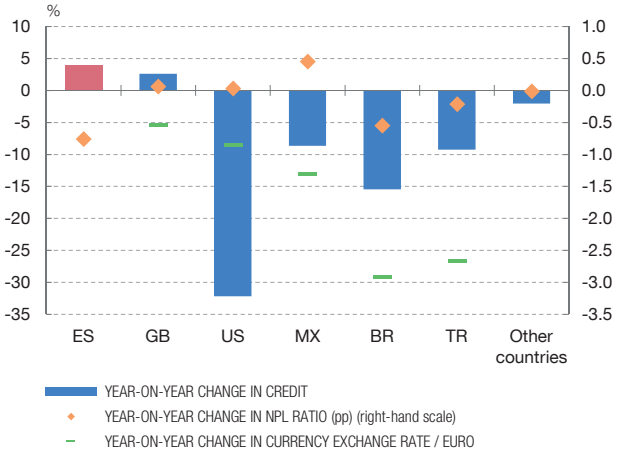
In 2020 Spanish deposit institutions increased their total volume of assets at consolidated level by 3.5%, despite the drop in the stock of loans to the private sector (see Annex 1). The decline in credit to the private sector was a consequence of the overall decrease for the foreign countries where Spanish deposit institutions have a significant presence, not for lending in Spain, which has expanded. In particular, financial assets abroad (which account for one half of consolidated

Chart 2.3

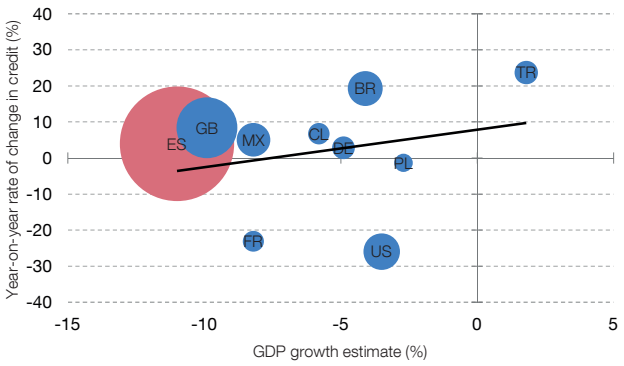
THE VOLUME OF CREDIT ABROAD OF SPAIN'S MAIN DEPOSIT INSTITUTIONS HAS BEEN ADVERSELY AFFECTED BY THE COVID-19 PANDEMIC, PARTIAL DIVESTMENT IN THE UNITED STATES AND THE APPRECIATION OF THE EURO. HOWEVER, THE CREDIT SUPPORT PROGRAMMES HAVE COUNTERED THESE IMPACTS IN PART

The volume of credit in the main emerging countries in which Spanish deposit institutions are present fell in the past year owing to the impact of the COVID-19 pandemic and to the depreciation of their currencies against the euro. Meanwhile, it grew in the United Kingdom. The fall in the United States resulted from the divestment decision adopted by one of Spain'a main banks. However, if the exchange rate effect is not taken into account, year-on-year credit growth and, in general, a positive relationship between the year-on-year rate of change in credit and estimated GDP growth are observed, although with differing dynamics depending on the credit support measures adopted by the different countries. The NPL ratio has declined in all significant countries, except in the United Kingdom and, especially, in Mexico.

1 LOANS AND NPL RATIO IN SPAIN AND ABROAD
Year-on-year change. Consolidated data. December 2020 (a)



2 CHANGE IN CREDIT IN LOCAL CURRENCY AND GDP GROWTH ESTIMATE (a) (b) (c)
Consolidated data. December 2020



SOURCES: Banco de España and IMF (April 2021 WEO).

a The data in the panels refer to the four main Spanish banking groups with significant international activity.
b Credit rate of change in constant euros, adjusted by year-on-year change in exchange rate (i.e.: rate of change in credit = [credit Dec-20 x (exr $_{€/currency\ Dec\text{-}20}$ / exr $_{€/currency\ Dec\text{-}19}$)] / credit $_{Dec\text{-}19}$ – 1).
c The size of the circles depicts the volume of credit adjusted at December 2020 in each country (i.e.: United Kingdom, €402 billion).

financial assets) decreased by 4.8% in 2020 (compared with a 9.2% increase one year ago), in part owing to decisions to divest in certain countries adopted by some banks and to exchange rate developments.

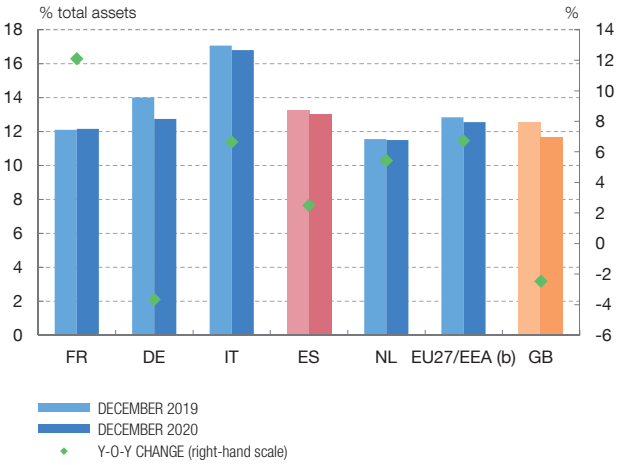
The main Spanish deposit institutions' business abroad was adversely affected by the COVID-19 pandemic, conditioned by the depreciation of currencies other than the euro, in particular emerging market currencies. Lending volume in the United Kingdom (the main country where Spanish deposit institutions operate) was less affected than in Mexico, Brazil and Turkey, in part owing to the greater depreciation of their currencies in the past year. In fact, these three countries recorded lending volume increases in local currency, which, however, did not offset the negative effect of the depreciations. The strong fall in lending in the United States was the result of the divestment decision made by one of the main Spanish deposit institutions, with its consequent reclassification to non-current assets held for sale. The NPL ratio declined in the main countries, except in Mexico (see Chart 2.3.1), where it stood at 2.6% as at December 2020, far lower than the 6.4% posted in Turkey. Chart 2.3.2 shows that despite the severity of the negative impact caused by COVID-19 in most of the countries where Spanish deposit institutions are present,

Chart 2.4

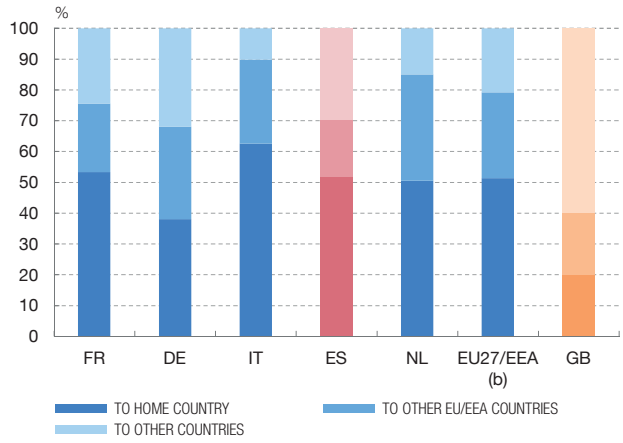
THE INCREASE IN GOVERNMENT DEBT ISSUANCE TO FINANCE MEASURES TO TACKLE COVID-19 WAS REFLECTED IN THE GROWTH OF EUROPEAN BANKS' GOVERNMENT DEBT HOLDINGS

As at December 2020 the exposure to sovereign debt represented 12.5% of total assets at European level. In Spain, the weight was 13%, slightly above the European average and only exceeded by Italy (16.8%). The volume of sovereign exposure varied unevenly across the largest European countries' banks, from -3.7% in Germany to 12.1% in France. The proportion of debt issued by European banks' own home country was 51.3% of the total sovereign exposure. The weight of Spain's domestic sovereign exposure (51.8%) was similar to the European average, and to that of countries such as France (53.3%) and the Netherlands (50.5%).

1 SOVEREIGN EXPOSURES OF EUROPEAN BANKS (a)
Consolidated data. December 2020



2 SOVEREIGN EXPOSURES TO HOME COUNTRY OF EUROPEAN BANKS (a)
Consolidated data. December 2020



SOURCE: EBA.

a The data for Spain are shown in red and those for the United Kingom in yellow.
b The EBA data include Iceland. From 2020 Q1 aggregate data for the EU no longer include figures from UK banks and include data from UK bank subsidiaries in EU countries.

the measures adopted to counter its adverse effects[4] have driven up the volume of lending, with positive year-on-year rates of change being recorded in local currency. In many countries, this greater buoyancy of credit has been linked to the approval of support schemes (for instance, Mexico did not adopt measures to promote lending and credit growth was lower than in other countries, such as the United Kingdom, Brazil and Turkey).

Spanish banks have increased their sovereign exposures at consolidated level, although to a lesser extent than in previous crises and than the average of European banks. The increase in public debt issuance to defray the fiscal cost of the measures taken to tackle the COVID-19 pandemic was reflected in an uneven change in the sovereign exposures of European banks. While these grew by 2.5% in year-on-year terms for Spanish banks as at December 2020, this growth reached 12.1% for French banks (see Chart 4.1). German banks reduced their sovereign exposure by 3.7% in 2020. As a percentage of total assets, Spanish banks' sovereign exposures declined by 0.2 pp in 2020, similar to the European average reduction (-0.3 pp). Spanish banks' exposure to sovereign debt stood at 13% of total assets in

4 See Box 2.1 Effects of the pandemic on the international banking systems most relevant to Spain, in the Autumn 2020 FSR.

December 2020, in line with the average for European banks. European banks' sovereign exposures are concentrated in bonds issued by their own country, which on average accounted for 51.3% of the total sovereign exposure (see Chart 2.4.2).

Liquidity and financing conditions

Purchase programs and, to a lesser extent, refinancing operations explain the expansion of the Eurosystem's balance sheet and the liquidity maintained by banks (see Chart 2.5). The balance of asset purchase programmes has increased by €467 billion since end-October 2020, the date of the last FSR, to €3,985 billion,[5] driven by the expansion of the pandemic emergency purchase programme (PEPP) announced in December 2020.[6] European banks have continued to have recourse to the Eurosystem's refinancing operations (TLTRO III) to obtain liquidity. Operations alloted in the latest TLTRO III tender[7] amounted to €331 billion, up from €50 billion allotted in December 2020, with a net increase in the liquidity obtained by banks through this channel of €353 billion after these latest two tenders.[8] Overall, European banks continue to have high liquidity levels, up €833 billion since the cut-off date of the last FSR.

These high liquidity volumes, along with the extension of the favourable funding conditions for banks and the expansion of the PEPP, have contributed to bringing money market interest rates down to record lows (see Chart 2.5.2). The euro short-term rate (€STR)[9] has declined gradually, currently standing below the pre-pandemic levels (around -55 bp), very far from its highs in April. Similarly, the €STR trading volume has declined from its highs, stabilising at levels close to those recorded before March. It has also been observed that money market transactions with very short (overnight) maturities have gained weight over those with longer-term maturities since the beginning of the crisis.

European banks' access to the Eurosystem's refinancing operations – with very favourable conditions – has improved their interbank funding costs, which are expected to remain low over a prolonged period. The expected interbank funding spread, calculated as the difference between expectations for EURIBOR and for risk-free interest rates, as determined by the OIS curve, provides

5 Data updated as at 20/4/21.

6 As a result of the decision of the Governing Council of the ECB of 10 December 2020 to expand the PEPP envelope to €1.85 trillion at least until March 2022.

7 The dates of the latest two tenders were 16 December 2020 and 24 March 2021 respectively.

8 The increase of €353 billion is calculated as follows: €381 billion (TLTRO III) – 29 billion (TLTRO II) + 3 billion (PELTRO).

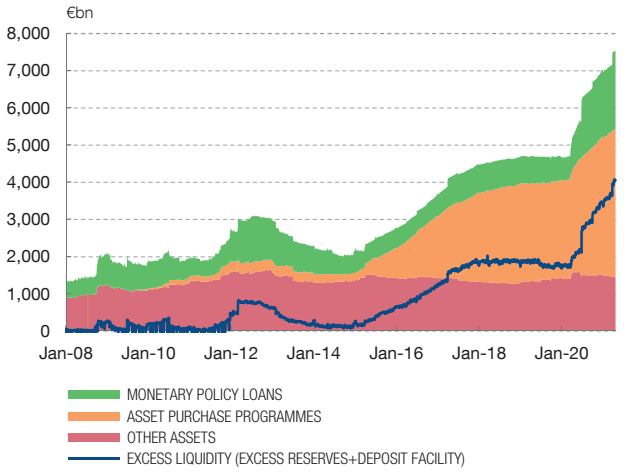
9 This refers to the transactions used to calculate the €STR, which reflects the wholesale euro unsecured overnight borrowing costs of banks located in the euro area. The €STR and trading volume are calculated and published each business day by the ECB based on the information provided by the 48 euro area MMSR reporting banks.

Chart 2.5

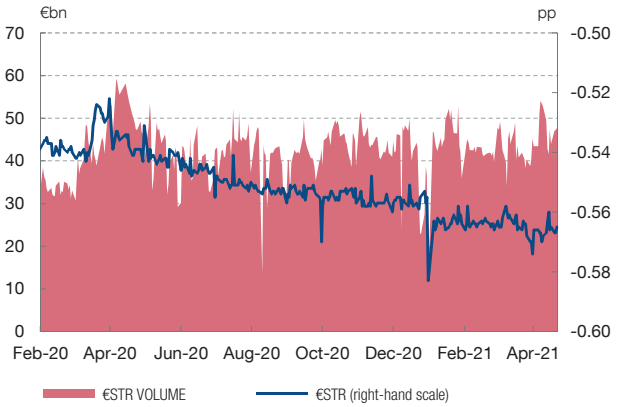
THE ECB'S MONETARY POLICY HAS LED TO A RISE IN EXCESS LIQUIDITY, TO RECORD HIGHS, CONTRIBUTING TO AN EASING OF FINANCIAL CONDITIONS

Money market interest rates are at historic lows as a result of excess liquidity and the latest monetary policy measures adopted. Also, the Eurosystem's financing operations have contributed to a notable improvement in banks' financing conditions, which are expected to remain at low levels over a prolonged period. Borrowing costs on the wholesale market also declined in 2020 as a result of these measures.

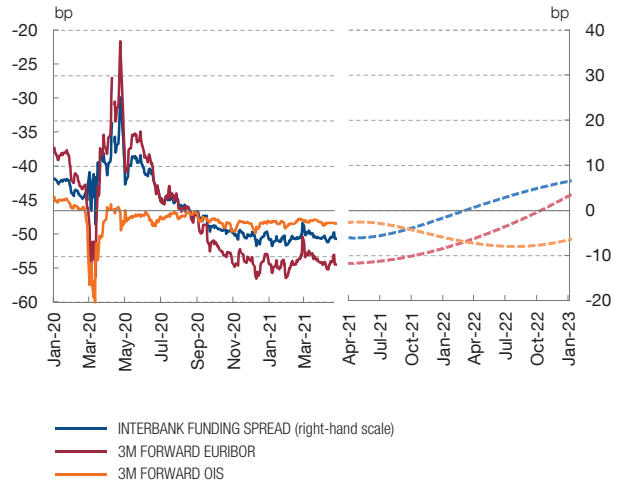
1 EUROSYSTEM BALANCE SHEET AND EXCESS LIQUIDITY



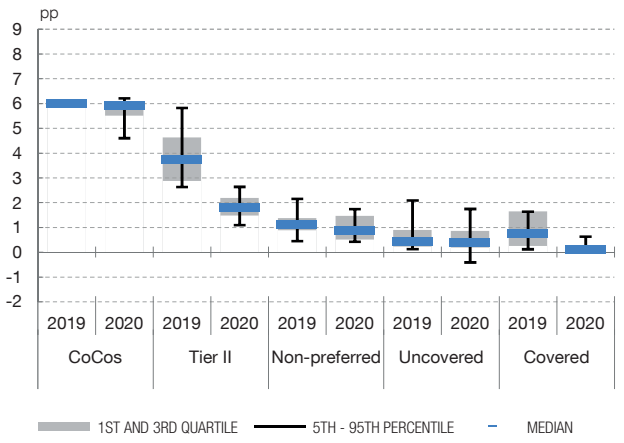
2 €STR VOLUMES AND RATES



3 INTERBANK FUNDING SPREAD (a)



4 ISSUANCE COST (IN EURO) BY TYPE OF INSTRUMENT: 2019 vs 2020 (b)



SOURCES: Bloomberg, Thomson Reuters and Banco de España.

a The solid lines show the spread between the three-month forward rate for 3-month Euribor and the forward rate based on the OIS curve for a three-month period, and the levels of these two rates, while the broken lines show the projections for the forward Euribor and OIS curves, respectively, and the spread between them.

b Only one issuance of contingent convertible bonds (CoCos) was carried out in 2019. The cost for Spanish banks' issues is shown based on the coupon. For bonds with a variable coupon, the issuance cost is calculated on the basis of the benchmark interest rate price on the issue date.

an indicator of market expectations regarding changes in interbank funding costs.[10] This spread narrowed substantially during the second half of 2020 as a result of the

10 This indicator is calculated based on the work carried out by Jondeau et al. (2020). It is calculated as the 3-month EURIBOR-OIS forward rate spread: FF= $F_{euribor3,3}$ - $F_{OIS3,3}$, where $F_{euribor3,3}$ represents the 3-month forward rate for 3-month EURIBOR and F_{OIS3} the forward rate based on the overnight index swap (OIS) curve with the same time horizon. The following derivatives are used as a reference for EURIBOR: a) Forward Rate Agreements (FRAs) for between 1 and 12 months, and b) Interest Rate Swaps (IRS) for between 1 and 10 years, where 3-month EURIBOR is the underlying rate.

liquidity injection received by banks through TLTRO III operations since June and the decision to maintain the interest rate on these operations at low levels for longer.[11] Despite an expected increase in this indicator in 2021-2022, explained by EURIBOR recovery expectations and the continuation of the risk-free interest rate level, it would remain moderate and comparable with the pre-crisis level (see Chart 2.5).

The cost of new issues denominated in euro has decreased or held steady for all debt instruments in the wholesale funding market. The decrease is particularly noteworthy in the case of bonds meeting the Tier II capital requirements and of covered bonds. Also, the cost of issuance is less dispersed in these cases (see Chart 2.5).

The structure and average cost of liabilities at Spanish deposit institutions was relatively stable in 2020, although the recourse to central bank funding increased somewhat. The average cost of private sector deposits remains at minimum levels, while the average cost of debt on the liability side of the balance sheet has increased minimally. In the individual balance sheet of business in Spain the volume of private sector deposits increased in 2020 (by 9% year-on-year), possibly driven by households' and firms' precautionary reasons, yet their weight in total funding decreased by 1.2 pp. The weight of private sector deposits in the consolidated balance sheet also fell by 0.3 pp in 2020, to stand at 66.8% of total funding (deposits and debt issuance on the balance sheet). In contrast, the weight of deposits received from central banks in total consolidated funding increased by 4.4 pp compared with December 2019, standing at 10.6% at December 2020. This change was prompted by the accommodative monetary policy adopted by the ECB and other central banks. Box 2.3 conducts a preliminary analysis of the consequences of the possible introduction of a digital euro for financial stability and monetary policy, where banks' deposit-taking activity plays a key role.

2.1.2 Profitability and solvency

Profitability

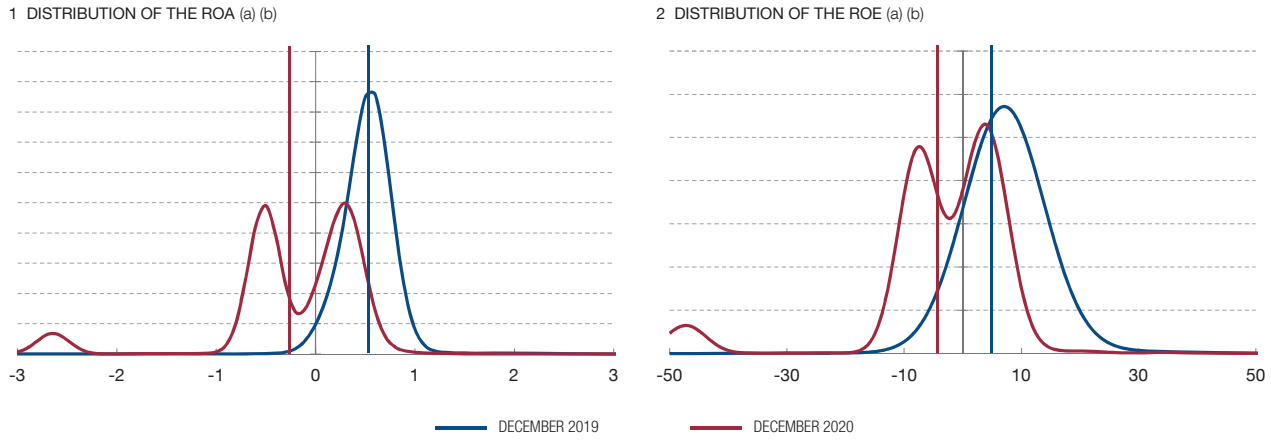
Over the course of 2020, the consolidated net profit of the Spanish banking system as a whole was negative (around -€8 billion), down nearly €26.5 billion on the profit recorded in 2019. This translates into a return on assets (ROA) of -0.21% (a fall of 72 bp from 0.51% in 2019) and a return on equity (ROE) of -3.1% (a fall of 10 pp from 6.9% recorded a year earlier).

11 Decision of the ECB Governing Council meeting of 10 December 2020. The interest rate applied to TLTRO III remains 50 bp below the MRO rate until 23 June 2022. For banks meeting certain criteria the rate may be up to 50 bp below the average deposit facility rate.

Chart 2.6

MOST BANKS HAVE REDUCED THEIR NET PROFIT IN 2020 WITH RESPECT TO THE PREVIOUS YEAR

As a result of the impact of the pandemic on banking activity and on the worsening of the economic outlook, the decrease in profit in 2020 was widespread among banks. However, the negative net accounting profits of the largest banks are influenced by the appreciation of the euro, the negative extraordinary adjustments relating to goodwill and deferred tax assets and the accounting adjustments linked to merger processes.



SOURCE: Banco de España.

a The charts show the ROA and ROE density functions for Spanish deposit institutions, weighted by the amount of average total assets and average equity, respectively. The density function is approximated by means of a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function. The vertical lines indicate the ROA and the ROE of the Spanish banking system as a whole in 2019 (blue) and 2020 (red).

b The negative mode closest to zero relates to large significant institutions whose results in 2020 are largely explained by negative extraordinary adjustments. The most extreme mode relates to another significant institution with accounting adjustments linked to a merger process.

This negative result is explained by the COVID-19 pandemic, which was also accompanied by negative extraordinary adjustments applied during the year in three of the system's main banks. Without these adjustments or the positive extraordinary items, the sector's profitability would be positive, with ROA standing at 0.3% and ROE at 4.3%. In particular, as noted in the previous FSR, the two largest banks recorded adjustments to their goodwill for an amount in excess of €12 billion in the first half of 2020, along with other adjustments, such as those linked to tax assets. In addition, as a result of the approval of its merger, another bank recorded an adjustment to fair value for an amount exceeding €5.5 billion in its year-end accounts, in accordance with accounting standards.[12] These negative adjustments were partially offset by positive extraordinary adjustments exceeding €1.2 billion associated with the sale of payment service, insurance, asset management and depository businesses.

Even without taking into account these negative extraordinary adjustments, the sector's profitability, which was already moderate in 2019, appears to have decreased substantially with respect to the previous year. Chart 2.6 shows how,

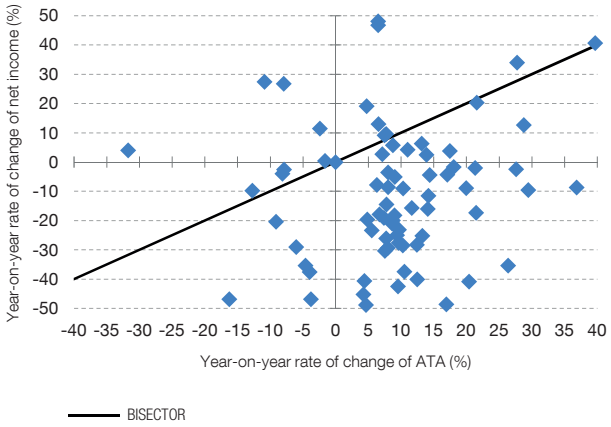
12 International Financial Reporting Standard 5 (IFRS 5) "Non-current assets held for sale and discontinued operations", which indicates that assets meeting the requirements for classification as held for sale should be valued at the lower of carrying amount and fair value less costs to sell.

Chart 2.7

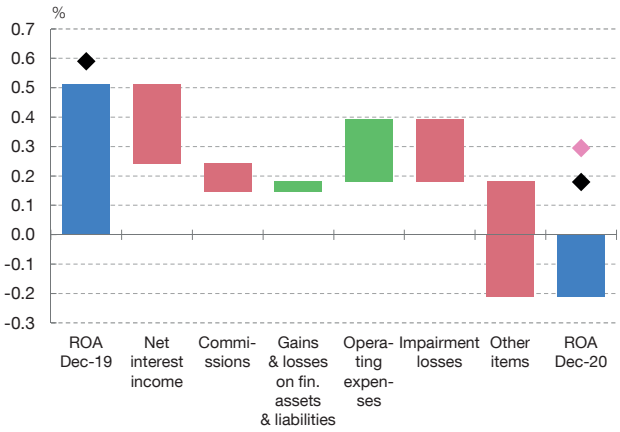
THE IMPACT OF THE PANDEMIC ON BANKING ACTIVITY AND THE ECONOMIC OUTLOOK HAS SEVERELY AFFECTED PROFITABILITY IN THE SPANISH BANKING SECTOR

In 2020 most institutions have recorded a fall in net income, while their ATAs have increased. The main determinants of the sharp fall in profits include the decrease in net interest income and in fees and commissions, the increase in impairment losses and the negative extraordinary adjustments (goodwill, tax assets and the deterioration in value arising from accounting reclassification, included in other items), while the increase in results on financial assets and liabilities and, in particular, the decline in operating expenses, contribute to improving income for the year.

1 CHANGE IN ATA AND CHANGE IN PROFIT. DECEMBER 2020



2 BREAKDOWN OF THE CHANGE IN PROFIT
Consolidated net profit as a percentage of ATA (a)



SOURCE: Banco de España.

a The red (green) colour of the bars indicates a negative (positive) contribution of the item concerned to the change in consolidated profit in December 2020 with respect to December 2019. The black diamonds show the ROA excluding both the adjustments to goodwill recorded in 2019 (-€2.8 billion) and 2020 (-€12.2 billion) and the deferred tax asset adjustment recorded in 2020 (-€2.5 billion). The pink diamond shows the ROA in 2020 excluding, in addition to the aforementioned adjustments, the deterioration in value arising from accounting reclassification (-€5.6 billion) and the extraordinary positive results recorded in 2020 (€1.2 billion).
b Including adjustments to goodwill and other extraordinary adjustments.

both for the ROA and the ROE, the distribution of profit in 2020 shifted significantly towards more negative values. Along the same lines, Chart 2.7.1 shows that most banks (more than three quarters of the sector) recorded a decline in net profit from the previous year, while their average total assets (ATAs) increased. For the system as a whole, ATAs increased by more than 4% year-on-year in 2020, while average equity decreased by more than 3%.

The impact of the pandemic on net interest income and fees and commissions resulted in both items posting year-on-year declines of around 10% in 2020 (see Annex 2). Part of this decrease in net interest income and net commissions is due to currency depreciation in the main countries in which Spanish banks have a significant presence, especially emerging countries.

Gains on financial assets and liabilities and operating expenses were the only items improving significantly with respect to the previous year. The decline in operating expenses was particularly notable (see Chart 2.7.2). Breaking the trend of recent years, gains on financial assets and liabilities increased by 35% in 2020, driven by the sale of securities portfolios accumulating

capital gains. This helped limit to some extent the adverse effects on gross income, which, however, declined by 5.1% year-on-year. Operating expenses decreased by more than 10%, in part owing to a lower contribution of extraordinary restructuring costs. This notable decline caused operating income to increase slightly with respect to the previous year (0.7%). As with net interest income and fees and commissions, the performance of other income and operating expense headings is at least partly explained by currency depreciation in the countries where Spanish banks have a significant presence, especially in the case of emerging countries (see Chart 2.3).

Operating income from activity in Spain has been more resilient to the impact of the pandemic. Recurrent banking activity was less affected in business in Spain than in total business in 2020. Thus, net interest income fell by barely 0.7% between December 2019 and December 2020 and fees and commissions increased by 1.4% in the same period. Gross income decreased by 1.9%, but since the decline in operating expenses was greater (-5.8%), the performance of operating income was ultimately positive.

Impairment losses increased significantly in the year, especially in the first six months. As a result of the potential negative impact of the COVID19 pandemic on credit quality, financial asset impairment losses increased by more than 50%, giving rise to the recording of provisions that were €8.7 billion higher in 2020 than in 2019. However, most of this increase was posted in the first half of the year (the increase in provisions between June 2020 and June 2019 was already €7.6 billion), with the pace of provisions slowing significantly from June. Impairment losses in the business in Spain account for more than 40% of total provisions and in this case the pace of provisioning in the second half of the year, although somewhat slower, remained close to the levels of the first half of 2020.

Credit risk provisioning for the business in Spain has been significant, but this effort needs to be maintained over time and even increase depending on the effectiveness of the support measures and on macroeconomic developments. The provisions recorded in 2020 for the business in Spain amount to 21.5% of those estimated for 2020-2022 under the Banco de España FLESB framework for stress testing on the assumption of a moderate impact of the support measures, and to 33.6% on the assumption of a medium impact of the support measures[13] (see Box 2.1). In any case, significant dispersion between banks was observed in the provisioning effort made (see Chart 2.8).[14]

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13 Under the moderate impact assumption, the quality of ICO-guaranteed loans is average for the portfolio of loans to business, while under the medium impact assumption, the quality is at a midpoint between the moderate impact assumption and a maximum impact assumption where the guarantee schemes are used in full to absorb the worst quality credit (for further details, see Chapter 2 of the Autumn 2020 FSR of the Banco de España.

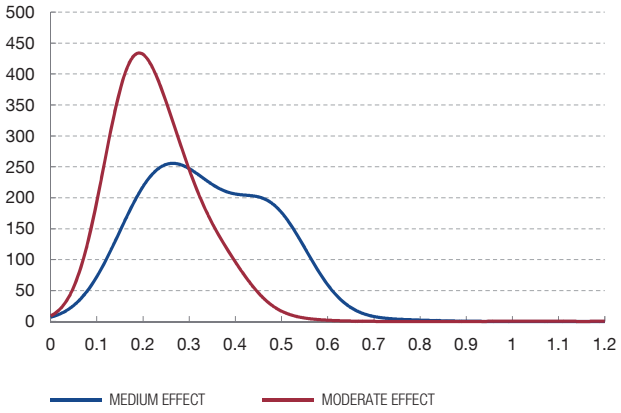
14 See also Box 5 of the ECB's Financial Stability Review, November 2020, where different explanatory factors of the heterogeneity across banks regarding the increase in their provisions owing to the pandemic are discussed.

Chart 2.8

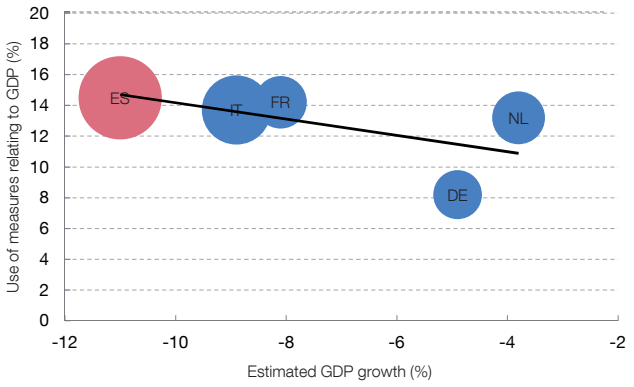
SPANISH INSTITUTIONSSHOULD MAINTAIN THEIR PROVISIONING EFFORT TO ABSORB THE IMPACT OF THE COVID-19 CRISIS ON CREDIT QUALITY, THE SCALE OF WHICH HAS BEEN CONDITIONED IN 2020 BY ECONOMIC PERFORMANCE AND BY THE SCOPE OF THE SUPPORT MEASURES

The pace of impairment provisioning in 2020 would broadly have been adequate to absorb the credit losses estimated in the FLESB stress test exercise for the 2020-2022 horizon, but the effort should be maintained over time in order to fully absorb the estimated credit impairment for the period. There is, however, heterogeneity across banks and uncertainty about the medium-term impact of the support measures implemented, mainly the ICO credit guarantees, and about the macroeconomic scenario. Among the main European countries, a negative relationship was observed in 2020 between the performance of GDP and the intensity of provisions, with limited change in the intensity of the measures relating to GDP.

1 PROVISIONS RECORDED IN 2020 VS. ESTIMATED PROVISIONS FOR 2020-2022
Business in Spain. Estimate obtained under the FLESB framework (a)



2 INTENSITY OF PROVISIONING, FALL IN GDP AND SUPPORT MEASURES - 2020
Consolidated data by jurisdiction (b)



SOURCES: Banco de España and ESRB.

a The numerator of the ratios considers the provisions recorded by Spanish banks for credit risk for business in Spain in 2020. The denominator considers the required provisions estimated by the FLESB framework for the baseline scenario in the 2020-2022 horizon.The denominator considers two assumptions regarding the impact of the support measures (mainly the ICO guarantee scheme): moderate and medium. Under the moderate impact assumption, the quality of credit guaranteed by the ICO is similar to that of the portfolio of loans to business activities as a whole, while, under the medium impact assumption, quality is at the midpoint between the moderate impact assumption and the maximum impact assumption where guarantees are used in full to absorb the worst credit quality (see Chapter 2 of the Autumn 2020 FSR of the Banco de España) for further details). The chart shows the density function of such ratios for Spanish deposit institutions, weighted by total credit volume. The density function is approximated by means of a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function.

b Each dot represents an EU country. The dot's area is proportional to the instensity of provisioning recorded in 2020, estimated based on the measurement of cost of risk of the EBA's dashboard for December 2020. The X axis represents the fall in GDP during that year and the Y axis represents the volume of measures used in relation to GDP in 2019, in accordance with Special Feature of the ECB's Financial Stability Review, Autumn 2020. The measures considered include direct tax transfers, furlough and similar schemes, tax and loan moratoria, use of public guarantees for bank credit and potential additional credit (not for credit already granted) resulting from the release of capital buffers and the effect of the reform of the treatment of provisions under IFRS 9.

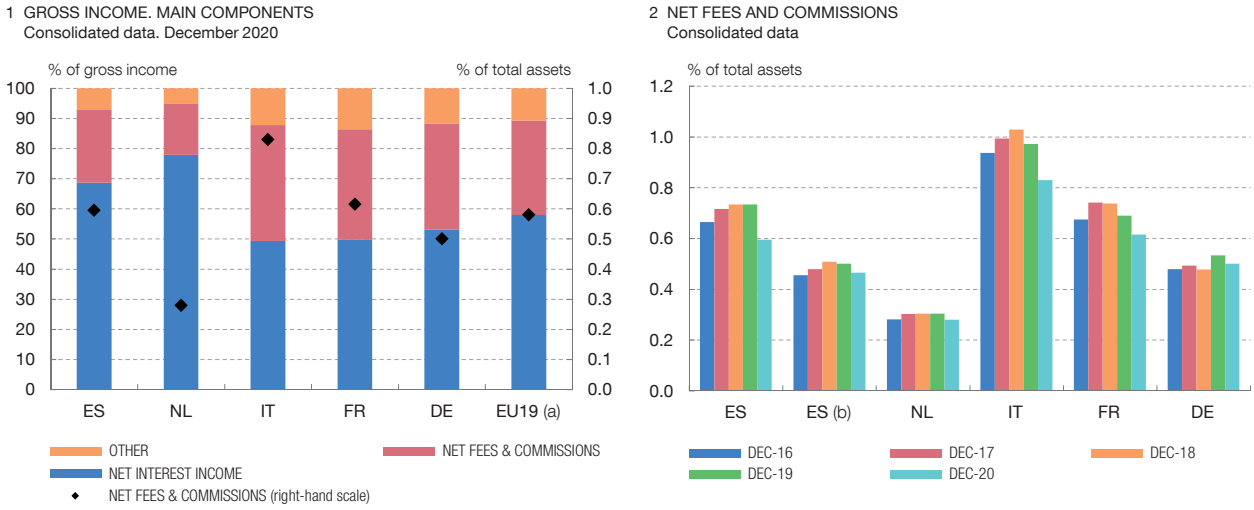
In the largest European economies there is to some extent a positive relationship between the the falls in activity and the credit risk provisioning effort.[15] In general, it is observed that the countries which have resorted more heavily to these support measures tend to be those which have endured a sharper contraction. This suggests that governments whose economies are more vulnerable to the pandemic have fostered more ambitious plans (see Chart 2.8). Credit institutions also seem to have made a greater provisioning effort in jurisdictions

15 The measure used to reflect the scale of the provisions is the cost of risk reported in the EBA Risk Dashboard 2020Q4.

Chart 2.9

NET INTEREST INCOME IS THE MAIN COMPONENT OF GROSS INCOME FOR EUROPEAN BANKS, ALTHOUGH A GROWING WEIGHT OF NET FEES AND COMMISSIONS AS A SOURCE OF INCOME WAS OBSERVED, WHICH WAS HALTED BY THE COVID-19 CRISIS

Despite the growing weight of net fees and commissions in total assets as an additional source of income in recent years, net interest income continues to be the main source of gross margin for the main European countries, although there are differences across countries. However, this growing trend has halted as a result of the COVID-19 crisis.



SOURCES: ECB and Banco de España.

a Includes the 19 Euro area member countries.
b Individual data, business in Spain.

recording larger GDP declines, which means that the measures might not have been sufficient to offset all the credit risk increase associated with this crisis.

At European level, the main component of gross income in the banking sector continued to be net interest income. According to the latest banking supervision statistics released by the ECB (December 2020), banks in the Netherlands and Spain were the most dependent on net interest income, which accounted for 77.9% and 68.7%, respectively, of gross income, while for those in France and Germany it accounted for approximately 50% (see Chart 2.9.1), which is explained by the different business models of their largest banks. Spanish banks made the biggest recent effort among European banks in terms of seeking alternative sources of income through the growth of net fees and commissions (see Chart 2.9.2). However, this ratio shows a lower level in business in Spain (0.47%) than at consolidated level (0.6%), the first figure being lower than the average for European banks at consolidated level (0.58%), and the second being higher, owing to the contribution of business abroad. The adaptation of its business model in areas where this item weighs less than average provides Spanish banks with greater potential for further growth in this source of income.

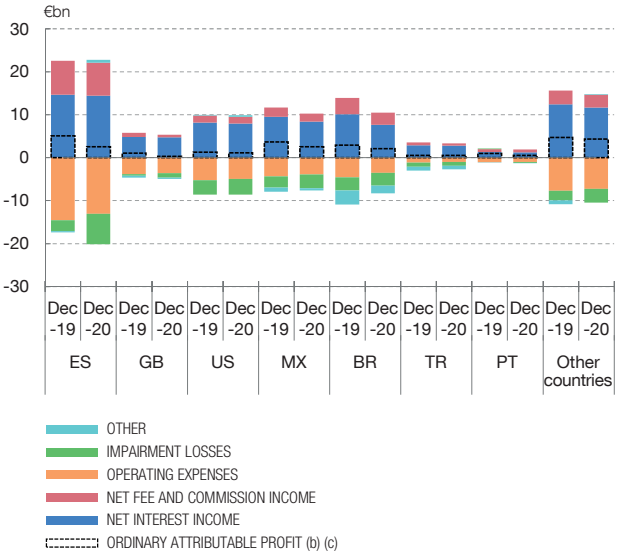
Against this backdrop, the weight of business abroad in Spanish deposit institutions' ordinary profit has increased. Thus, without taking into account the

Chart 2.10

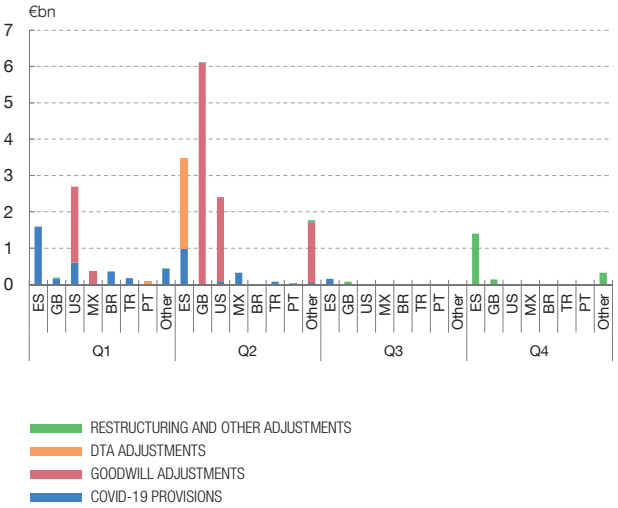
BUSINESS ABROAD INCREASED ITS CONTRIBUTION TO THE ORDINARY PROFIT OF SPANISH DEPOSIT INSTITUTIONS WITH SIGNIFICANT INTERNATIONAL ACTIVITY

Ordinary profit obtained abroad by deposit institutions with a strong international presence fell across the board (e.g. -31% in Brazil or -28% in Mexico), in part owing to currency depreciation in emerging countries, but its relative contribution to ordinary profitability at the consolidated level increased. This is explained by the larger fall in business in Spain (-50%), affected by relatively higher impairment losses than the average for the other countries. However, the smaller contribution to consolidated profit made by business abroad was on account of the goodwill adjustment at the subsidiaries in the United Kingdom and the United States. The extraordinary COVID-19-related provisions were also concentrated in the first half of the year.

1 INCOME STATEMENT. MAIN COMPONENTS
Main Spanish banking groups (a)
Consolidated data. December 2020



2 COVID-19 PROVISIONS AND EXTRAORDINARY ADJUSTMENTS
Main Spanish banking groups (a)
Consolidated data. December 2020



SOURCE: CNMV.

a The panel data refer to the four big Spanish banking groups with significant international activity.
b Ordinary attributable profit does not include impairment of goodwill or other adjustments (e.g. restructuring costs, adjustments for deferred taxes, etc.), and for Spain it does not include the contribution by the corporate centre.
c Ordinary attributable profit was affected by the appreciation of the euro, against the emerging currencies (i.e. Brazil, Turkey and Mexico) and against the US dollar and pound sterling.

adjustments made by Spain's main banking groups to the goodwill of their subsidiaries in the United Kingdom and the United States, ordinary profit from business abroad accounted for over 80% of the total (see Chart 2.10.1). Business in Spain made a smaller contribution to the ordinary profit of Spain's main banking groups as a result of the larger relative increase in impairment provisions in 2020 (see Chart 2.10.2). As discussed earlier, impairment losses in business in Spain represent a high proportion of total provisions in 2020.

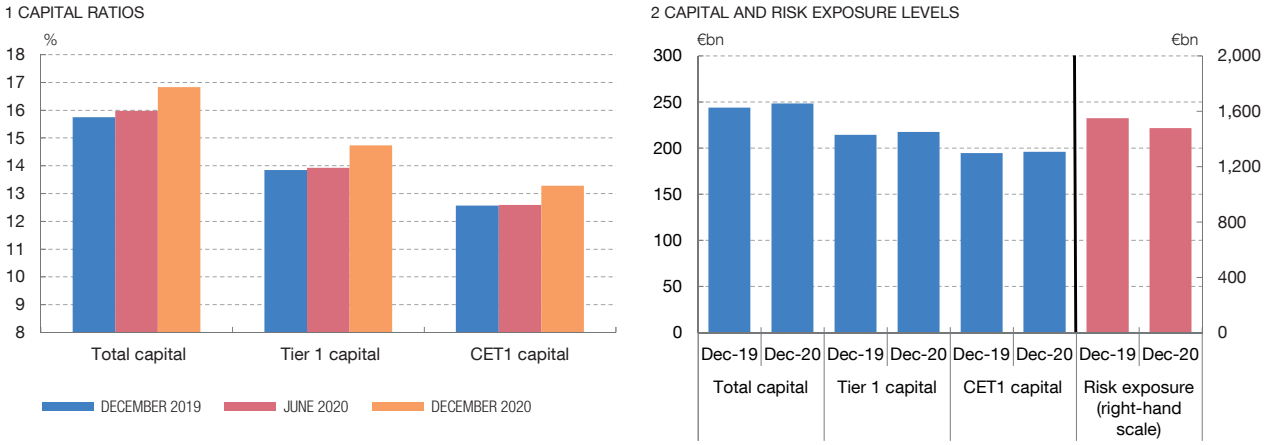
Solvency

In 2020, despite the outbreak of the pandemic, the CET1 ratio of the Spanish banking system increased by 71 basis points (bp), to 13.3%. This increase was recorded in the second half of the year. The same trend, i.e. a rise in the ratios mainly

Chart 2.11

THE AGGREGATE CAPITAL RATIOS OF THE SPANISH BANKING SECTOR INCREASED IN 2020 DESPITE THE PANDEMIC

In 2020, the CET1 ratio increased by 72 bp to stand at 13.3% at the end of the year. The rise occurred in the second half the year and, although CET1 capital increased slightly, it was mainly a consequence of the decline in RWAs, partly due to currency depreciation. The Tier 1 capital and total capital ratios also increased in 2020. The European quick fix and the prudential filters prevented the deterioration in profitability (due to negative extraordinary adjustments) from translating into a deterioration in solvency, and also contributed to the improvement in the ratios.



SOURCE Banco de España.

in the second half of the year, was followed by the Tier 1 capital ratio and the total capital ratio, which stood at 14.7% and 16.8%, respectively (see Chart 2.11.1). The downturn in profitability did not lead to a negative adjustment of banks' solvency, largely because negative extraordinary items (e.g. goodwill impairment) affect balance sheet items that are not counted towards banks' prudential capital.

The decrease in the risk-weighted assets (RWAs) of the largest institutions contributed to the increase in the solvency ratios. Although prudential capital levels rose in 2020 in the numerators of the ratios for the banking sector as a whole (CET1 by 0.8%, Tier 1 capital by 1.4% and total capital by 1.9%) the decline in RWAs was more pronounced, nearly 5% in 2020 (see Chart 2.11.2). The fall in RWAs in the past year was largely due to the measures adopted by the authorities to mitigate the effects of the pandemic (guaranteed loans, the CRR quick fix, etc.) and to exchange rate effects in the two banking groups with the strongest international presence, thus partially offsetting the adverse effects of these exchange rate movements in the volume of CET1 denominated in euro.

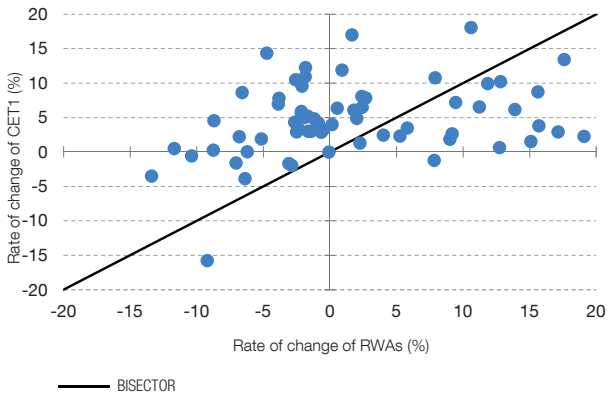
The increase in capital levels was driven by the authorities' recommendation on dividend distribution restrictions and, to a greater extent, by the CRR quick fix. Specifically, the CRR reform exempts part of banks' investments in intangible fixed assets related to software from deduction. In addition, a further discount to risk weighting was added to credit to SMEs. Also, the prudential treatment of eligible income for solvency purposes results in it not being affected by the negative

Chart 2.12

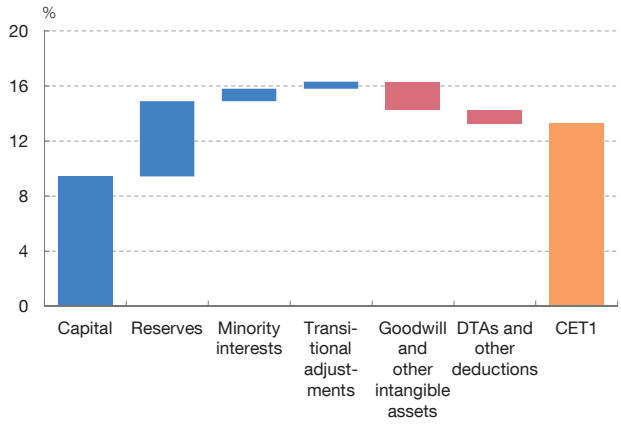
WHEREAS MOST BANKS INCREASED THEIR CET1 IN 2020, CHANGES IN RWAs WERE DIVIDED EVENLY BETWEEN POSITIVE AND NEGATIVE VALUES

A large portion of banks increased their CET1 during 2020, whereas negative and positive changes in RWAs were distributed more evenly. However, since the largest banks reduced their RWAs (partly as a result of currency depreciation), the aggregate volume of RWAs fell by almost 5% in 2020. Deductions associated with goodwill decreased owing to the significant impairment of this component in 2020.

1 RATE OF CHANGE OF CET1 AND RWAs BETWEEN DECEMBER 2020 AND DECEMBER 2019 (a)



2 BREAKDOWN OF CET1 RATIO AS % OF RWAs



SOURCE: Banco de España.

a The dots above the bisector represent increases (decreases) in CET1 over the last year greater (smaller) than the increases (decreases) in RWAs and, therefore, relate to increases in the CET1 ratio between December 2019 and December 2020. The reverse applies for the dots below the bisector.

extraordinary items identified in the previous section and, therefore, the rest of profit generation contributes positively to the numerator's performance. Chart 2.12.1 shows that the increase in CET1 is widespread among banks (the same is true for the other two types of capital), while in the case of RWAs there are greater disparities, with increases and reductions. Thus, the decrease in the Spanish banking system's aggregate RWAs in 2020 is due to the decline in most (10) of the (12) significant institutions supervised by the SSM while, for the rest of the system, RWAs broadly increased.

As regards the composition of the CET1 ratio, capital instruments and reserves together account for more than 90% of the CET1 ratio (see Chart 2.12.2). However, over the past year there was some change in the relative weights of these two items, with capital rising and reserves declining. As regards deductions, the decrease in those deriving from goodwill and tax assets is notable, as a consequence of the downward adjustment to the goodwill recorded by the two banks with the largest international presence discussed in the previous section.

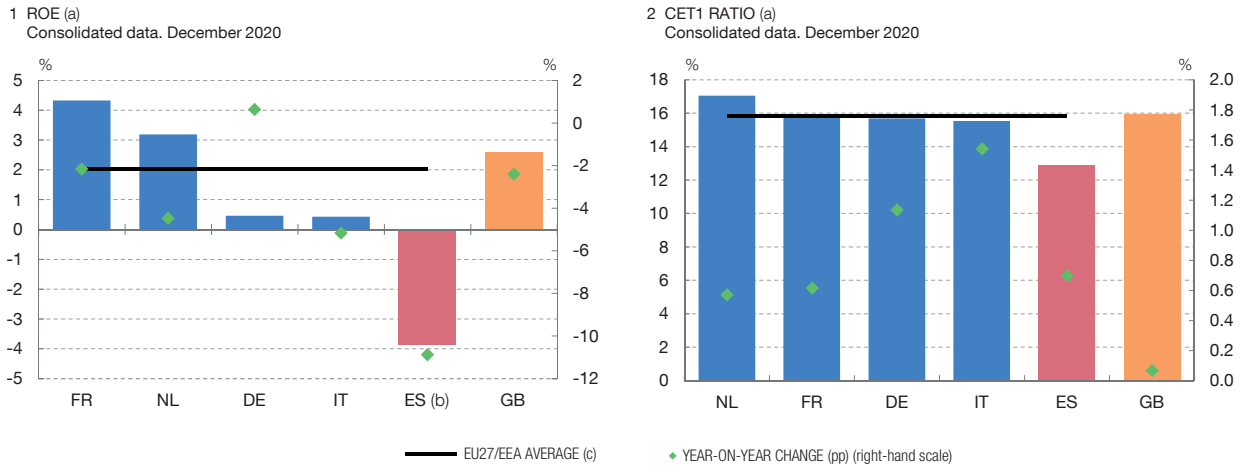
Comparison of European banks in terms of solvency and profitability

The profitability of Spanish deposit institutions was lower, on average, compared to the rest of the European banking sector in 2020, although the

Chart 2.13

SPANISH DEPOSIT INSTITUTIONS COMPARE UNFAVOURABLY WITH THE EUROPEAN BANKING SECTOR, AS A WHOLE, IN TERMS OF PROFITABILITY AND THE CET1 RATIO

The ROE of the main Spanish deposit institutions stood at -3.9% in December 2020 – considerably lower than the European average of 2% – reversing the trend of recent years. This lower ROE was heavily influenced by extraordinary negative adjustments such as those to the goodwill of the foreign subsidiaries of the two major banking groups. Similarly, the CET1 ratio of Spanish deposit institutions continues to be the lowest of the largest European countries. However, this ratio grew for Spanish banks in 2020, and even more so for the banks of the other main European countries, largely driven by the revision of the capital requirements regulation.



SOURCE: EBA.

a The charts show the data for Spain in red and that for the UK in yellow.
b Excluding extraordinary results, the ROE of Spanish banks was 4.3%, -3.7 pp lower than in 2019.
c The EBA data include Iceland. As from 2020 Q1, the EU aggregate data no longer include figures for UK banks but do include data of UK banks' subsidiaries in EU countries.

aforementioned extraordinary factors could be conditioning this assessment. Chart 2.13.1 shows the European comparison of the ROE ratio based on the latest data published by the EBA at December 2020. The main Spanish banks reported a negative ROE (-3.9%%), well below the European average (2%) and countries such as France and the Netherlands (above 3%). Also, Italy's and Germany's main banks posted profitabilities close to zero. This behavior in 2020 contrasts with the higher than European average profitability of Spanish banks after the financial global financial crisis. The negative profitability for the Spanish banking sector has been marked, as mentioned earlier, by certain extraordinary items. If Spanish banks' extraordinary profit is excluded, ROE in 2020 is more favourable (4.3%), although this is 3.7 pp lower than in 2019.[16]

Analysing solvency in terms of RWAs, Spanish banks ranked last among the main European banks as at December 2020, but they were in line with the European average in terms of the leverage ratio. Spanish banks' CET1 ratio as at that date stood at 12.9% (see Chart 2.13.2), 3 pp below the European average (15.9%).

16 A rigorous comparison with the results of other European banks would require a comparable detail of the influence of these extraordinary items on their results for 2020.

The positive across-the-board performance of this ratio in 2020 was underpinned for banks supervised by the SSM by the "quick fix". It should be borne in mind that this difference with the European average, in the case of the solvency ratio in terms of RWAs or the CET1 ratio, was already observed before the COVID-19 crisis and it is due to greater asset density, in part owing to structural factors such as the greater use of the standardised approach by Spanish banks. In fact, if solvency is measured in terms of the leverage ratio, Spain's significant institutions (5.8%) are in line with the European average and above those of the larger countries, except Italy.

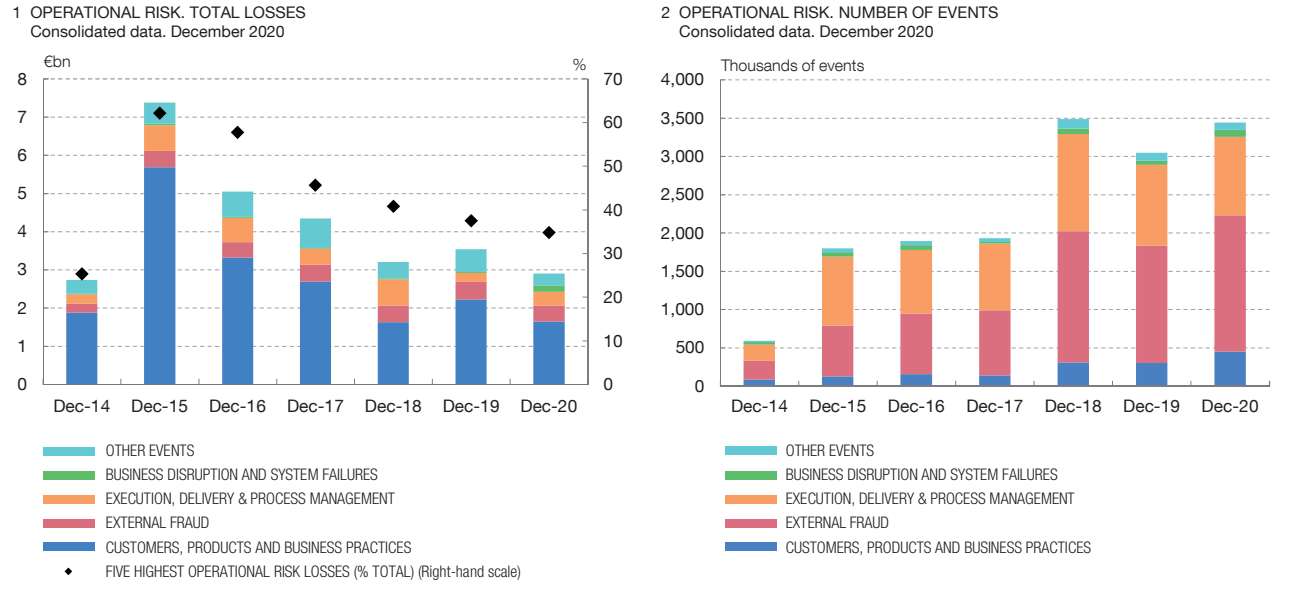
2.1.3 Deposit institutions' operational risks

In recent years, the impact of operational risks in terms of losses for deposit institutions has declined. This is explained in part by the fall in customer complaints (particularly those relating to mortgage loans), which have sometimes been resolved through the courts against Spanish deposit institutions and, in certain cases, are still pending resolution (see Chart 2.14.1).[17] However, other types of operational risk loss events have increased, particularly those relating to external fraud, which is in many

Chart 2.14

OPERATIONAL RISK LOSSES HAVE FALLEN IN RECENT YEARS, ALTHOUGH THE NUMBER OF EVENTS GREW

Operational risk losses fell significantly between 2015 and 2018, especially those relating to customers, products and business practices, but have stabilised in recent years. By contrast, the number of loss events has continued to rise, particularly external fraud-related loss



SOURCE: Banco de España.

17 See the Annual Claims Report of the Banco de España (2019) (full version available only in Spanish).

cases associated with cybersecurity breaches, but their related operational risk losses have increased more moderately. The number of events relating to the implementation, delivery and management of processes has held relatively steady. Meanwhile, events relating to customers overall (i.e. beyond complaints), products and business practices have increased. These also account for a greater proportion of operational risk losses, although it has declined since 2015 (see Chart 2.14). Operational risk-weighted assets have also fallen, declining by 6.5% in the past year, mainly owing to the decrease in the sector's net income and the lower equivalent value of the portion of income in foreign currency resulting from the depreciation of certain currencies, such as Latin American currencies, this being the main variable used to calculate operational risk capital requirements under the standardised approach generally used by Spanish banks.

2.2 Non-bank financial sector and systemic interconnections

2.2.1 Non-bank financial sector

Specialised lending institutions

Specialised lending institutions (SLIs) posted a strong decline in credit granted in 2020 and a worsening of the NPL ratio. The outstanding balance of credit granted by SLIs in Spain amounted to €41.3 billion at December 2020, down 18.9% from the previous year. If the impact of corporate transactions on the sector is excluded[18] and only the performance of the SLIs existing in December 2020 is considered, their outstanding credit would have declined by 6.4% in the past year. In any event, this is a significant contraction compared with the rates observed in previous years, owing to the impact of the health crisis on consumer lending, which is the main source of business for SLIs (see Chart 2.15).

The poor performance of credit contributed to the worsening of the NPL ratio in the first two quarters of 2020. The increase, to 6.5% (0.9 pp more than in December 2019), was more subdued in the second part of the year. Yet the volume of non-performing loans is experiencing very significant growth, in line with the non-performing loans in deposit institutions' consumer loan portfolios. And this despite the fact that borrowers have availed themselves of moratoria for significant amounts.

The income of SLIs also worsened substantially in the past year. In 2020 the income of SLIs decreased by 19% year-on-year, in contrast with the positive changes

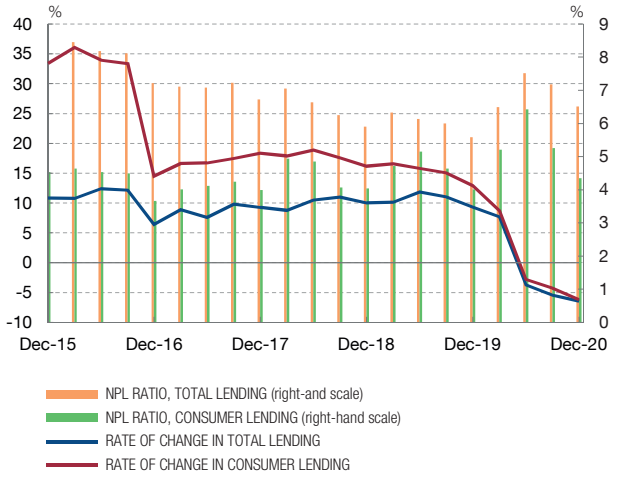
18 The absorption of a sizeable SLI by a deposit institution in 2020 accounted for approximately three quarters of the overall decline.

Chart 2.15

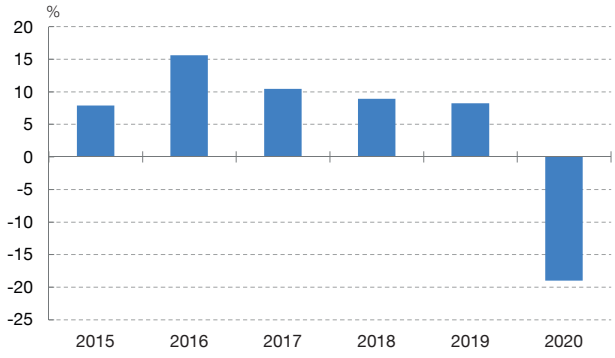
THE CREDIT GRANTED BY SLIs IN 2020 DECLINED NOTABLY, THEIR NPL RATIO ROSE MODERATELY AND THEIR INCOME WAS HIT HARD BY THE PANDEMIC (a)

Specialised lending institutions (SLIs) have been severely affected by the COVID-19 pandemic. The credit extended by these specialists in consumer credit declined notably by 6.4% for the year as a whole. The NPL ratio was particularly hard hit in the first two quarters of the year, although this effect moderated subsequently, and the ratio ended the year slightly higher than twelve months earlier. As for income, the decline in net interest income and in fees was the result of a fall of 19% in annual profit compared with growth in previous years.

1 RATE OF CHANGE IN LENDING AND NPL RATIOS AT SLIs (b)



2 RATE OF CHANGE IN PROFITS AFTER TAX OF SLIs



SOURCE: Banco de España.

a The analysis was performed with the group of SLIs existing in December 2020 and excluded, therefore, the effects of M&A activity in recent years.
b The total NPL ratio is higher than the NPL ratio for the consumer segment since a larger SLI specialises in high-risk mortgage loans.

observed in recent years. As they specialise in consumer credit, SLIs were able to obtain higher profitability than other institutions, as this is also a riskier business. As mentioned earlier, the pandemic impacted consumption more severely than other segments. Accordingly, net interest income on fees and commissions declined sharply during the year, explaining the fall in profit. As a result of the specialised nature of these institutions, both their income and their NPL ratios could experience additional impairment pressures over the coming quarters if the restrictions associated with the pandemic remain, particularly as regards portfolios under moratoria.

Investment funds

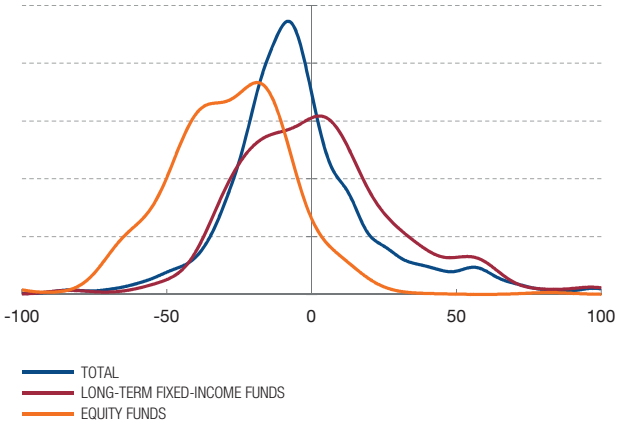
Despite the negative impact of the COVID-19 pandemic in 2020 Q1, the net assets of investment funds registered in Spain had nearly recovered their pre-pandemic levels at end-2020. Investment funds' assets declined by only 0.05% in 2020, despite the 10.5% fall recorded in Q1. This aggregate performance conceals the fact that net assets declined at more than half of the funds registered in Spain, in particular at equity investment funds (see Chart 2.16.1), which were highly influenced by the negative effects of adverse changes in the prices of these types of assets in the wake of the pandemic. There is also some heterogeneity in the

Chart 2.16

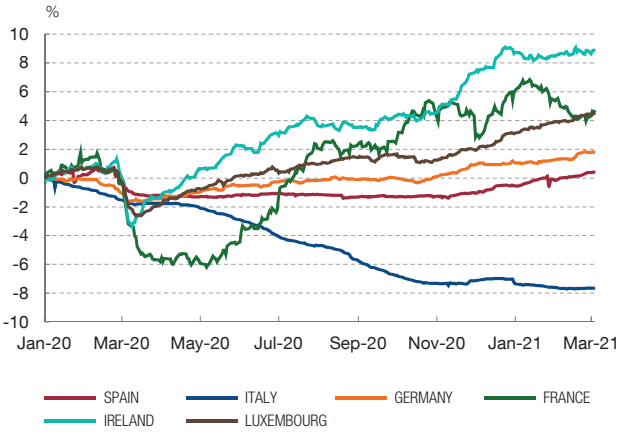
AFTER THE INITIAL ADVERSE IMPACT OF THE COVID-19 PANDEMIC, NET ASSETS AND THE NET CAPITAL INFLOWS OF INVESTMENT FUNDS RECOVERED ACROSS THE BOARD

Following the recovery as from 2020 Q2, in December 2020 investment funds' net assets reached a similar volume to that of the previous year, with a year-on-year rate of change of close to zero. However, the median value of the distribution of the rate of change in investment funds' net assets stood in negative territory, especially in equity funds. In March 2020, with the outbreak of the COVID-19 pandemic, there were significant net capital outflows from the investment funds of certain European countries. However, in 2020 H2 and the beginning of 2021, net capital inflows recovered in most European countries, especially in Ireland and France, with the exception of Italy.

1 INVESTMENT FUNDS. DISPERSION OF CHANGES IN NET ASSETS
December 2019 vs December 2020 (a) (b) (c)



2 INVESTMENT FUND FLOWS (d)



SOURCES Inverco and Refinitiv.

a The "long-term fixed-income funds" category includes long-term fixed-income investment funds, mixed fixed-income funds, international fixed-income funds and international mixed fixed-income funds. The "equity funds" category includes equity investment funds, mixed equity funds, international equity funds and international mixed equity funds. The total includes the two previous categories together with hedge funds, short-term fixed income funds, monetary funds, passive management funds, absolute return funds, global funds and collateralised investment funds.
b The chart shows the density function of the rate of change in investment funds' net assets, weighted by the previous year's net assets. This density function is approximated through a kernel estimator which allows a non-parametric estimate of the density function, yielding a continuous and smoothed graphical representation of that function.
c The components of the contribution to the change in investment funds' net assets (net subscriptions and profitability) show a correlation coefficient of 0.01 for the total and for the long-term fixed-income funds, and of 0.20 for the equity funds.
d Cumulative change in investment funds' net capital inflows and outflows, as a percentage of and in relation to the net assets of each country's funds on 15 January 2020, based on a representative sample of funds domiciled in euro area countries.

contribution of the components of net subscriptions and profitability to the change in net assets, among both investment funds and investment fund categories. In 2021 Q1, the net assets of investment funds registered in Spain increased (by 4.7% with respect to December 2020), in terms of both net subscriptions and profitability.

Capital inflows of investment funds in the euro area have increased substantially in recent months. Chart 2.16.2 shows the cumulative change in capital flows since early 2020 for a representative sample of investment funds from the main euro area countries. Following the outbreak of the COVID-19 pandemic, significant net outflows were recorded, which reversed from mid-year in all the countries except Italy. The recovery picked up in the final stretch of the year, particularly in equity funds. This is consistent with the positive impact on this market of the news on the COVID-19 vaccines, which led to an increase in investors' risk appetite. In the case of Spanish investment funds, the pattern of capital inflows and

outflows, in comparison with other European countries, is proving to be more stable in this crisis. Thus, there were lower outflows at the onset of the pandemic, as well as a lower pace of inflows during the recovery phase. This could be due to the high weight of retail investors in the capital of investment funds, whose net assets are a priori less sensitive to falls in returns and, in general, to bouts of market volatility[19].

Pension funds and insurance companies

The flows of net contributions to pension funds increased significantly in 2020. Thus, although gross contributions remained at levels similar to those of the previous year, net contributions grew by more than 40%, particularly in the individual systems. This dynamic could be affected by the new tax framework applicable to pension funds. Pension plan assets increased by 1.8% year-on-year, also showing an expansive behaviour in the first quarter of 2021 (growth of 2.4% since December 2020). The annual average rate of return on pension funds at December 2020 was 0.7% and the long-term rate of return (25 years) was 3.4%.

The insurance sector improved its solvency and profitability levels in 2020, despite the outbreak of the COVID-19 pandemic, with an uneven performance of the life and non-life segments. The solvency capital requirement (SCR) ratio was 237.8%, compared with 237% in 2019, while the ROE increased from 13.5% in 2019 to 14.9% in 2020. Premium income in the non-life sector grew slightly (1%) owing to the strength of health and multi-risk insurance, while life premiums posted a double-digit decrease, giving rise to an overall fall in premium income for the sector of 8.2%.[20] This drop in income was more than offset by the fall in claims and operating expenses, which explains the sustained profitability.

2.2.2 Banks' interconnections with the non-bank financial system

The analysis of interconnections between the different components of the Spanish financial system helps to identify common sources of risk, which could contribute to the transmission of tensions therein in the event that the risks to stability posed by the current crisis materialise. For this purpose, we analyse in this section the credit ratings of common holdings – i.e. securities that form part of the portfolio of more than one financial sector – of financial sectors' marketable securities

19 As regards the relationship between fund performance and type of holder, see Javier Gil-Bazo, Peter Hoffmann and Sergio Mayordomo, "Mutual Funding", The Review of Financial Studies, Volume 33, Issue 10.

20 Life insurance may cover the risk of death and/or incorporate a savings component linked to the insured's survival (with the possibility of mixed policies combining the two elements), while non-life insurance covers a wide range of risks (car, health, claims, home insurance, etc.). Data obtained from ICEA.

portfolios in 2020 Q4.[21] Specifically, these holdings are studied, focusing on securities issued by non-financial corporations, for banks, insurance companies, investment funds and resident pension funds. Marketable securities portfolios account for 24% of total assets in the banking sector and for around 80% of total assets in the resident non-bank financial (NBF) sectors mentioned above.[22]

The main risk is that the credit ratings of certain vulnerable issuers may be downgraded, possibly triggering fire sales and losses (realised or valuation losses) for banks and NBF sectors. Fire sales could be conducted by some financial intermediaries that can only invest in securities above a certain credit rating, or by agents, such as investment funds, that could face cash withdrawals in periods of stress.[23] This could impair liquidity and cause abrupt falls in prices in several markets, which could be passed on from one financial sector to another given their exposure to the same issuers. To date, the measures adopted to alleviate the impact of the health crisis have contributed to temporarily mitigating economic agents' credit risk. Similarly, the decisions adopted in the design of the ECB's asset purchase programme have also mitigated the possible non-linear effects on prices of the downgrading of credit ratings.[24] Also, credit rating agencies have revised their ratings less than in other crises. Nonetheless, numerous issuers, especially NFCs, are currently in a vulnerable situation, as suggested by the negative outlooks resulting from credit agencies' analyses and, accordingly, their ratings could be downgraded in the event of a worsening or persistence of the economic situation.[25]

In Spain, more than 50% of each financial sector's portfolio securities are classified as above investment grade (above BBB- and equivalent ratings). This percentage would be significantly higher if only fixed income assets were considered. Banks and insurance companies have the highest percentages of securities in investment grade, with 66% and 80%, respectively, of their holdings above this rating. In the case of investment funds and pension funds, these percentages hover around 51% and 57%, respectively, given the greater volume of unrated securities in their portfolios. Nevertheless, analysing these two subsectors

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21 Marketable securities include both fixed-income and equity instruments and may, in particular, include holdings in the capital of investment funds. Each issuer's rating at a specific date is assigned to all of its issued securities.

22 The banking sector's marketable securities portfolio, valued at market prices, amounts to around €661 billion, while the NBF sectors' portfolios are much smaller: insurance companies, €276 billion; investment funds, €263 billion; and pension funds, €119 billion.

23 See Section 2.2.2. of the Banco de España's Autumn 2020 FSR or Rodríguez de Codes et al. (2020), *The challenges associated with the use of agencies' credit ratings in the context of the COVID-19 crisis,* Section 4, Financial Stability Review, Autumn 2020, Issue 39.

24 In April 2020 the ECB's Governing Council adopted certain measures to relax collateral eligibility requirements in financing transactions with financial institutions which included, most notably, the easing of the conditions for the use of non-marketable assets (loans and advances) as collateral and the reduction of valuation haircuts for marketable and non-marketable assets. At the same time, in order to mitigate the impact of rating downgrades on collateral availability, it was decided to temporarily continue to accept the marketable assets and the related issuers which on 7 April 2020 met the minimum credit quality requirements.

25 See Boxes 1 and 3 of Chapter 2 of the ECB's Financial Stability Review, November 2020.

in more detail, the securities not classified as investment grade were concentrated in instruments without assigned rating at the end of last year, which represented 44.5% and 39% of the total holdings respectively. Within these instruments without an assigned rating, holdings in the capital of other investment funds predominated (a percentage higher than 30% of the portfolio) which, due to their nature, are not subject to credit ratings in the way fixed income securities are. Conversely, the presence of fixed income instruments without an assigned rating was marginal.

The weight of securities holdings classified in the highest categories (from A- to AAA+ and equivalent ratings) is greater for insurance companies (60%), which is significantly higher than for investment funds (27%) and pension funds and banks (35%). These figures largely reflect that banks and insurance companies have larger holdings of – mainly Spanish – government debt securities. Lastly, holdings bordering on investment grade, in the BBB range, make up between 20% to 25% of portfolios for the NBF sectors and 31% for the banking sector.

The ratings of securities held in common by the banking sector and NBF sectors are concentrated between A- and AAA+ (see Chart 2.17.1). The percentage of securities held in common by each pair of sectors[26] varies only slightly with respect to the similar exercise conducted in 2020[27] and is particularly high in the case of NBF sector. The holdings held in common by banks and NBF sectors that are bordering on investment grade represent a relatively small percentage of the total bank portfolio, around 12%. The weight of securities bordering on investment grade in holdings held in common with other sectors is more significant for investment and pension funds (around 20%).

The weight of unrated holdings in investment and pension fund portfolios was high in December 2020. Specifically, nearly 40% of their holdings are unrated (29% in the banking sector and 16% in the insurance sector). This is also reflected in the percentage of holdings these two sectors have in common and which each of them has with insurance companies. However, leaving aside the participations in other funds that, as already indicated, exceed 30% of the portfolio, the holdings that have not been assessed by credit rating agencies are not subject to the risk of fire sales owing to possible rating downgrades. However, as they are unrated, their secondary markets are likely to be shallow, which would make them difficult to sell in the event of possible liquidity needs and could generate more downward pressure on prices in an episode of tension.

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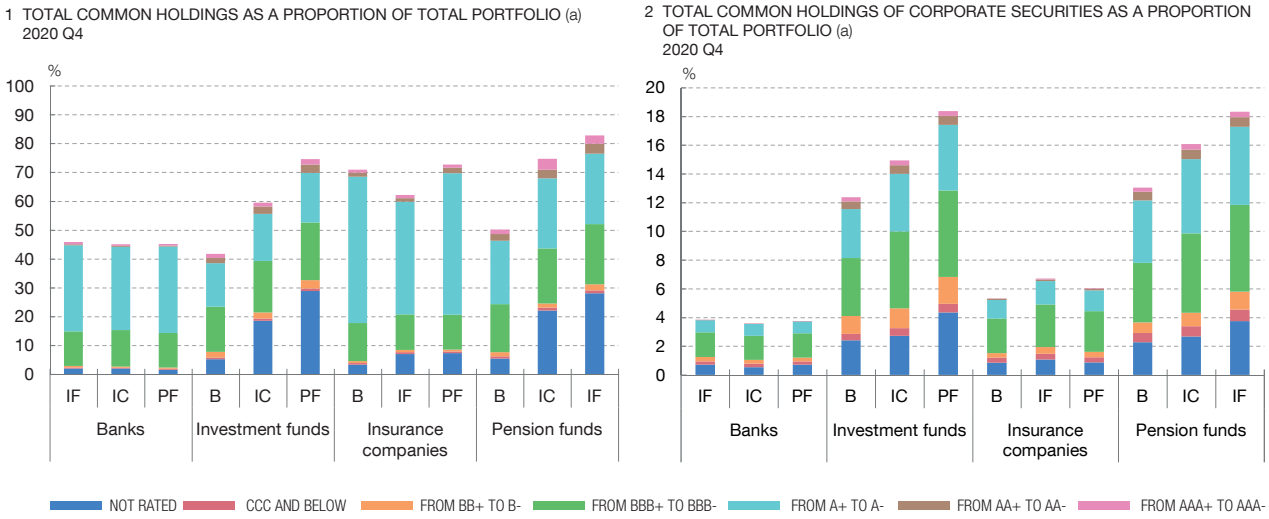
26 Each financial sector maintains in its portfolio securities that the other sectors have also acquired. These may be securities issued by non-financial corporations, governments or other financial intermediaries. For instance, if a bank or an investment fund have acquired parts of the same bond issue of a firm in the transport sector, the amounts relating to these holdings are computed as common holdings.

27 See the Banco de España's Spring 2020 Financial Stability Report.

Chart 2.17

COMMON HOLDINGS IN DIFFERENT FINANCIAL INTERMEDIARIES OF SECURITIES ON THE EDGE OF INVESTMENT GRADE ARE IMPORTANT FOR INVESTMENT AND PENSION FUNDS

Investment funds and pension funds hold a relatively high proportion of common holdings of securities issued by NFCs that are on the edge of investment grade and are, therefore, more vulnerable to the possibility of a worsening of the economic situation. By contrast, in the case of the banking sector and the insurance companies, these securities account for a low proportion of total portfolio.



SOURCES: Securities Holding Statistics by Sector and Refinitiv.

a IF, IC, PF and B denote investment funds, insurance companies, pension funds and banks, respectively. Each sector has common holdings with other sectors, as shown by the different columns in the chart, which depict the common holdings between each sector pair. For instance, the first column on the left-hand side indicates that the common holdings between banks and investment funds make up 48% of the total banking sector portfolio; of these holdings, approximately 12% are investment grade (BBB+ to BBB-). The market value of the holdings reported by the institutions is taken into account (or, where appropriate, their fair value). The latest credit rating available at 29.1.2021 is used, standardised according to S&P's credit rating scale.

Banks' holdings of bonds or shares issued by NFCs are minimal, around 4.5 % of their marketable securities portfolio, and lower than those of the NBF sectors. The weight of these corporate securities in the NBF sectors' portfolios is higher (10% in the case of insurance companies and around 20% in that of investment funds and pension funds). Approximately 40% of corporate security holdings held by banks are securities issued by Spanish NFCs, while the percentage is lower for the NBF sectors, between 18% and 34%[28].

Investment funds and pension funds maintain the highest percentage of common holdings of corporate securities relative to the size of the portfolio, between 12% and 17% for each sector (see Chart 2.17.2). Holdings on the edge of investment grade range between 4% and 6% of the portfolio of these two sub-sectors. For banks and insurance companies, common holdings of corporate

28 The data used in this analysis are grouped at sectoral level, but are not consolidated on an intra- or cross-sectoral basis. This means that NFCs may have subsidiaries classified in the sectors of financial intermediaries through which they are financed via the issuance of securities, but since the consolidated information is not available, these exposures are not included in the analysis as securities issued by NFCs.

securities are lower, standing at 4% and 6.5%, respectively. Chart 2.17 shows that when securities other than corporate securities are excluded, the weight of common holdings declines significantly in magnitudes exceeding 30 pp of the total portfolio. This effect evidences the importance of other common exposures different from corporate securities (particularly government debt) as a possible channel for the transmission of market shocks to all the financial sectors.

Box 2.1

MONITORING OF LOANS WITH PUBLIC (ICO) GUARANTEE

Royal Decree-Law (RDL) 8/2020 of 17 March 2020 approved a public guarantee facility for firms and self-employed persons of up to €100 billion. The aim was to provide firms with access to the funding they needed to meet their liquidity needs generated as a result of the restrictions imposed on economic activity and mobility in response to the pandemic. RDL 25/2020 activated a second guarantee facility, of up to €40 billion, essentially to meet funding needs linked to investment.[1] RDL 34/2020 extended the deadline for application for guarantees to June 2021. It also extended, at the request of the firms concerned, the duration of the loans guaranteed up to eight years and the grace period up to 24 months (from five years and 12 months, respectively, in RDL 8/2020).

On data as at December 2020, the amounts guaranteed stood at around €88 billion, which represents total financing granted to non-financial corporations (NFCs) and sole proprietors of approximately €115 billion, including loans drawn (€93 billion) and credit facilities (€22 billion). The volume of credit drawn by firms and sole proprietors since March 2020 has risen by some €30 billion, largely as a result of the high volume of loans granted under the guarantee scheme, especially in 2020 Q2. In the second half of the year, the credit under the guarantee scheme and new loans outside the scheme were not sufficient to offset repayments and transfers to write-offs, resulting in a small but continuous decrease in this credit stock (see Chart 1).

A positive correlation is found between the growth in financing granted to NFCs and sole proprietors and the weight of the guarantee scheme in credit institutions' relevant portfolios (see Chart 2). Accordingly, it is observed that institutions with a higher level of participation in the guarantee scheme are associated with higher credit growth to business in 2020.

By comparing firms that obtained ICO-backed loans in 2020 with those that did not, it is possible to identify whether or not the firms that obtained such loans have characteristics

Chart 1
CHANGE IN CREDIT TO NFCs AND SOLE PROPRIETORS, MARCH-DECEMBER 2020
Individual data. Business in Spain. Deposit institutions

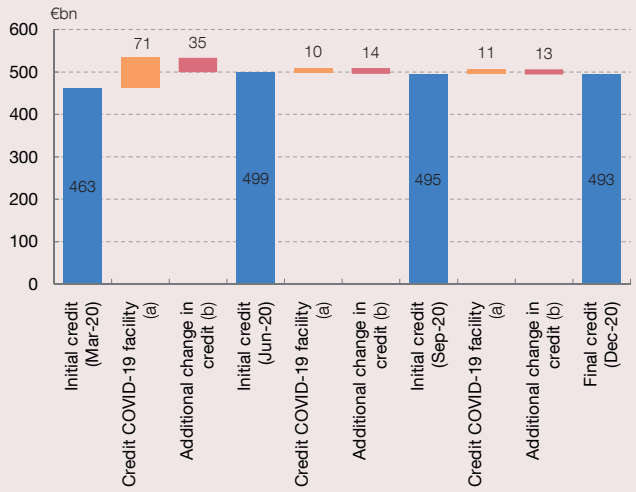
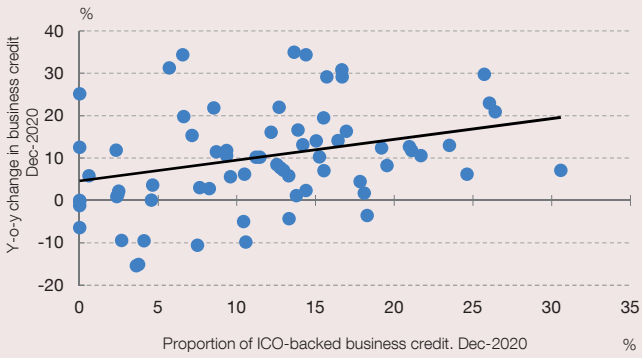


Chart 2
IMPLEMENTATION OF ICO GUARANTEE SCHEME AND GROWTH IN CREDIT FOR BUSINESS (c)
Individual data. Business in Spain. Deposit institutions



SOURCES: ICO and Banco de España.

a COVID-19 guarantee facility under RDL 8/2020 of up to €100 billion. Total financing granted under the guarantee facility up to December 2020: €115 billion. Total amount effectively drawn by NFCs and sole proprietors: €93 billion.
b The additional change in credit to NFCs and sole proprietors reflects the change in the credit stock that is not explained by the implementation of the COVID-19 guarantee programme, corresponding to the net difference between new lending outside the scheme and repayments and transfers to write-offs.
c Business credit includes loans to non-financial corporations and sole proprietors granted by deposit institutions.

1 Subsequently, resolutions of the Council of Ministers of 24 November and 22 December 2020, on execution of this guarantee facility, activated the second, third and fourth tranches, in an amount of €2.55 billion, €250 million and €500 million, respectively. The second tranche also covered meeting the liquidity needs of firms in the restructuring agreement stage of insolvency proceedings.

associated with greater risk.[2] For this purpose, the firms reporting to the Banco de España's Central Credit Register (CCR) in December 2019 that were not in default at that date (a pre-requisite for eligibility for the guarantee scheme) were taken and matched with the data held in the Banco de España's Central Balance Sheet (CBB) database at end-2018 (the last complete sample available). The findings show that the firms that took advantage of the guarantee scheme had a lower equity-to-asset ratio, a higher average cost of debt, a lower level of sales productivity (measured as sales to employees) and shorter bank debt maturities (see Chart 3). They were also smaller and younger, but their profitability and liquidity ratios were higher. All the above suggests that the firms that took advantage of the guarantee facilities had, ex ante, a somewhat higher risk profile than those that did not.[3] This conjecture is in keeping with their credit risk performance: up to the end of 2020 more of these firms were classified as at risk in the CCR (Stage 2, non-performing for subjective reasons or non-performing) than those that did not take advantage of the guarantee scheme. A multivariate econometric analysis that controls for all these and more characteristics – for example, firm sector and geographical location and identity of main lending bank – confirms all these findings.

Drawing on the set of firms and sole proprietors in the CCR (see Chart 4), it is observed that, for firms, 35.8% of the financing drawn linked to the ICO guarantee scheme corresponds to borrowers that have at least one Stage 2 loan in the system overall (29.4% for sole proprietors). Around 5% of the amount drawn with ICO guarantee corresponds to firms that have at least one loan that is non-performing for subjective reasons (2.5% for sole proprietors), and 5.5% to firms that have at least one non-performing loan (5.6% for sole proprietors).[4] Analysing the existence of impairment exclusively in the financing under the guarantee

Chart 3
FINANCIAL CHARACTERISTICS OF FIRMS MAKING USE OF THE ICO GUARANTEE SCHEME (a)

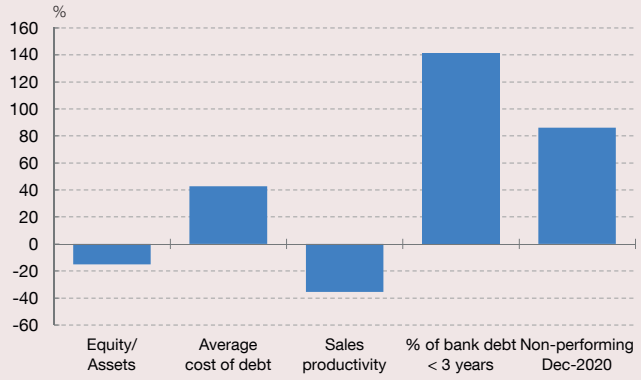
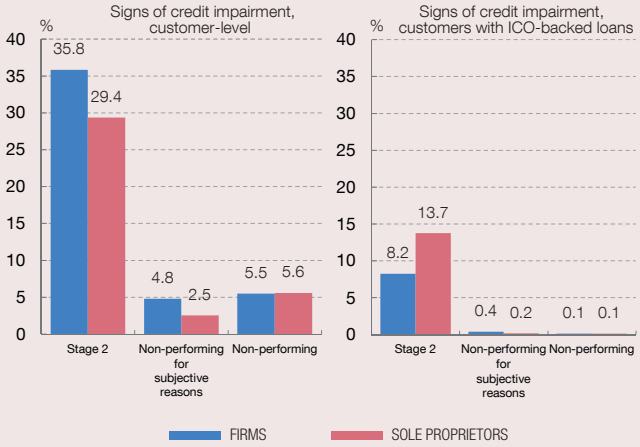


Chart 4
PROPORTION OF ICO-BACKED LOANS OF CUSTOMERS WITH SIGNS OF CREDIT IMPAIRMENT. DECEMBER 2020 (b)
Individual data. Business in Spain. Deposit institutions



SOURCE: Banco de España.

a For each financial characteristic, the chart shows the relative difference (expressed in %) between its average value for firms with an ICO-backed loan and its average value for firms with no ICO-backed loans.
b In the customer-level analysis, all possible loan impairment on all loans, whether or not with ICO backing, granted by any institution under the ICO guarantee scheme or not, are identified for each corporation or sole proprietor with an ICO-backed loan. Customers with troubled loans over a minimum materiality threshold are flagged as having signs of impairment. In the analysis of customers with guaranteed loans, only possible credit problems with their ICO-backed loans are analysed.

2 Sole proprietors have to be excluded from this analysis, as the necessary balance sheet and income statement data are not available for them.
3 Box 1.2 shows that, for business credit overall, firms with a lower risk profile were those that recorded the highest rate of growth. Here the comparison is different, with a higher proportion of firms at risk being observed among those taking advantage of the ICO guarantee scheme. It may be inferred, therefore, that had the scheme not been introduced, these firms could have faced credit constraints.
4 A materiality filter of 5% is applied to borrowers' total credit exposure in the system to determine whether or not it is a problem exposure. This indicator does not seek to determine a pulling effect in accordance with accounting standards, but to identify general signs that would permit early detection of credit quality impairment.

Chart 5
NEW LOANS SUBJECT TO PUBLIC GUARANTEE SCHEMES BY MATURITY AND GUARANTEE COVERAGE
Consolidated data. Deposit institutions. December 2020

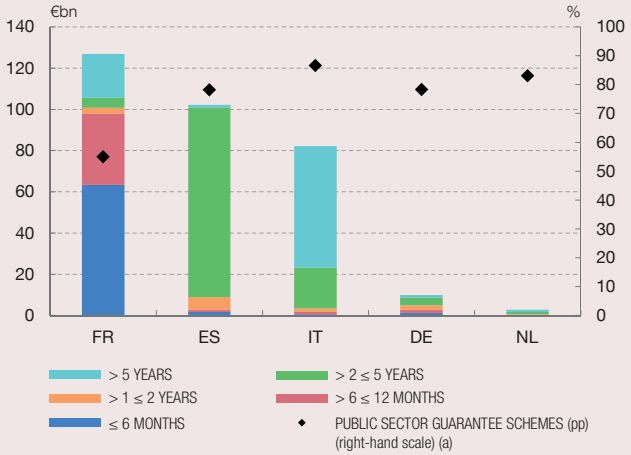
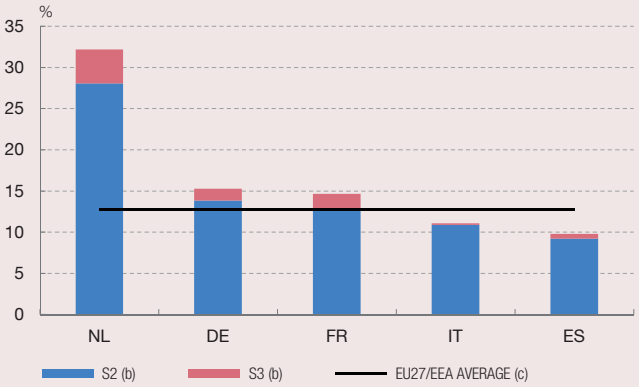


Chart 6
NEW LOANS SUBJECT TO PUBLIC GUARANTEE SCHEMES BY CREDIT QUALITY STAGE
Consolidated data. Deposit institutions. December 2020



SOURCE: EBA.

a Public guarantee denotes the percentage of cover that public guarantees offer these new loans.
b S2 (Stage 2) denotes a significant increase in credit risk, but not default status or classification as non-performance for subjective reasons which would correspond to S3 (Stage 3).
c The EBA data include Iceland. From 2020 Q1 the aggregated EU data no longer include the figures of UK banks, but they do include data from their subsidiaries in EU countries.

scheme, the problem loan percentages are much lower: for firms, Stage 2 loans account for some 8% of the credit guaranteed (around 14% for sole proprietors), while the volume of non-performing loans is well below 1% (and it is even lower for sole proprietors). It is important to note that many of these guaranteed loans had a payment holiday that will probably not yet have come to an end.

At the European level, on consolidated balance sheet data and the latest data published by the EBA in its risk map as at December 2020, new loans to NFCs under public guarantee schemes amounted to €342.9 billion. They were concentrated primarily at banks in France, Spain and Italy, which together accounted for 90.7% of the total. However, although in the case of French banks the amount guaranteed was close to 50% and most of the loans had maturities of less than 12 months, in Spain and Italy the sums guaranteed amounted to 80% and most were medium and long-term loans (see Chart 5). In addition, most new loans backed by public guarantee schemes were S1 (performing) loans. Thus, new S2 (significant increase in credit risk) and S3 (non-performing) loans at the European level accounted for 12.7% of the total. The high share of new S2 and S3 loans in the Netherlands (32%) stands out (see Chart 6).[5]

5 The EBA uses the IFRS9 S1, S2 and S3 credit risk categories (which are similar to the performing, significant increase in credit risk and non-performing categories).

Box 2.2

MONITORING LOAN MORATORIUM SCHEMES

To date, five different types of credit moratoria have been approved in Spain, four of which correspond to legislative schemes and the other to conventional agreements.[1,2] Combining data for monitoring these schemes reported by credit institutions to the Banco de España with data from the Banco de España's Central Credit Register (CCR), this box analyses the volume, duration and credit quality of these moratoria.

On December 2020 data, 1.38 million moratoria have been granted in Spain, with an acceptance rate of more than 92%. The amount of credit that has become subject to moratoria since March 2020 exceeds €56 billion (8% of all the credit in the loan portfolios eligible for moratoria and 5% of all the credit to the non-financial private sector in December 2020). During this same period there have also been reductions in the amount of credit subject to moratoria (owing to discharges, repayments and cancellations) totalling €22 billion, so that the outstanding volume of loans subject to moratoria in December 2020 amounted to €34 billion, slightly more than 3% of all loans to the non-financial private sector (see Chart 1).

Most of this outstanding volume corresponds to conventional schemes (more than €32 billion, or 95%). More than €15 billion of credit initially subject to legislative moratoria is now subject to conventional moratoria; the shorter duration of the former means that when they expire loans are often transferred to bilateral or sectoral moratoria. Around 85% of these outstanding moratoria will expire during the first half of 2021 (see Chart 2), with expiries concentrated in April and May (over 50%).

As regards the classification of loans whose moratoria have already expired or been cancelled and, therefore, are no

Chart 1
INFLOW AND OUTFLOW OF CREDIT TO/FROM MORATORIA AND OUTSTANDING VOLUME OF MORATORIA AS AT DECEMBER 2020 (a) (b)

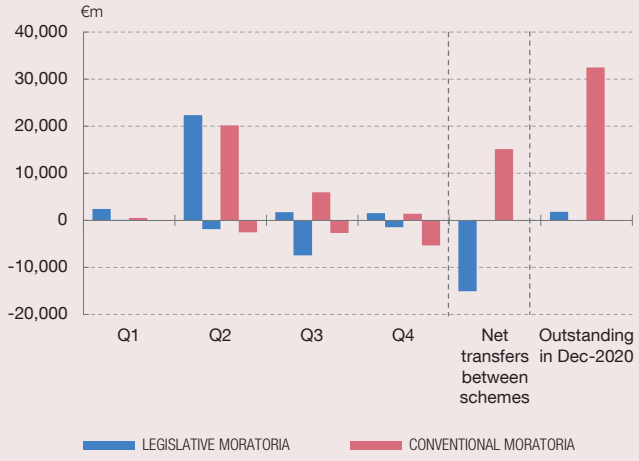
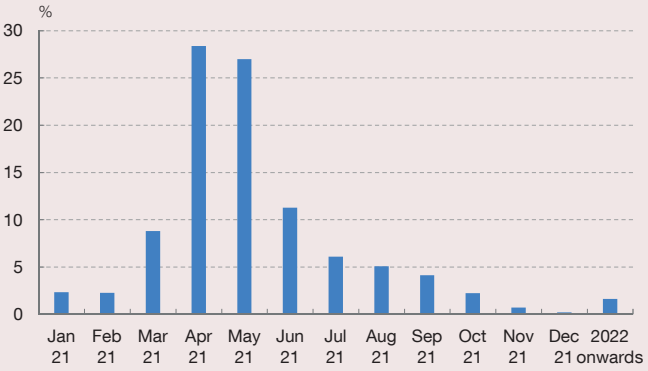


Chart 2
EXPIRIES BY MONTH OF THE MORATORIA OUTSTANDING IN DECEMBER 2020 (% OF TOTAL)



SOURCE: Banco de España.

a The data on outflows are for the period to November to be consistent with the criterion used to compute the moratoria outstanding in December (expiry is not considered to occur until the end of the month, even if it occurs during the month).
b The inflow of credit to moratoria (positive bar) and the outflow of credit from moratoria (negative bar) are shown for each quarter. Also, the (positive or negative) net flow of transfers of credit volume received by each scheme from the other is shown for the year as a whole. The last two bars depict the stocks in December 2020 as a result of these two types of flow and of the net transfers between the legislative and conventional moratoria programs throughout 2020.

1 Royal Decree-Law (RDL) 8/2020, on extraordinary urgent measures to address the economic and social impact of COVID-19, established the legislative moratorium for personal mortgage debts. Royal Decree-Law 11/2020 introduced the moratorium for non-mortgage loan agreements (including consumer credit). Essentially, the requirements and effects of both types of moratorium are the same, although they apply to different types of loans. Royal Decree-Law 19/2020 established a special regime for sectoral framework agreements for the deferral of customer financing transactions concluded between lender institutions and their customers through their representative associations. For their part, Royal Decree-Law 25/2020 and Royal Decree-Law 26/2020 established two new moratoria, applicable not only to individuals, like the previous ones, but also to legal persons. These moratoria apply to loans granted to the tourism sector and to the public transport of goods and charter bus sector.

2 Conventional moratoria include both the sectoral moratoria covered by the provisions of the sectoral agreements entered into by lender institutions through their representative associations, in accordance with Royal Decree 19/2020, and other moratoria agreed under the principle of freedom of contract in the Civil Code that are not covered by a sectoral framework agreement (bilateral moratoria).

longer in force, almost three-quarters are performing, around 20% are in stage 2 and somewhat less than 10% are classified as non-performing (see Chart 3). Most of the moratoria no longer in force are legislative moratoria, specifically for households in a situation of vulnerability. By type of guarantee, 21% of mortgage loans which were subject to moratoria are in stage 2 (15% of non-mortgage loans), and 9% are classified as non-performing (6% for other loans, without mortgage security).

An econometric model has been estimated to identify the main determinants of the probability that, when it ceases to be subject to a moratorium, a mortgage loan is classified as non-performing or in stage 2. This model uses data from the Banco de España's Central Credit Register on the characteristics of credit transactions (type of moratorium, interest rate, original maturity, etc.), collateral (unemployment rate of geographical location of collateral, etc.), borrowers (income, total debt, age and credit history of head of household, etc.) and lender banks.

The results of this analysis show that loans subject to legislative moratoria initially have a 33% higher probability of being classified in a category other than performing, and that this probability is also greater in the case of loans to households with a higher bank debt-to-income ratio in 2019, lower income,[3] poorer credit history (past defaults), or that live in regions more severely affected by the pandemic in terms of job losses. In particular, the average probability of a loan being classified as stage 2 or non-performing is 50% higher for the most indebted households (bottom vis-à-vis top quintile, see Chart 4). The study also shows that these household characteristics are associated with a higher probability that loans subject to legislative moratoria will become subject to conventional moratoria. This overlapping of moratoria may be containing risks and thus postponing their materialisation in the form of future non-performance.

For all these reasons, and given the uncertainty surrounding economic developments, credit moratoria need to be closely monitored in Spain over the coming months. In addition, the current profile of expiries may be affected by the entry into force of RDL 3/2021,[4] which allows new nine-month moratoria to be applied for until March and the duration of existing moratoria to be extended to a total duration of not more than nine months. The experience built up over these months shows that this type of support measure is flexible and can be activated and withdrawn relatively quickly, but must be used prudently in order to ensure that appropriate repayment incentives are maintained.

Chart 3
CREDIT QUALITY OF LOANS LINKED TO EXPIRED OR CANCELLED MORATORIA (a)

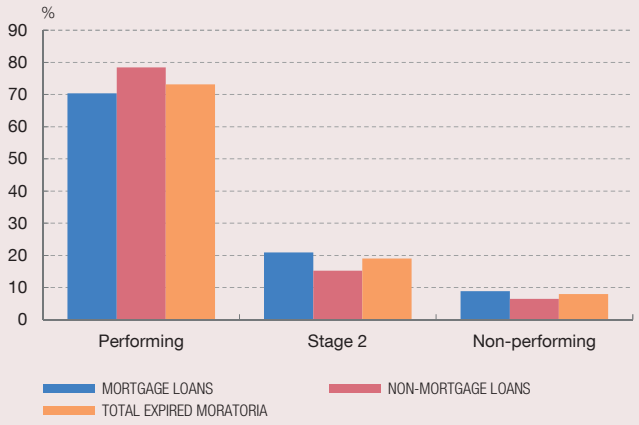
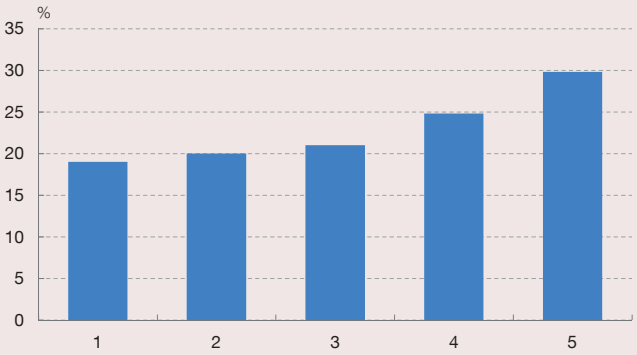


Chart 4
PERCENTAGE OF NON-PERFORMING AND STAGE 2 LOANS THAT WERE SUBJECT TO MORATORIA NO LONGER IN FORCE AT THE END OF 2020, BY HOUSEHOLD INDEBTEDNESS QUINTILES



SOURCE: Banco de España.

a Non-performing loans include both non-performing for subjective reasons and objectively non-performing.

3 Each household is imputed the average income corresponding to its postcode.

4 Among other measures, Royal Decree-Law 3/2021 of 2 February 2021 adopting measures to reduce the gender gap and on other Social Security and economic matters extends the application period for moratoria and extends their duration to up to nine months.

Box 2.2

MONITORING LOAN MORATORIUM SCHEMES (cont'd)

Chart 5
EBA-COMPLIANT MORATORIA
Consolidated data. December 2020

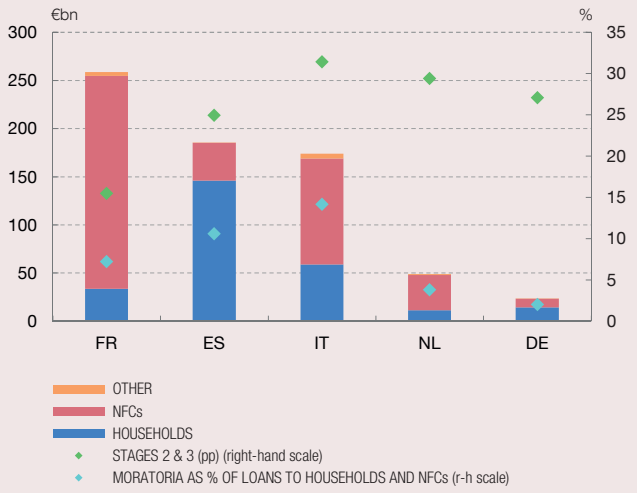
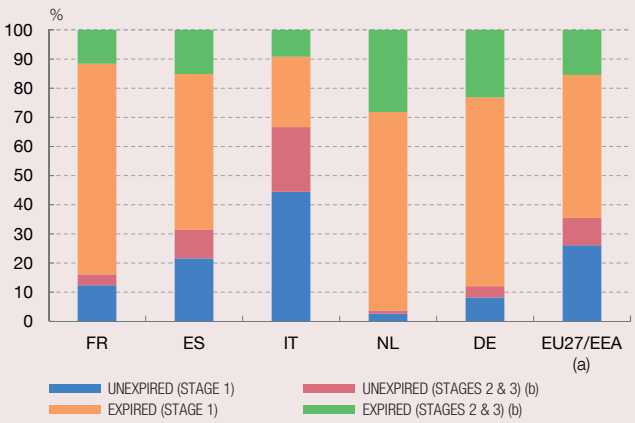


Chart 6
EBA-COMPLIANT MORATORIA (CONTINUED)
Consolidated data. December 2020



SOURCE: European Banking Authority.

a The EBA data include Iceland. From 2020 Q1, the aggregate EU data no longer include figures for UK banks, but do include data for subsidiaries of UK banks in EU countries.
b Most of the EBA compliant moratoria, both expired and unexpired, correspond to stage 2 loans and advances.

At European level, according to the latest data published by the EBA on its Risk Dashboard corresponding to December 2020, the total volume of loan moratoria granted in 2020 to non-financial corporations and households, based on consolidated bank balance sheets data (i.e., including information on subsidiaries in other countries), stood at €898.8 billion, of which 26% were classified at the end of the year as stage 2 loans (22.3%) and stage 3 loans (3.7%), with considerable cross-country heterogeneity.[5] Thus, for Spanish banks most of the loans under moratoria were to households (78.7%), while for banks in France, Italy and the Netherlands most of the loans under moratoria were to firms (see Chart 5). For Spanish and Italian banks, the share of total loans to non-financial corporations and households that were under moratoria stood above the European average (7.8%), at 10.6% and 14.2%, respectively. The difference between this 10.6% share for Spanish banks, based on consolidated data, and the 5% mentioned above for the total volume of loan moratoria granted for the business in Spain shows that moratoria have been much more widespread in other jurisdictions where Spanish banks operate than in Spain.

Meanwhile, for banks in the Netherlands, Germany, France and Spain more than 50% of the moratoria have expired, while for banks in Italy unexpired moratoria account for more than 65% of the total (see Chart 6). In the case of expired moratoria, according to the international comparison, based on consolidated data, banks in the Netherlands have the highest percentage of stage 2 and 3 loans (almost 30%), followed by German banks (23.2%), while the EU average is 15.5%. As regards unexpired moratoria, the highest percentages of stage 2 and 3 loans under moratoria are observed in Italy (more than 20% of the total), while the average level in Spain stands at 9.7%, in line with the EU average (9.4%).

5 Stage 2 loans show a significant increase in credit risk, but without default or classification as non-performing for subjective reasons, which would make them stage 3 loans.

Box 2.3

AN INITIAL ANALYSIS OF THE POSSIBLE INTRODUCTION OF A DIGITAL EURO

In recent years, interest in what are known as central bank digital currencies (CBDCs) has grown markedly.[1] Society's increasing digitalisation, new payment technology possibilities and the potential monetary policy and financial stability implications of private initiatives of this kind have led numerous central banks worldwide (see Table 1) to analyse the possibility of creating this new monetary liability that could grant the entire population access to central bank digital currency.

Any decision in this regard needs careful consideration given its many implications and the different configurations it could take (for example, book-entries vs. tokens, centralised vs. decentralised management model, remuneration policy). The Eurosystem began its own analysis more than a year ago, as it was aware of the need to be prepared for a possible decision to issue a digital euro. The outcome of an initial study[2] focusing on assessing its potential advantages and disadvantages and the different design alternatives was published in October 2020.

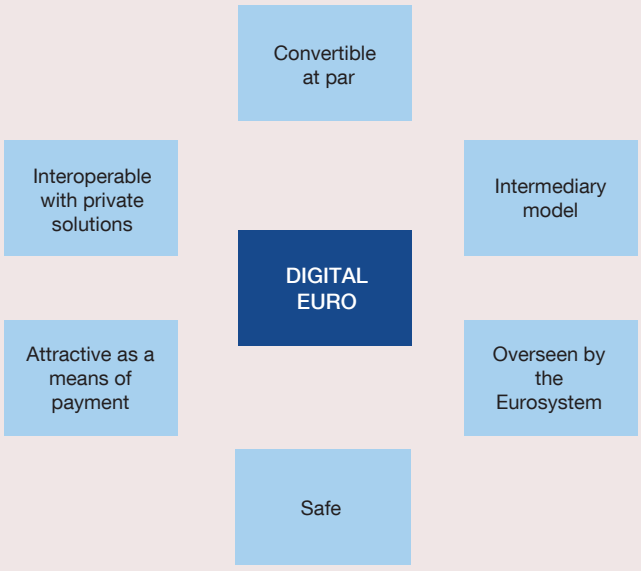
The report identifies some scenarios where it might be useful to issue a digital euro as a complement to cash. For example, it could be envisaged as a tool to promote digitalisation and payment sovereignty in the European economy. Issuing a digital euro could also be necessary if the use of cash were to decline significantly, or if foreign digital money or a private payment solution not overseen by European authorities that was broadly taken up were to emerge as a source of risks or instability.

Despite its potential benefits, the implementation of a digital euro could also have undesired effects for the stability of the financial system, the functioning of the payment system and the effectiveness of monetary policy, among others. In particular, developing a digital euro could diminish the importance of the bank deposit activity. This could trigger changes in the behaviour of banks (increasing deposit remuneration, bundling deposits with other products, turning increasingly to more volatile market financing and to central bank financing) and customers (greater ability and incentives to withdraw funds from the banking sector during crises) and have implications for stability. In addition, banks, who play a key role in the payment system, could lose much of this business, which accounts for a considerable

Table 1
CBDC PROJECTS WORLDWIDE

Projects	Countries
Retail CBDC in operation	Bahamas
Retail CBDC pilot in operation	Eastern Caribbean Central Bank, Sweden and China
Retail CBDC pilot completed	Ecuador, Uruguay and Ukraine
Research on retail CBDC	United States, Brazil, Iceland, Norway, Denmark, Russia, Tunisia, Ghana, Madagascar, Israel, Malaysia, Philippines and New Zealand
Research on retail CBDC and wholesale project	Euro area, Canada, French Guiana, United Kingdom, Switzerland, South Africa, India, Indonesia, Australia and Japan
Wholesale CBDC project	Saudi Arabia, Hong Kong, Thailand and Singapore

Figure 1
SOME REQUIRED DIGITAL EURO FEATURES



SOURCE: BIS.

1 For an overview of the number of ongoing initiatives across the world, see the BIS database by R. Auer, G. Cornelli and J. Frost (2020), "Rise of the central bank digital currencies: drivers, approaches and technologies", BIS Working Paper, No 880.

2 See "ECB Report on a digital Euro" of 2 October 2020.

share of their revenue. As the new equilibrium would imply higher costs and lower revenue for banks, lending to households and firms would also become more expensive, with a knock-on effect on economic activity. The loss of information on bank customers due to lower deposit activity and the potential deterioration in banks' profitability could incentivise greater risk-taking by the banking sector.

The report acknowledges that the design of the digital euro could have undesirable implications for the monetary policy mandate, something which is to be avoided. At the same time, the report does not at this stage analyse the possible role of the digital euro in strengthening the monetary policy framework.

A disruption of the transmission channel resulting from digital euro-induced changes in banks' balance sheets and behaviour may lead to potential adverse effects materialising. For example, replacing deposit funding with central bank borrowing could raise banks' demand for collateral, thereby altering the risk-free rate, and increase central banks' exposure to the economy.

Alternatively, remunerating the digital euro through interest could directly reinforce the transmission of monetary policy both in ordinary times and in times of crisis. The risk of bank deposits shifting to the digital euro in moments of stress could be mitigated by remunerating digital euro holdings at a variable interest rate over time, even to the extent of penalising them in the event of a bank run, for instance. In ordinary times, the direct effect identified by some academic studies[3] also stems from the fact that such remuneration of the digital euro may act as the effective lower bound on interest rates , thus making it easier for central banks to control market rates. These claims also highlight that the mechanism could make it easier for negative rates to be transmitted, thus strengthening the policy framework for action when they are needed. However, the coexistence of the digital euro and cash limits the relevance of this objective.

The report also includes an initial analysis of these impacts on the stability of the financial system and sets out a series of essential requirements that the digital euro would have to meet to limit these possible adverse impacts. These are, namely: to be based on the best technology, to allow for a standardised service throughout Europe and to be interoperable with private payment solutions, attractive as a means of payment (particularly, compared with cash), easy to use and secure. Its convertibility at par into physical euro should be guaranteed and the ECB should be the authority responsible for maintaining its value. The degree of involvement of financial intermediaries would be especially important to mitigate the effects on financial stability (see Figure 1).

In addition, an appropriate mix of the different design options and the way the support infrastructure is configured could help mitigate some of the possible adverse implications of issuing digital euro.

Given the importance of these and other aspects, the ECB and the euro area central banks have continued to work together to identify and assess all the risks associated with the digital euro, and to determine what could be the most advisable design to ensure that the Eurosystem objectives are properly met. Naturally, for this initiative to be successful, user preferences will also have to be factored into its design. To this end, since the aforementioned ECB report was published, efforts have been made to broaden knowledge of the digital currency in two ways.

First, a number of practical experiments have been conducted to gauge the possibilities and limitations of the different technologies, and a solid opinion has been formed on the suitability of the different approaches. The results will be useful in facilitating any further research that may be conducted in the euro area.

Second, the Eurosystem has also sought to enhance dialogue with all the stakeholders by organising a wide-ranging public consultation for this purpose. This initiative has been very well received and has provided valuable and detailed information on potential users' needs and preferences. It has also allowed the Eurosystem to become familiar with the insight and expectations of the financial sector and other professionals, both in academia and in the technology industry, regarding the future of the digital euro.

The participation of the Eurosystem in various supra-national fora and bodies will also help enrich the Eurosystem's

3 M. D. Bordo and A. T. Levin (2017), "Central Bank Digital Currency and the Future of Monetary Policy", NBER Working Paper No. 23711, National Bureau of Economic Research.

4 See *Eurosystem report on the public consultation on a digital euro*, ECB, April 2021.

understanding of the nature of the digital euro and the opportunities it offers, thereby helping ensure that it can be fully integrated into the international monetary system.

All this work will nurture a fresh debate in the ECB Governing Council with a view to outlining a possible future digital euro roadmap.

Box 2.4

RECENT CORPORATE TRANSACTIONS IN THE SPANISH BANKING SECTOR

The Spanish banking system is currently undergoing a new consolidation process, whose aim is to strengthen its business model in the light of the COVID-19 pandemic-induced economic crisis and pre pandemic profitability challenges (e.g. operational efficiency or net interest income generation). Against this background, four of the 12 significant Spanish banks have approved the consolidation of their business activities through the appropriate corporate transactions. Based on the merger plans, the CaixaBank-Bankia and the Unicaja-Liberbank mergers would enable the resulting banks to improve their profitability and solvency levels, with lower overheads and larger economies of scale which will enhance their digitalisation and access to financial markets.

Both mergers will be legally implemented through the merger by absorption of the smaller banks in each case (Bankia and Liberbank), whose shareholders will receive new shares of the absorbing bank. The Board of Directors of the merged banks will have a greater relative weight of directors in the largest banks in each case (CaixaBank and Unicaja). The FROB —the main shareholder of Bankia— will hold a stake of almost 16% in CaixaBank, following application of the exchange ratio to the share capital of each bank.

The merger of CaixaBank and Bankia (second and fourth largest banks in Spain by asset size) would benefit, in terms of culture adaptation and speed of integration, from having a similar business, targeting the retail segment and with a significant SME portfolio. The resulting bank will have a total loan portfolio of €368 billion, thus becoming the largest bank in terms of Spanish operations, with a total market share of almost 25%. As a systemically important institution, the new CaixaBank's macroprudential buffer will foreseeably be revised upwards. The resulting bank would have a non-performing loans ratio of 3.8% and a non-performing loan coverage ratio of 64%.

The merger plans envisage potential cost synergies arising from the streamlining of the cost structure of up to €770 million per year, and potential additional revenues resulting from a broader customer base of up to €215 million per year. Restructuring costs, estimated at €2.2 billion,[1] and the fair value adjustment to Bankia's assets and liabilities will be absorbed in the regulatory capital base of the two banks prior to the merger, with no risk of breaching capital requirements. A fully-loaded CET1 target of 11.5% is established for the resulting bank. For 2022, the bank resulting from the merger of CaixaBank and Bankia will also target a return on tangible equity (RoTE) of 8%.

The merger of Unicaja and Liberbank will give rise to the fifth largest Spanish bank, with a loan portfolio amounting to approximately €55 billion and a total market share of almost 4.5%. Both banks have a similar business model, targeting the retail segment and lending to SMEs, which could smooth their integration. As regards asset quality, the resulting bank will have a non-performing loans ratio of around 3.6% and a non performing loan coverage ratio of 62%. The two bank's deep historical roots in their home regions (Andalusia, Asturias, Cantabria, Extremadura, Castilla-La Mancha and Castilla y León) and their geographical complementarity would enable the resulting bank to maintain its leadership position in most of them and to extend its reach to 80% of Spain.

Based on the banks' interim estimates, the elimination of overlaps will entail integration costs of approximately €540 million and future synergies, which will be obtained gradually to stand at €159 million per year in 2023. These synergies will enable the resulting bank to improve its profitability, with an expected RoTE of around 6% for 2023. Table 1 summarises the key figures for the two merger transactions.

The announcement of the CaixaBank-Bankia merger negotiations on 4 September 2020[2] was welcomed by the stock market with rises in all bank stocks, since it was considered a potential trigger for other mergers in the banking sector. In fact, the returns seen in the market on that date were significantly higher for all banks than those which would have been observed on a day with no relevant news or events[3] (see Chart 1). The positive effects persisted until the merger agreement between CaixaBank and Bankia was confirmed (18 September

1 In April 2020, the absorbing entity Caixabank has announced plans to lay off approximately 20 % of the combined staff of the two entities and the closure of 25 % of the branches of the network resulting from the fusion.

2 The commencement of the negotiations between these banks was announced on 4 September 2020.

3 This conclusion was reached using the "event analysis methodology", under which the response of stock prices to specific events is analysed and compared with the expected performance had such an event not been known, permitting abnormal returns to be measured. This expected return is calculated using a regression that takes into account the performance of the Madrid Stock Exchange General Index, changes in the slope of the OIS curve and developments in sovereign risk.

Table 1
FINANCIAL INFORMATION OF THE BANKS RESULTING FROM THE MERGERS
DECEMBER 2020 (a)

	CaixaBank-Bankia	Unicaja-Liberbank
Total assets (€billion)	661	113
Loans and advances to customers (€billion)	368	55
Customer funds (€billion)	562	85
Market share	25%	4.5%
NPL ratio	3.8%	3.6%
NPL coverage ratio	64%	62%
Fully-loaded CET1 ratio	13.9%	15.1%
Estimated RoTE	8% (2022)	6% (2023)
Total clients (million)	20	4.5
Branches	6,300	1,500
Employees	51,400	9,900

SOURCE: Banco de España.

a The figures are either the sum or the average of the consolidated financial statements of the banks party to each transaction, which had not been completed at December 2020. They are therefore the resulting banks' tentative financial position figures for when the mergers are concluded in 2021.

Chart 1
IMPACT OF CAIXABANK-BANKIA MERGER
Initial impact 4 September and accumulated impact from 4 to 18 September (a)

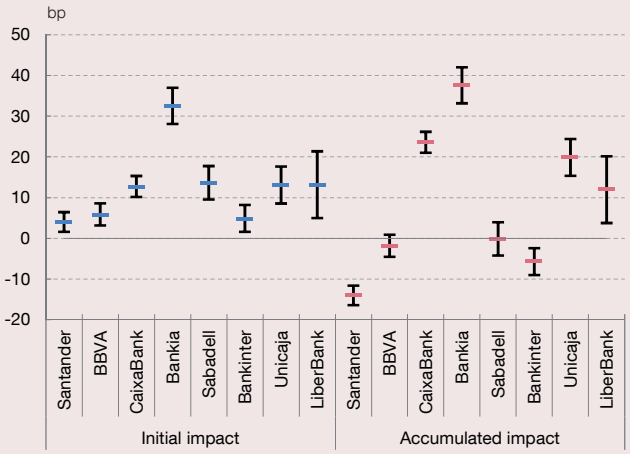
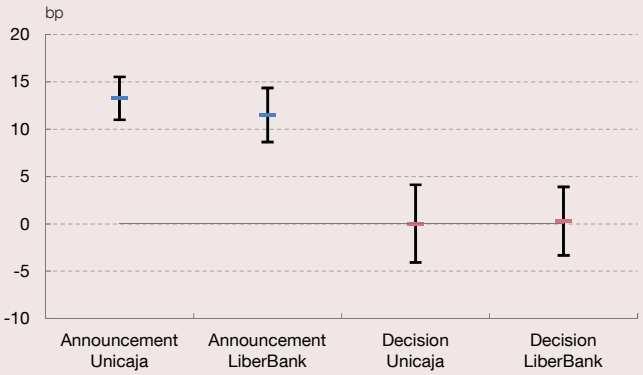


Chart 2
IMPACT OF UNICAJA-LIBERBANK MERGER
Impact announcement on 5 October and impact decision on 29 December (a)



SOURCES: Thomson Reuters, Dealogic and Banco de España.

a The charts show the "abnormal returns" for each bank and the estimation error.

2020), but only for these two banks and for the other two that the market perceived as the likeliest candidates for a merger (Unicaja and Liberbank), whereas the favourable effect faded for the remaining banks[4] (see Chart 1).

The market responded to the confirmation of discussions for the merger of Unicaja and Liberbank with further larger-than-expected stock price increases (5 October 2020). However, the merger confirmation on 29 December

4 Chart 1 shows that, for these four banks, the effects are significant and positive until ten days after confirmation of the merger agreement between CaixaBank and Bankia.

2020 seemed to have already been discounted on that date (see Chart 2). Furthermore, the lack of response at other banks indicates that the market was not expecting any additional mergers.

These consolidation transactions are taking place at a time when the European Central Bank (ECB) has just published its Guide on the supervisory approach to consolidation in the banking sector,[5] which is intended to clarify the prudential supervisory approach the ECB follows when determining whether the arrangements implemented by a credit institution resulting from a consolidation ensure the sound management and coverage of its risks. The document covers several key aspects, such as the objectives and phases of consolidation processes, and their prudential treatment, supervisory expectations regarding the resulting bank, and the application of this framework to less significant institutions.

The supervisory expectations are focused on the sustainability of the business model of the resulting bank, which will be examined by the ECB in order to assess its solvency, profitability and risk profile. It will also place particular focus on the existence of suitable governance arrangements and risk management frameworks.

As regards prudential aspects, the Guide highlights the post-merger capital requirements, the treatment of badwill and the approach to internal models. Specifically, for consolidation transactions where no substantial supervisory concern has been identified, the Guide envisages the following approach:

- Credible integration plans will not be penalised with higher capital requirements (P2R and P2G) than those derived from applying the weighted average of the banks' consolidated pre-combination capital requirements.
- Prudent recognition of badwill, which is expected to materially contribute to the capital of the resulting bank and cannot be distributed as dividends until the sustainability of the business model is established.
- Temporary acceptance of the use of existing internal models, subject to a roll-out plan.

From the resolution perspective, the Single Resolution Board (SRB) has announced that the resolution plans of the absorbed banks and their MREL requirements will cease to apply if the mergers take place as envisaged. It will also review the absorbing banks' plans and MREL decisions after the merger. Furthermore, the SRB has expressed interest in avoiding that these requirements hinder this type of transactions, provided that the resolvability of the resulting bank under the regulatory terms is ensured.

5 See SSM Guide to the Supervisory Approach to Consolidation in the banking sector, published on 12 January 2021.

3

SYSTEMIC RISK AND PRUDENTIAL RESPONSE TO COVID-19

This chapter analyses the various vulnerability and systemic risk indicators, focusing in particular on those used in decisions concerning the counter cyclical capital buffer (CCyB), which since the onset of the pandemic have had to be adapted to a context of crisis. Continued adverse activity indicators, in particular a negative output gap, mean that the CCyB has to remain deactivated. Next, the chapter reviews certain prudential measures which have been adopted or are under discussion, both as a result of the crisis and regarding the medium-term development of the macroprudential framework. Worth noting in this connection is the public consultation of the amendment to Banco de España Circular 2/2016 on the supervision and solvency of credit institutions, which will make it possible to activate new macroprudential measures based on sectoral capital requirements and limits on the sectoral concentration of credit risk and on credit standards.

3.1 Analysis of macro-financial vulnerability indicators and their relevance in the environment generated by COVID-19

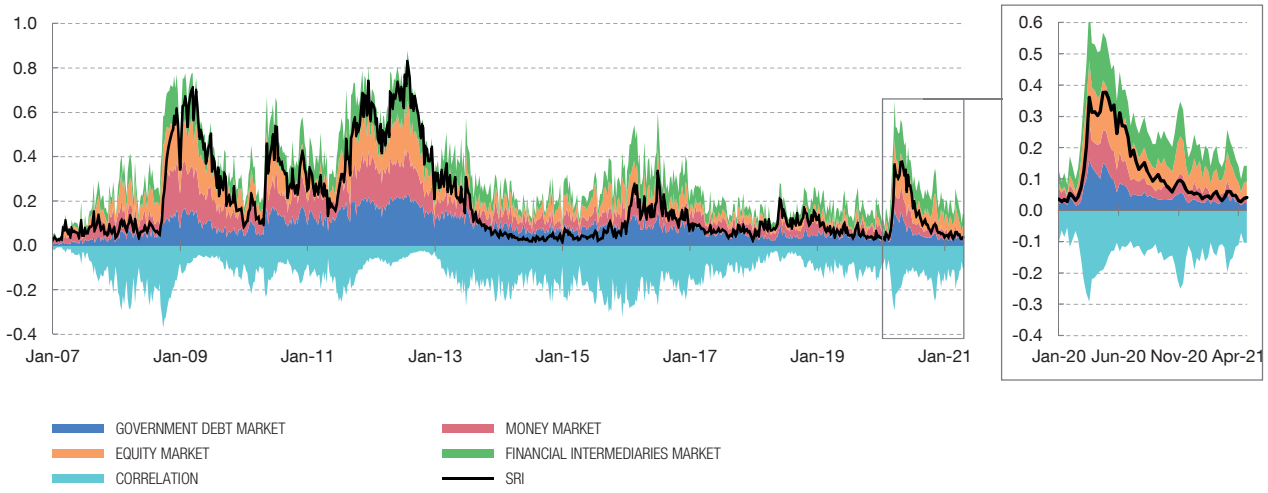
The acute stress unleashed in financial markets in March 2020 with the outbreak of the COVID-19 pandemic continued to abate in 2020 H2 and early 2021, especially owing to ongoing economic policy support and medical advances to combat the coronavirus. This lower financial stress is perfectly reflected in the systemic risk indicator (SRI), which brings together information on the money market, government debt, equity and financial intermediaries segments, and is designed to be particularly sensitive to simultaneous stress across these four segments. This indicator performed highly favourably in the final stretch of 2020 and almost completely reversed its surge between February and May of the previous year (see Chart 3.1). The SRI held at low levels in 2021 Q1. This improvement shows, on one hand, the effectiveness of the measures implemented to stabilise markets which include, most notably, the ECB's monetary policy measures. On the other, the approval of the first vaccines by the pertinent agencies and the progress of large-scale vaccination of the population also had a positive effect on this indicator.

The abrupt year-on-year fall in GDP in 2020 and the economic policy response continue to distort the usual interpretation of the credit-to-GDP gap, which held on an upward path in 2020 Q4 that exceeded warning levels. This indicator recorded highly negative values following the global financial crisis, holding on a rising path thereafter, which was consistently below 2 pp, a level usually considered as showing signs of imbalances. After the outbreak of the pandemic, this indicator has remained above the alert threshold since June 2020. However, this is due to the

Chart 3.1

STRAINS IN THE SPANISH FINANCIAL SYSTEM GRADUALLY EASED TO PRE-PANDEMIC LEVELS (a)

After rising sharply in the early weeks of the pandemic, the SRI has gradually declined since end-April and currently stands at levels similar to those recorded in the period immediately before March 2020.



SOURCES: Datastream and Banco de España.

a Updated with data as at 21 April 2021. For a detailed explanation of this indicator, see Box 1.1 of the May 2013 Financial Stability Report.

stimulus policies and the sharp impact of the shock triggered by COVID-19 rather than new endogenous imbalances of the financial system which are susceptible of treatment by the activation of macroprudential tools (see Chart 3.2), specifically the CCyB. As indicated in previous FSRs, according to BCBS guidance on the CCyB, it is not appropriate to activate this buffer automatically when the credit-to-GDP gap increases owing to an abrupt decline in GDP[1]. Nevertheless, the length and intensity of the crisis triggered by COVID-19 increases the risk that the higher degree of leverage in relation to GDP will be consolidated over time and, consequently, it will be necessary to remain vigilant about future developments in the credit-to-GDP gap.

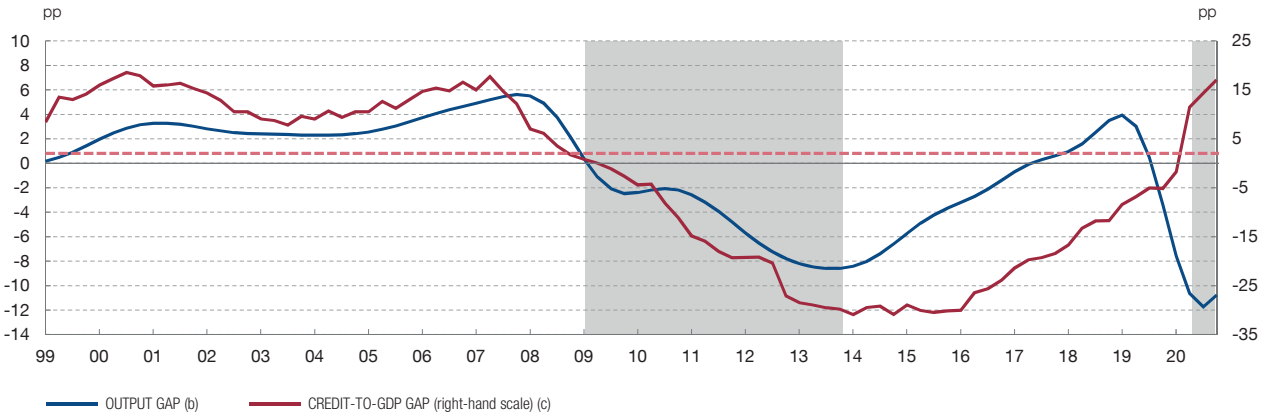
The markedly negative output gap continues to indicate that it is appropriate to keep the CCyB at current levels, whereas the downward path of the SRI indicates that financial markets are operating under no strain. The SRI – a coincident indicator of systemic financial strain – is usually employed to determine when this buffer is released in the face of a significant increase in this strain. The improvement of the SRI in 2020 H2 shows that financial markets are gradually stabilising, which does not necessarily mean that the economic situation is better across the board. The negative performance of the output gap is evidence of this. This variable has fallen to negative values, which are unprecedented in recent history, although it

1 Basel Committee on Banking Supervision. Guidance for national authorities operating the countercyclical capital buffer, December 2020. See Principle 3 ("Risk of misleading signals").

Chart 3.2

THE CREDIT-TO-GDP GAP CONTINUED TO RISE ABOVE THE CCyB REFERENCE THRESHOLD, WHILE THE OUTPUT GAP HELD AT VERY NEGATIVE LEVELS (a)

At end-2020 the credit-to-GDP gap exceeded the CCyB activation threshold and was higher than in previous quarters as a result of the sharp fall in GDP, which is also reflected in a rapid decline in the output gap, but should not therefore be interpreted as a systemic risk warning. Although corrections are expected in the coming quarters as positive GDP growth rates are observed, such as the output gap is beginning to show, the indicator needs to be monitored continuously to assess the degree of absorption of higher indebtedness by economic agents.



SOURCE: Banco de España.

a The vertical shaded bands represent the period of the last financial crisis in Spain (2009 Q1-2013 Q4) and the crisis unleashed by the pandemic as from 2020 Q2. The data to December 2020 are provisional. The broken red horizontal line represents the reference CCyB activation threshold of 2 pp for the credit-to- GDP gap.

b The output gap is the percentage difference between observed GDP and potential GDP. Values calculated at constant 2010 prices. See Cuadrado, P. and Moral-Benito, E. (2016), "Potential growth of the Spanish economy", Occasional Paper 1603, Banco de España.

c The adjusted credit-to-GDP gap is calculated as the difference, in percentage points, between the observed ratio and the long-term trend calculated using a one-sided statistical Hodrick-Prescott filter with a smoothing parameter equal to 25,000. This value is calibrated to adapt to the financial cycles historically observed in Spain (see Galán, J.E. (2019). "Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited." Occasional Paper 1906, Banco de España).

started to recover slightly in Q4 (see Chart 3.2). Notwithstanding the difficulties of estimating potential growth in view of current uncertainty levels, this indicator is at present more informative for guiding decisions in relation to the CCyB than the credit-to-GDP gap.

Indicators of banks' capacity to face adverse systemic shocks are also considered to complement the analysis of macro-financial stress. SRISK[2] is a notable example of an indicator which quantifies the level of systemic risk in the banking sector overall and individual banks' contribution to such risk, since it assesses the impact of an extreme negative event on each bank. This latent risk indicator provides an estimate at market value of the expected capital shortfall in respect of a bank's prudential ratio over its assets after a hypothetical severe crisis in equity markets entailing an adverse correction of its market capitalisation.

Since the onset of the pandemic SRISK has held at historically elevated levels, associated with the decrease in banks' market valuations, which were

2 See Brownlees, C., R. Engle, 2017. SRISK: A conditional capital shortfall measure of systemic risk. The Review of Financial Studies 30, 48-79.

subsequently corrected by the measures adopted during the crisis (including the easing of prudential requirements). Changes in the SRISK of European listed banks since March 2020, coinciding with the spread of COVID-19, pushed the indicator close to the peak levels observed during the 2012 European sovereign debt crisis and above the levels of the 2008-2009 global financial crisis (see Chart 3.3). As from November 2020, this indicator has clearly decreased, in line with the favourable performance of financial markets, although it clearly remains above pre-crisis levels. This evidence indicates the market's pessimistic view of the distance between banks' capital and the capital required should there be a significant correction in stock prices[3]. This small distance could have implications for the usability of banks' capital buffers, adversely affecting bank credit supply in that scenario. This underlines the importance of measures which prompt financial markets to return to normal, such as expansionary monetary policy and the relaxation of capital requirements. These measures should, however, be carefully monitored to avoid overvaluations being generated in turn.

The particular nature of the current crisis should also provide guidance for an appropriate interpretation of the SRISK indicator. This risk indicator has not reached alert thresholds as a result of an endogenous increase in the banking sector's leverage or of an abrupt correction of imbalances which have built up in the industry; rather the key factor is the decline in banks' market valuations in the face of COVID-19-related uncertainty.

Stock market performance also reveals a latent worsening of listed European firms' credit quality, which is mixed across sectors. The application of option valuation methods to the data on the prices and the degree of leverage of Eurostoxx 600 firms has shown a significant widespread increase in the underlying probability of default since March 2020, which is particularly pronounced in the sectors hardest hit by the pandemic (e.g. tourism). Recent market developments have corrected the scale of this underlying credit impairment, although the latter remains above pre-COVID-19 crisis levels; it is higher than in the global financial crisis only in specific sectors (see Box 3.1).

House price indicators suggest that prices stand roughly at their equilibrium level in a highly uncertain setting. House price indicators are key to the early identification of potential vulnerabilities which could lead to future systemic problems, since they usually move in line with the financial cycle and could even amplify it. Accordingly, there are currently no signs of overvaluation in this market with respect to its equilibrium level, calculated by using different methodologies, although the subdued volume of transactions during 2020 and the fact that the indicators are more dispersed are grounds for some caution (see Chart 3.3).

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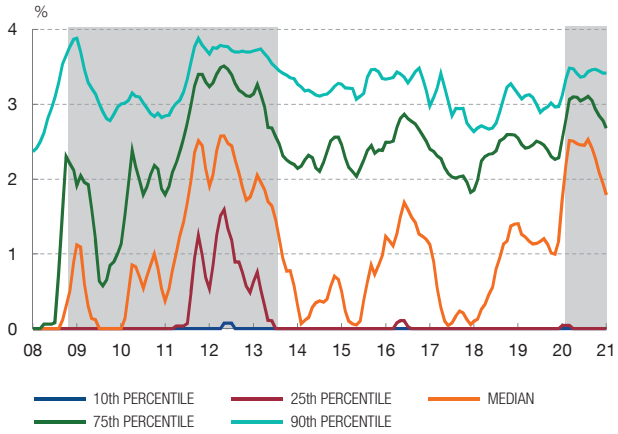
3 This exercise considers the distance between capital at market value and a prudential requirement of 4.5% of asset value (using a book value for debt and a market value for capital), whereas in reality capital requirements are numerous and complex. The SRISK used is, therefore, an informative indicator but not an exhaustive assessment of requirements. The relaxation of the requirements parameter was not examined specifically either.

Chart 3.3

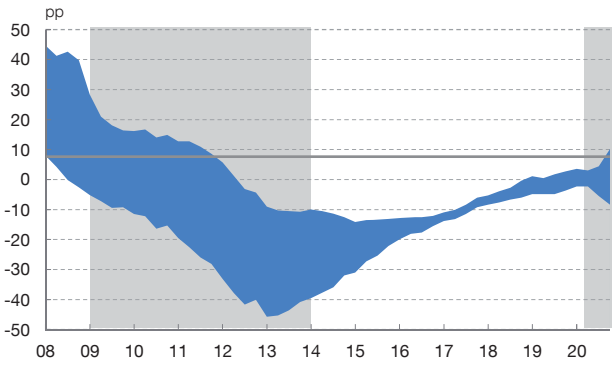
THE SRISK INDICATOR OF BANKING RISK HAS REMAINED ELEVATED SINCE THE ONSET OF THE PANDEMIC, WHILE, AT THE SAME TIME, OTHER INDICATORS, SUCH AS THOSE OF THE REAL ESTATE MARKET, HAVE NOT YET GIVEN ANY WARNING SIGNALS (a)(b)

The systemic risk of listed banks in the euro area – approximated by SRISK as a percentage of each bank's total assets – increased in March 2020 with the onset of the pandemic. Subsequently, this indicator has corrected somewhat coinciding with the recovery in financial markets. The indicators of imbalances in the real estate market have remained stable on average, although their dispersion has increased since some of them have been affected by the decline in household income.

1 DISTRIBUTION OF THE SRISK SYSTEMIC RISK INDICATOR (a)



2 INDICATORS OF IMBALANCES IN HOUSE PRICES (b)



SOURCES: Datastream, SNL, INE and Banco de España.

a SRISK is expressed as a percentage of each institution's total assets. The parameters used are k=4.5% for the capital requirement, C=10% for the market decline and h=22 business days for the period over which the hypothetical decline occurs, see for more details Brownlees and Engle, (2017) "SRISK: A Conditional Capital Shortfall Measure of Systemic Risk, Vol 30, pp. 48-79". The SRISK index for the months of 2021 Q1 is calculated from the values of assets and liabilities of 2020 Q4 with the stock prices data of the corresponding month. The series have been smoothed using a three-month moving average.

b The shaded area represents the minimum and maximum values of the four indicators of imbalances in house prices. The indicators are: i) the real price gap, ii) the house prices to household disposable income ratio gap, iii) the ordinary least squares model which estimates house prices based on long-term trends in household disposable income and mortgage interest rates, and iv) the error correction model which estimates house prices based on household disposable income, mortgage interest rates and fiscal effects. The long-term trends are calculated in all cases using a statistical one-sided Hodrick-Prescott filter with a smoothing parameter equal to 400,000. The vertical shaded bands represent the period of the last financial crisis in Spain (2009 Q1-2013 Q4) and the crisis unleashed by the pandemic as from 2020 Q2.

Taking this set of macro-financial indicators into account, the Banco de España is maintaining the CCyB at 0% and does not envisage increasing it at least until the Spanish economy has recovered from the impact of the crisis[4]. The various indicators show different signs, but the scale of the negative exogenous shocks inflicted by the pandemic on real activity has seen special consideration given to the output gap criterion and the uncertainty surrounding growth. The Banco de España continues to consider it appropriate to maintain the CCyB at a minimum of 0% to make it easier for banks to be able to sustain the credit flow and thus contribute to alleviating the negative pressure on economic growth. In this respect, this decision is in line with the press releases and guidance on the flexible application of prudential requirements in response to COVID-19 issued by the ECB, ESRB, EBA, BCBS and FSB.

4 See "The Banco de España holds the countercyclical capital buffer at 0%", press release of 24 March 2021.

In November 2020 the Banco de España announced the designation of five institutions as systemically important, together with their macroprudential capital buffers[5]. Each year the Banco de España identifies Spanish credit institutions which are globally systemically important institutions (G-SIIs) and other systemically important institutions (O-SIIs). This designation entails an additional prudential requirement in the form of a capital buffer (see Table 3.1), with the objectives of correcting these institutions' potential competitive advantages in the funding market owing to their systemic footprint, adjusting their risk-taking and building up additional funds to absorb possible shocks to these institutions, whose stability is needed to maintain the stability of the system as a whole. Since 2015, when G-SIIs and O-SIIs first appeared in legislation, the composition and classification of the list of institutions identified in Spain has remained relatively stable. In 2021 the Banco de España will assess again the systemic importance of institutions so as to reflect the changes in the structure of the banking system in 2020.

3.2 Prudential measures adopted and other alternative measures

The coordinated action of macroprudential, micro-prudential and accounting policies continued to facilitate the financing of the real economy, and to mitigate the economic impact of the pandemic, which continued to influence activity in the early months of 2021[6]. Persisting uncertainty and pandemic-related obstacles to the normal functioning of the economy are the reason why the prudential measures approved since spring 2020 have generally remained in place so as to mitigate these negative conditions and complement the monetary and fiscal measures which have also continued to be in force[7]. Each area of measures is summarised and presented in a summarised chronological order to underline their adaptation to the unfolding of an uncertain environment.

The easing of solvency and liquidity requirements for European banks remains in force. As covered in previous FSRs, in the field of solvency and liquidity requirements, European guidance remained in place for banks to release the CCyB , with the possibility of operating temporarily below the P2G level, the capital conservation buffer and the liquidity coverage ratio. Rules on the composition of P2R were also modified so that they could be partially covered with AT1 and AT2, anticipating the entry into force of CRD V.

The presence of other support measures limited banks' recourse to buffers to increase lending further. First, the application of the rapid reform of the EU

5 See "Banco de España updates the list of systemically important institutions and sets their capital buffers", press release of 27 November 2020.

6 See Anguren, R., L. Gutiérrez de Rozas, E. Palomeque and C.J. Rodríguez García (2020) "The regulatory and supervisory response to the COVID-19 crisis", Financial Stability Review, No. 39, Banco de España.

7 See 2020 Spring FSR and 2020 Autumn FSR.

Table 3.1
SYSTEMICALLY IMPORTANT INSTITUTIONS AND ASSOCIATED CAPITAL BUFFERS

Legal Entity Identifier (LEI)	Institution	Designation	Capital buffer requirement in 2021
5493006QMFDDMYWIAM13	Banco Santander, S.A.	G-SII and O-SII	1.00 %
K8MS7FD7N5Z2WQ51AZ71	Banco Bilbao Vizcaya Argentaria, S.A.	O-SII	0.75 %
7CUNS533WID6K7DGFI87	CaixaBank, S.A.	O-SII	0.25 %
SI5RG2M0WQQLZCXKRM20	Banco de Sabadell, S.A.	O-SII	0.25 %
549300GT0XFTFHGOIS94	BFA Tenedora de Acciones, S.A.U. (Bankia, S.A.) (a)	O-SII	0.25 %

SOURCE: Banco de España.

a The identification and the buffer of this entity were effective until its integration into CaixaBank, S.A. in March 2021.

capital requirements regulation – the CCR quick fix – in June 2020 shored up European banks' solvency ratios. This achievement was similar to that relating to the restrictions on banks' dividend payments, which will remain strict in 2021. Furthermore, reining in the negative effects of the pandemic on bank profitability in 2020 H2 (see Chapter 2), particularly through the moderation of impairment provisions, generally avoided capital charges. Expansionary monetary policy, including the enlargement of the asset purchase and bank funding programmes, also contributed to very relaxed liquidity conditions. In the crisis environment, growth of the stock of loans was strongly underpinned by guarantee programmes and moratoria (see Chapter 2).

In order to maximise the impact on economic activity of more flexible solvency and liquidity requirements, it is vital that banks do not face obstacles to the usability of the buffers they have built up. The use of buffers in a context of crisis, which so far has not been observed among Spanish and other European banks, could mean banks experience market stigma if the markets consider that such action means their capital and liquidity ratios are insufficient for maintaining their funding risk at a reasonable level. If this were to happen, using buffers would have a negative impact on market valuations of the banking sector. Furthermore, banks could also be uncertain about when they will be required to rebuild those buffers. In the short term, effective communication of the measures' objectives and guidance on the future rebuilding of buffers within a reasonable timeframe, once the crisis is over, play a significant role in avoiding these negative effects. In certain regulatory fora, the possibility is under discussion that in the medium term, the macroprudential framework may include more flexible requirements to counter the materialisation of unexpected risks which can be applied to the banking sector as a whole or to broad segments of it to avoid specific banks from being stigmatised. If this reformed framework facilitates the widespread use of buffers by banks during crises, it would make recessions weaker and, as a consequence, loan losses lower.

Different authorities have continued to recommend credit institutions to exercise prudence regarding dividend distribution during the COVID-19 pandemic. In December 2020 the ECB published a new recommendation[8] on dividend distribution during the pandemic (replacing its previous recommendation[9])whereby significant institutions are recommended to refrain from distributing cash dividends and repurchasing shares until 30 September 2021 or to limit such distributions. In the latter case, the dividends and share buybacks are expected to remain below 15% of the accumulated profits for 2019 and 2020 or below 20 bp of CET1, whichever is lower. They are also recommended to refrain from announcing the distribution of provisional dividends charged to their profits for 2021. The Banco de España[10] decided to extend the ECB's recommendation to all the less significant institutions under its direct supervision. Along the same lines, the European Systemic Risk Board issued its own recommendation on dividend restrictions for credit institutions, investment firms and insurers throughout the EU[11]; as did the European Banking Authority[12], the European Insurance and Occupational Pensions Authority[13] and the Directorate General of Insurance and Pension Funds in Spain[14]. The restriction on dividend distribution is having a significant impact (see Chapter 2) on credit institutions' capital and a regulated framework of these interventions within prudential regulations is worth considering in the medium term. Additionally, the empirical analysis undertaken with granular information on bank loans shows that the Spanish institutions which did not distribute dividends last year were more active granting loans and, consequently, helped to mitigate the impact of the crisis on the real economy[15].

Further developments have taken place in the realm of regulation and prudential supervision, both in connection with the response to the crisis and also from a longer term standpoint, which should be considered when assessing the risk outlook for the financial sector. In the area of micro-prudential supervision and accounting regulation, among other developments, progress has been made in applying the quick fix, new supervisory guidelines on bank mergers have been introduced, the operational flexibility measures remain in place and accounting standards have been tailored to this crisis (e.g. the presence of support measures),

8 Recommendation of the European Central Bank of 15 December 2020 (ECB/2020/62) on dividend distributions during the COVID-19 pandemic and repealing Recommendation ECB/2020/35.

9 Recommendation of the European Central Bank of 27 July 2020 (ECB/2020/35) on dividend distributions during the COVID-19 pandemic and repealing Recommendation ECB/2020/19.

10 Banco de España recommendation on dividend distribution and variable remuneration of 15 December 2020. (In Spanish only).

11 Recommendation of the European Systemic Risk Board of 15 December 2020 (ESRB/2020/15) amending Recommendation ESRB/2020/7 on restriction of distributions during the COVID-19 pandemic.

12 EBA press release of 15 December 2020.

13 EIOPA press release of 18 December 2020.

14 Note of the Directorate General of Insurance and Pension Funds of January 2021. (In Spanish only).

15 See Martínez Miera, D., and R. Vegas, 2021, Impact of the dividend distribution restriction on the flow of credit to non-financial corporations in Spain, Analytical Article, Economic Bulletin, Banco de España.

with significant updates to EBA guidelines, and proposals have been presented for asset management in Europe. Notable among the long-term developments are the impact of the completion of Basel III on the banking sector, whose implementation was delayed owing to the impact of the crisis, and the introduction of new macroprudential tools in Spain. All these measures are analysed in more detail in the paragraphs below.

The CRR was reformed in line with the quick fix provisions to modify favourably the prudential treatment of certain software programmes, which are recorded as intangible assets. Following the approval of Commission Delegated Regulation (EU) 2020/2176, the deduction of software assets from CET1 shall no longer be required and the difference between the prudential amortisation and the amortisation for accounting purposes, with certain restrictions, should be deducted[16]. The main reason for this deduction was the low value of these assets in bank resolution and, consequently, their limited loss absorbing capacity. However, investment in software, databases and their management is considered a basic input for institutions to pursue their activities amid the economy's and society's growing digitalisation, and to be able to better compete with BigTech firms, which are software asset-intensive. Furthermore, European legislation is thus aligned with that of the United States and Switzerland, neither of which deducted these assets from their banks' CET1. By contrast, the UK recently announced that it will maintain the deductions.

The European Central Bank published its final guide on the supervisory approach to consolidation in the banking sector. This guide clarifies the prudential supervision principles followed to determine whether the arrangements applicable to a credit institution resulting from a consolidation ensure the sound management and coverage of its risks. Box 2.4 analyses its implications in greater detail.

The EBA reactivated its guidelines on legislative and non-legislative moratoria in December 2020 and the BCBS also published in 2020 H2 a supplemental note to its 2014 guidance on the external audits of banks regarding the use of expected credit loss accounting frameworks. This reactivation of the EBA's guidelines until end-March 2021 was set up as a support measure for bank borrowers (households and firms) and continues to allow institutions to make timely use of the flexibility in prudential regulations[17]. At the same time, it limits the maximum duration of a loan payment deferral to nine months to facilitate that the exit strategy from all of these measures is implemented as gradually and selectively as possible. These guidelines have also been adopted by the Banco de España. The note of the Basel Committee[18] considers that the use of forecasts and forward looking information may be useful for 2020 bank

16 See Commission Delegated Regulation (EU) 2020/2176.

17 See EBA/GL/2020/15.

18 See BCBS Guidelines. December 2020.

audits, as well as the construction of macroeconomic scenarios and weightings and the assessment of internal model performance.

The European Commission also sent a communication to the European Parliament, the Council and the European Central Bank on how to tackle the probable increase in non-performing loans in the aftermath of COVID-19, proposing greater proactivity to anticipate this increase at the same time as it extended the State aid Temporary Framework until end-December 2021. The communication issued by the European Commission[19] proposes: (i) further developing the secondary market for non-performing exposures; (ii) improving coordination in the operation of national asset management companies to share information, best practices and even take coordinated action against common counterparties; (iii) harmonisation of national legislation on business insolvencies, even proposing that the European Reconstruction Fund include some type of conditionality based on progress in this legislation; and (iv) adapting European legislation on bank resolution and State aid to the extraordinary nature of COVID-19, exceptionally proposing capital injections for solvent institutions to address temporary capital shortfalls as a result of a serious shock.

As part of the response to the COVID-19 crisis, the finalisation of certain aspects of the Basel III framework has been delayed; however, it remains important to analyse its impact sufficiently far in advance and to uphold the commitment to its full and consistent implementation. In the European setting, the EBA has updated its impact study on the full implementation of the Basel III capital framework, including the output floor requirement on internally modelled capital requirements (delayed until 1 January 2028). The EBA also examined the possibility of partially implementing the framework. Box 3.2 provides a more detailed description of this study, which consolidates the findings of previous work that the full and consistent transposition of the Basel III framework, under the new timetable, is desirable.

The measures which support lending to business activities in Spain have adapted to the economic crisis and continue to factor in the need for ongoing monitoring and sufficient flexibility to react to possible future changes in the economic situation. For instance, Royal Decree-Law 34/2020 extends the maximum duration and payment holidays of the guarantee programmes, respectively, by three years (up to a maximum of eight years) and by 12 months. Royal Decree-Law 5/2021 (see Box 1.3) introduces different measures to bolster business solvency: direct assistance to compensate businesses and the self-employed for lower revenue, a toolkit (restructuring, conversion into participating loans, even debt reductions as a measure of last resort) to reduce the

19 See "*Tackling non-performing loans in the aftermath of the COVID-19 pandemic*", 16 December 2020.

overindebtedness of firms which have loans with State guarantees, and the creation of a recapitalisation fund for medium-sized firms[20].

The effectiveness of business solvency support programmes will hinge on them being designed and implemented satisfactorily. The design of the procedures for monitoring and selecting the recipients of funds should be guided by economic principles that maximise the economy's growth potential and reach businesses that really need them. Programmes should be implemented sufficiently rapidly within a well-defined timeframe to boost the productive use of the funds and maintain adequate incentives. As a result of the existing uncertainty, programmes must be monitored continuously in order to potentially recalibrate their various parameters, if needed.

The dynamic assessment of support measures is of a more far-reaching importance, and anticipating the reaction of regulatory and supervisory policies to different scenarios of how the crisis may unfold is particularly necessary. Under the baseline scenarios of economic activity gradually returning to normal, a credible and sufficiently long timetable for the withdrawal of measures (e.g. the relaxation of capital requirements for banks) needs to be considered. This should avoid a sudden increase in the financial pressure on the private sector at a time when medium-term expectations are improving, but agents are somewhat fragile as a result of the pressure exerted by the crisis since March 2020. The timetable should, however, be well defined to avoid perpetuating certain sectors' reliance on support programmes and the possible distortion of incentives, if they were to remain in place over an excessively long horizon. If downside risks were to materialise, the measures should be adapted selectively to maximise their impact on productive capacity and to limit their cost, particularly the increased pressure on public finances.

The strong impact of the current crisis does not diminish the importance of developing sufficiently far in advance a suitable framework of macroprudential tools to absorb future shocks. Worth noting in this connection is the public consultation of the amendment to Banco de España Circular 2/2016 on the supervision and solvency of credit institutions, which makes it possible to impose new measures such as the sectoral CCyB and limits on sectoral concentration and on credit standards. These regulatory tools, which are described in detail in Box 3.3, enlarge the Banco de España's capacity, as the designated authority for applying macroprudential instruments to the banking sector, to act in the prevention and mitigation of systemic risk.

20 The Announcement of the Spanish Council of Ministers of 20 April 2021 (in Spanish only) modified some conditions of the aid programmes, so that they can be applied to a wider group of sectors of activity, and permitted certain selection requirements to be relaxed in exceptional circumstances.

Box 3.1

ASSESSING CREDIT RISK ON THE BASIS OF STOCK MARKET INFORMATION

Despite the sizeable downturn in economic activity over the last year, the NPL ratio in the banking sector's credit portfolios has yet to increase significantly (see Chapter 2). This is due mainly to the economic support measures implemented during the pandemic. Moreover, these measures are being extended selectively so that they are not withdrawn abruptly, which could lead to cliff effects for many firms and households. Nonetheless, it is important to investigate whether the economic downturn is causing a build up of risks that may materialise as credit losses in the near and medium term.

This box applies a methodology that is consistent with recent academic work assessing the impact of the COVID 19 crisis. This method enables an assessment of the probability of default (PD) of listed firms using the Merton model[1,2]. In this model, a firm's value is the sum of its debt and stock market capitalisation. Assuming the limited liability of its shareholders, a firm will default when its value is less than the nominal value of the debt on its maturity date[3]. The resulting model estimates a firm's PD using a statistical formula that depends on debt, stock market capitalisation, expected growth and volatility of the stock market return on the share. Higher debt levels or greater volatility will tend to increase PD, whereas greater expected growth in the share price will tend to lower it.

This exercise focuses on firms listed on the STOXX Europe 600 Index (see sectoral breakdown in Chart 1). Consistent with previous papers that have used this methodology, these firms' long-term debt was chosen as the value of debt. Also in line with some previous academic papers, it was assumed that the expected stock market return would be equal to the real interest rate of three-year sovereign debt. Lastly, the volatility of the stock market returns was estimated using a

Chart 1
SECTORAL DISTRIBUTION OF THE FIRMS ANALYSED (a)

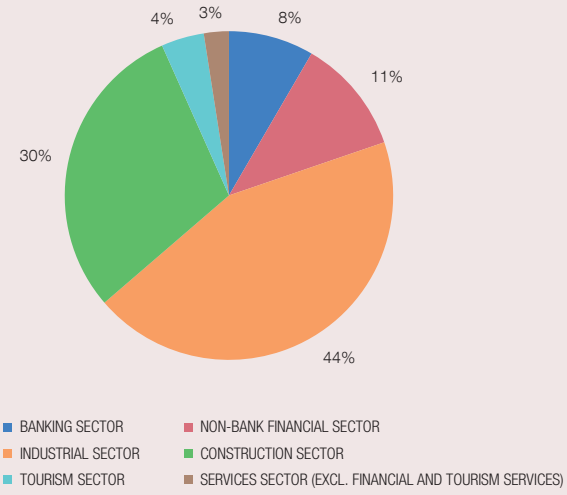
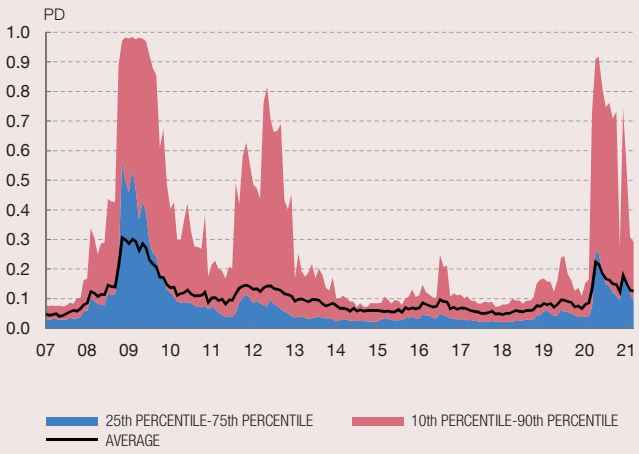


Chart 2
DISTRIBUTION OF IMPLIED PDs OF EUROPEAN FIRMS, 2007-2021. PERCENTILE RANGES AND AVERAGE (b)



SOURCES: Refinitiv and Banco de España.

a Distribution by economic sector of the firms included in the exercise listed on the STOXX Europe 600 Index as at November 2020. The sample totals 479 firms with the available information required to perform the exercise's calculations.
b The vertical axis represents the implied PD. The black line shows the average distribution of PDs in each month and the blue and red shaded areas represent the range between the 25th and 75th percentiles and the 10th and 90th percentiles of that distribution, respectively.

1 See H. J. Reinders, D. Schoenmaker and M. A. Van Dijk (2020), "Is COVID-19 a threat to financial stability in Europe?" CEPR Discussion Paper DP14922. See also a prior application of the methodology in A. A. Dar and S. Qadir (2019), "Distance to default and probability of default: an experimental study", Journal of Global Entrepreneurship Research, 9, 32.

2 See R. C. Merton (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates", Journal of Finance, Vol. 29, pp. 449-470.

3 The debt maturity parameter is calibrated in the model using an average empirical time to maturity of three years, consistent with Reinders et al. (2020), cited in footnote 1.

time series econometric model enabling the cyclical changes in this variable to be captured[4].

The results show that the implied PD of the firms underwent sizeable increases in 2020 after the outbreak of the pandemic (see Chart 2). Nonetheless, on average these increases were not of the magnitude of those in the 2009 global financial crisis. The riskiest firms (above the 90th percentile) have, however, shown very high PDs[5]. Most of the increase in these PDs occurred during the first wave of the pandemic. They fell gradually after that wave, until the third wave gave rise to a temporary surge. However, PDs have subsequently resumed their downward pattern, although they are yet to return to their pre-health crisis values.

Meanwhile, a characteristic of this crisis has been its much deeper adverse impact on certain economic sectors, such as tourism. For instance, PD in the tourism sector rose sharply during the first wave of the pandemic. This increase is more than twice as large as that observed during the global financial crisis (see Chart 3). The worsening eased during the second wave, when several vaccines were approved, but it deteriorated again during the third wave. This reveals the sector's fragile position, which may constitute an important source of latent risk. The improved performance of stock prices in 2021 Q1 has moderated the increase in this sector's PDs to levels more comparable to, albeit still higher than, those of the global financial crisis. The increases in PD during the pandemic have also been significant for the banking sector. This may have reflected market expectations regarding the impact on the banking sector of credit impairment in the non-financial sectors. After the third wave, the increase in the banking sector's implied PDs has edged down significantly, although it still exceeds that in other sectors, except for the tourism sector. In these other sectors, such as the non bank financial sector, other services (excluding tourism) and the industrial sector, the situation appears to have returned to pre-crisis levels during the second wave and, despite some surges during the third wave, continued to rise moderately in 2021 Q1.

Chart 3
CHANGE IN IMPLIED PD OF EUROPEAN FIRMS BY SECTOR AFTER THE PANDEMIC AND IN THE GLOBAL FINANCIAL CRISIS (a)

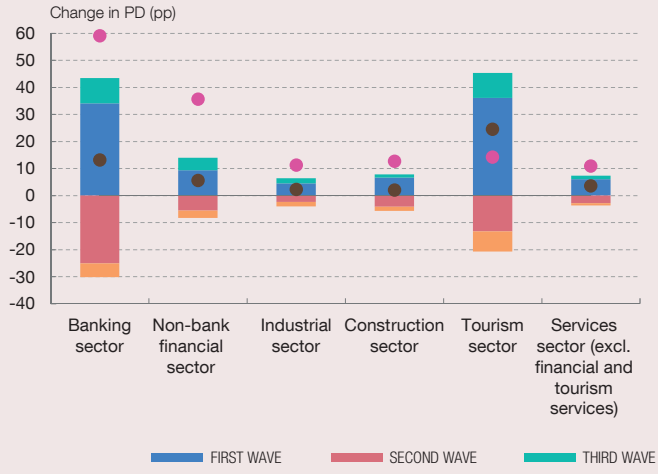
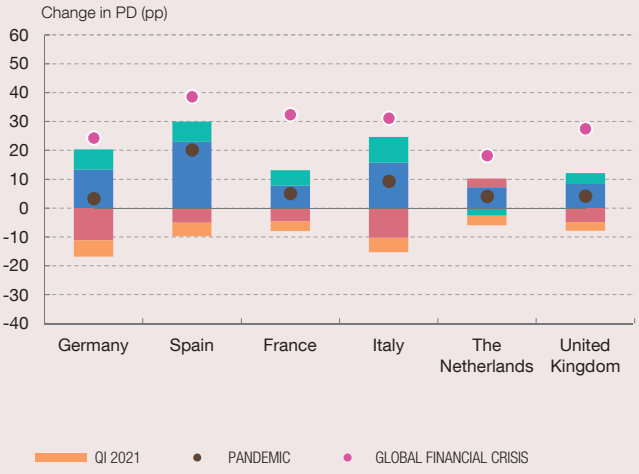


Chart 4
CHANGE IN IMPLIED PD OF EUROPEAN FIRMS BY COUNTRY AFTER THE PANDEMIC AND IN THE GLOBAL FINANCIAL CRISIS (a)



SOURCES: Refinitiv and Banco de España.

a Charts 3 and 4 depict the change in aggregate PD by sector in pp, after weighting the PD of each firm by its market value within the corresponding sector and country, respectively. The brown dot represents the change between the average pre-pandemic value (January-February 2020) and the value at end-2021 Q1. The stacked bars depict the change attributable to the first wave of the pandemic (March-May 2020), to the period between the first and second waves (June-November 2020), to the third wave (December 2020-February 2021) and to the period of 2021 Q1 after the third wave (February-March 2021). The pink dot represents the peak change in 2008-2009 with respect to the 2006-2007 average.

4 A GARCH model. See T. Bollerslev (1986), "Generalized Autoregressive Conditional Heteroskedasticity", Journal of Econometrics, Vol. 31, pp. 307-327.

5 The average stands above the 75th percentile due to the influence of the values at the upper end of the distribution (75th percentile–90th percentile).

Comparing the main European economies, Spanish and Italian firms were the hardest hit during the first wave of the pandemic (see Chart 4). There was a widespread recovery during the second wave, although it displayed cross-country heterogeneity. Conversely, PDs rose during the third wave (except for in the Netherlands). Improved stock prices in 2021 Q1 have generally moderated the implied increases in PDs, although they remain at higher levels in Spain and Italy. In any event, in all countries's PDs have worsened substantially less than during the global financial crisis.

To prevent a downturn in activity, the economic policy response to a sudden shock like the COVID-19 crisis cannot wait for risks that behave inertially, such as credit risks, to materialise. These market information based indicators are thus useful to steer possible economic policy response actions ahead of time.

However, using the indicators is also subject to caveats. Specifically, PDs depend on investors' valuations of firms via stock prices. For example, optimistic (pessimistic) valuations would result in lower (higher) estimates than the actual PDs. As stated in Chapter 1 and Box 1.1, there are some signs of overpricing in the financial markets, which could also result in sudden increases in the PDs estimated by investors in response to a worsening of their expectations for economic activity or the duration of the support measures. It is therefore advisable to use these models alongside the broadest possible regulatory and supervisory information. Lastly, it should also be borne in mind that listed firms are not necessarily representative of a country's overall productive system, in which smaller firms are of greater significance. In this connection, the results may represent a lower bound of the actual impacts.

Box 3.2

UPDATED IMPACT OF THE FINALISATION OF THE BASEL III FRAMEWORK ON THE BANKING SECTOR

In response to a new request from the European Commission, on 15 December 2020 the European Banking Authority (EBA) published the updated impact analysis of Basel III capital regulation reform on European banks[1]. The report updates the starting point of the June 2018 analysis to December 2019 and considers two scenarios: (i) implementation of Basel III with no deviations ("Basel III scenario") and (ii) the so-called "EU-specific scenario".

The first scenario corresponds to the final Basel III framework with no deviations. This framework imposes on banks a series of restrictions and common standards in the calculation of risk-based capital requirements, limiting the use for regulatory purposes of the internal models of these entities. This reform would thus make regulatory risk metrics more comparable across entities, reinforcing also the minimum degree of prudence embedded in the requirements. This scenario includes, in particular, the new frameworks for: i) credit risk risk (new standard method and restrictions on internal models[2]); ii) operational risk (full exclusion of internal models and introduction of a new standardised approach, based on a business volume indicator and the use of historical losses); and iii) market risk and capital requirements linked to the credit value adjustment[3] (CVA).

The second scenario includes deviations from Basel III in the SME supporting factor[4] and excludes certain counterparties from the capital requirements due to the CVA calculation. It also considers the exercise of national discretion to exclude historical losses from the calculation of the capital requirements for operational risk, which would depend only on the business volume indicator of each bank, and other adjustments[5].

Lastly, and for both scenarios, the EBA considers three implementation options for the output floor, that is, a restriction such that bank capital requirements calculated with internal models do no fall below a certain percentage of requirements under the standard method.[6]: The three options are: (i) the main Basel III approach, whereby the output floor would be applied to the full stack of requirements; (ii) an alternative approach, whereby the output floor would not be applied to to all requirements, excluding Pillar 2 requirements (P2R) and the Systemic Risk Buffer[7]; and (iii) the so-called parallel stack approach, which the EBA considers to be non-compliant with Basel III[8].

The Basel III impact (in 2028) is expected to be lower, based on December 2019 data, than that obtained using June 2018 data. Under the Basel III scenario, the Tier 1 requirements would now increase by 18.5%, compared with a rise of 24.1% based on June 2018 data (see Chart 1). This is primarily attributable to the lower output floor impact and the application of the new CVA framework, revised by the Basel Committee in July 2020. The capital shortfall[9] is reduced from €109.5 billion (based on June 2018 data) to €52.2 billion (based on 2019 data), due to the smaller increase in the requirements and to institutions' higher capital position. Of this shortfall, 83% is concentrated in global systemically important institutions (G-SIIs).

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1 See the EBA's Basel III impact study.

2 The regulatory reform imposes floors to the inputs, that is, minimum acceptable values for credit risk parameters (probability of default, loss given default, etc.), with specific restrictions applying to some credit portfolios.

3 The CVA modifies the value of an asset holding to recognize the credit risk arising from the potential default of the counterparty that has issued the assets. This adjustment, which also has a direct effect on the income statement, is incorporated into the capital requirements to capture the variability of its impact.

4 The SME supporting factor entails applying a factor of 0.7619 to RWAs – under both the standardised and the IRB approaches – for exposures of less than €2.5 million. CRR2 also considers a factor of 0.85 for SME exposures exceeding this threshold, although the EBA was unable to take this second factor into account in its report. .

5 Exemptions for non-financial counterparties, intragroup counterparties, CCPs, pension fund counterparties and sovereign counterparties (Article 382 of the CRR).

6 The EBA's exercise also considers, under the EU-specific scenario, some of the adjustments introduced by the European authorities in response to COVID-19 (specifically, the new prudential treatment of software assets and the change in P2R composition).

7 The Pillar 2 requirement (P2R) is specific to each bank and it is determined by the microprudential supervisor to cover risks not considered in the common Pillar 1 requirements (P1R). The System Risk Buffer is of macroprudential nature, and its goal is that entities with the potential to destabilize the whole financial system have enough resources to absorb shocks so that this eventuality is avoided.

8 This approach would set the requirements at amounts equal to the higher of: (a) the Basel requirements (without additional European requirements) for floored RWAs and (b) the total capital requirements applied to RWAs calculated using internal models. Such approach is complex and could limit the output floor impact, going against the purpose of this regulation.

9 Additional capital required to maintain the minimum total capital ratio (including Pillar 1, the combined buffer and P2R).

Chart 1
INCREASE IN TIER 1 CAPITAL REQUIREMENTS AND ASSOCIATED CAPITAL SHORTFALL
European banks (a)

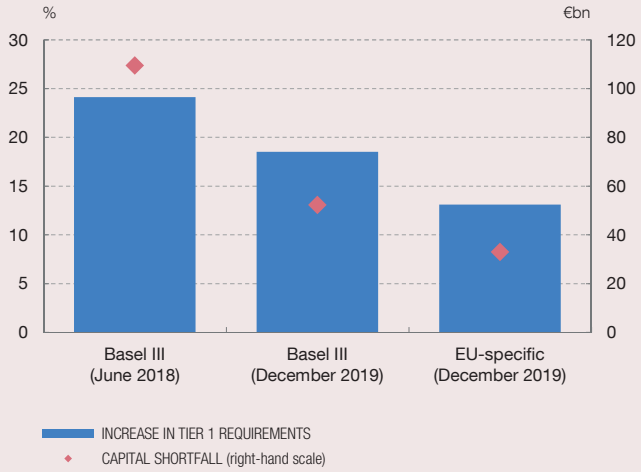
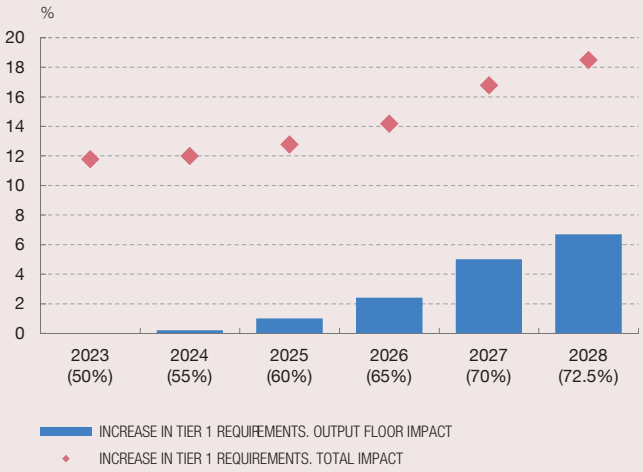


Chart 2
INCREASE IN TIER 1 CAPITAL REQUIREMENTS IN THE STANDARD IMPLEMENTATION OF BASEL III
European banks (a)



SOURCE: Banco de España.

a The study is based on a sample of 99 banks with data as at December 2019.

Owing to the exemptions and discretionalities explained above, the impact under the EU-specific scenario, using the main approach to implement the output floor, is expected to be reduced by 5.4 pp to 13.1% relative to the Basel III scenario. The capital shortfall is also reduced from €52.2 billion to €33 billion, with G-SIIs accounting for 77% (see Chart 1).

Considering the different output floor options separately, and without including the other EU specificities, the capital shortfall would be €45 billion under the alternative approach and €32 billion under the parallel stack approach (the option with the most significant differential impact). In any event, when assessing its impact (and given its importance in the total impact of the reform), it should be noted that a phase-in period of five years has been envisaged for the full implementation of the output floor. Thus, the output floor impact would not be especially significant until the fourth year, i.e. 2027 (see Chart 2).

Under the Basel III scenario[10], cross-country heterogeneity is observed both in total impact and in the materiality of each element of the reform. However, as occurs at the aggregate level, the most important factors are the output floor and the operational risk adjustments. Broadly speaking, three groups of countries can be identified:

— Countries where the impacts are higher than the average of 18.5%, essentially owing to the output floor. These are Germany and Sweden, followed by the Netherlands, Denmark and France.

— Another set of countries where the impact is below, but closer to, the average: Belgium, Spain and Italy. In Belgium, the impact is essentially attributable to credit risk, CVA and, to a lesser extent, the output floor. Meanwhile, in Spain and Italy there is no appreciable output floor impact, and the impact of operational risk is higher than in other countries, comparable only to France.

— A third group (Greece, Ireland, Poland and Portugal), where the impacts are less than 10%; these countries are unaffected by the output floor.

As described for the aggregate level, an across-the-board reduction is observed in the impacts under the EU-specific scenario. Although there are cross-country differences in how sharp this reduction would be, the countries rank in an order similar to that under the Basel III scenario.

10 See Figures 1 and 2 of the EBA's report "Basel III Reforms: Updated Impact Study" EBA/Rep/2020/34.

Analysing the results for Spain in somewhat greater detail, it can be observed that:

— Under the Basel III scenario, there is no output floor impact. The greatest impacts stem from operational risk, Spain presenting the highest impact in this regard, followed by credit risk and CVA, with similar magnitudes.

— Under the EU-specific scenario, using the output floor main approach, there is a sharper reduction in the impact for Spain than for the European average. This is because the EU specificities – SME supporting factor, CVA exemption and operational risk discretion – cause a relatively greater reduction in the requirements and adjustments other than the output floor (which has no impact for Spain). However, if the parallel stack approach to the output floor is applied to the EU-specific scenario, the impact for Spain would be reduced somewhat less compared with the European average.

The EBA considers that the results of this report do not alter the conclusions drawn in its previous analyses. In summary, the EBA concluded that the benefit in terms of reducing unwanted RWA variability, as sought by Basel III, would outweigh the savings in capital requirements derived from accepting deviations in Europe[11]. As regards the EU specificities that are analysed in its latest report and discussed in this box, the EBA does not support their implementation. The EBA also prefers applying the so-called main approach to implement the output floor.

The banking sector faces the COVID-19-induced crisis from a more solid starting position, largely thanks to the Basel III reforms. In this regard, and as reiterated by the Basel Committee and by the Group of Central Bank Governors and Heads of Supervision (GHOS), fully, timely and consistent implementation of Basel III by member jurisdictions, is key to ensuring that the banking sector continues to be resilient to future crisis scenarios.

11 See the EBA's previous impact study August 2019.

Box 3.3

NEW MACROPRUDENTIAL TOOLS APPLICABLE TO THE ACTIVITY OF CREDIT INSTITUTIONS IN SPAIN[1]

Royal Decree-Law 22/2018 and Royal Decree 102/2019 empowered the Banco de España to develop a new macroprudential toolkit applicable to the banking sector to address systemic risks, including a sectoral countercyclical capital buffer (SCoCCyB), which is built in as an additional component of the countercyclical capital buffer (CCyB), sectoral concentration limits (SCLs) for credit exposures, and limits and conditions on lending and other transactions (known internationally as Borrower-Based Instruments or BBIs). This regulatory development is part of a broader reform establishing the Spanish macroprudential authority (AMCESFI) and allocating new macroprudential tools to the three sectoral supervisory authorities: the Banco de España, the National Securities Market Commission (CNMV) and the Directorate General of Insurance and Pension Funds (DGSFP).

In this setting, on 2 February the Banco de España submitted a draft amendment of Circular 2/2016 on the supervision and solvency of credit institutions for public consultation[2,3]. This reform aims, firstly, to establish new CCyB regulation that is consistent with the revised wording of Article 45(1) of Law 10/2014 and which allows the Banco de España to require such a buffer both for all the credit exposures of an institution and for those to a specific sector (i.e. the SCoCCyB, defined as a sectoral component of the CCyB). Likewise, the reform implements regulations on the setting of SCLs for credit exposures and also of certain limits and conditions on the granting of BBIs.

The Banco de España, as the designated authority for using macroprudential tools for the banking sector, is responsible for safeguarding financial stability by seeking to prevent systemic financial shocks that could have an adverse impact on the real economy. To this end, it must have at its disposal the tools needed for carrying out this task effectively[4].

The aim of the SCoCCyB is to contain the systemic risk arising from potential imbalances (excessive credit growth) that may emerge in a given economic sector, by seeking to alter the relative cost, in regulatory capital terms, of lending to that sector. In turn, in order to avoid undesirable side-effects stemming from its application, the reaction of other sectors must be monitored in order to prevent the excessive credit growth from shifting to them. The SCoCCyB also seeks to provide institutions with sufficient capital to cope with potential losses from a disorderly propagation of the imbalances originating in the sector where excessive credit growth is detected.

Implementation of the SCoCCyB must strike an appropriate balance between the accuracy and the scope of the definition of the economic sectors giving rise to the imbalances. Historical evidence shows that, in previous crises, most systemic risks were concentrated in exposures to specific economic sectors, as was the case for the real estate sector in the run-up to the global financial crisis (see Chart 1). However, the definition of the sectors subject to this measure must be broad enough to ensure that the tool has the broad-based scope proper to its macroprudential purpose. Empirical evidence suggests that the SCoCCyB should generally be activated at the earliest stages of the build-up of the systemic risk. Its release should be immediate if the systemic risk materialises and progressive if it gradually subsides.

The SCL tool limits the total volume of credit exposures to a specific sector. This limitation is defined relative to a capital metric, not as a limit on the absolute level of exposure. Thus, if a particular institution decides to further increase its exposure to a sector subject to such limit, it may do so as long as it sufficiently increases its capital levels. In this way, it would be able to cope with potential losses in the sector in which the systemic risk builds up. Chart 2 shows how exposure to real estate credit grew relative to bank capital before the global financial crisis and how this was subsequently corrected.

As the SCL is also a sectoral tool, some of its features are analogous to those of the SCoCCyB. Again, this requires a cautious analysis of the potential spillovers to

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1 This box is based on the content of C. Trucharte Artigas (2021), "Nuevas Herramientas Macroprudenciales para las entidades de crédito", Revista de Economía, No. 918, ICE.

2 See Banco de España Circulars for further details on this public consultation and for the draft circular.

3 Under Royal Decree-Law 22/2018, new macroprudential tools were made available to the Banco de España and the other Spanish sectoral supervisory authorities. In the banking sector, Royal Decree-Law 22/2018 extends the toolkit already available under Law 10/2014.

4 C. Castro and A. Estrada present an empirical analysis of the effectiveness of these new instruments available to the Banco de España in "Completando el conjunto de herramientas de la política macroprudencial en España: los nuevos instrumentos a disposición del Banco de España", Financial Stability Review, Spring 2021, Banco de España (forthcoming).

Chart 1
TOTAL AND SECTORAL (real estate credit) CREDIT-TO-GDP GAPS (a)

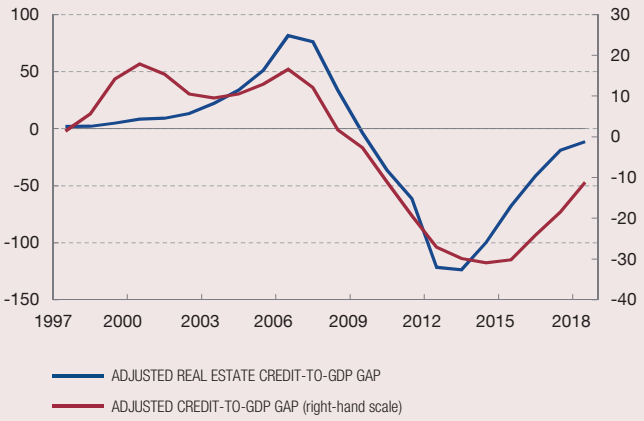

Chart 2
RATIO OF REAL ESTATE CREDIT TO TOTAL CAPITAL

SOURCE: Banco de España.

a Credit-to-GDP gaps correspond to December data for each year.

other sectors that might be produced by limits in a specific sector, and the proper identification of sectors with an effect on systemic risk. The key difference between this tool and the SCoCCyB is that its activation would limit sectoral credit concentration growth more directly (as this would be done via a restriction on quantity), while the SCoCCyB would act more via disincentives, by making it more expensive, in relative capital terms, to increase the credit exposure to the sector or sectors for which it has been activated. For this reason, the SCL can be generally considered as a last resort, to be used in the later stages of the unfolding of the systemic risk when the other tools have proved to be ineffective. However, in special circumstances it could also be used earlier. It should be immediately deactivated upon materialisation or dissipation of the systemic risk.

BBIs monitor credit standards in the granting of financing (for example, value of collateral, term, capacity to repay the loan). The available evidence suggests that loans granted under lax criteria, be it in terms of the value covered by the required collateral, leverage, the debt-to-income ratio required of borrowers or maturity, entail higher repayment risks down the line[5].

The decision to set limits on some characteristics rather than others will depend on the nature of the systemic risk, and the most effective alternative for its mitigation will be decided accordingly. However, it must be borne in mind that setting limits on a particular characteristic may lead to easing others, requiring action to be taken on several characteristics at the same time. Moreover, the easing of standards may spill over to other credit portfolios, requiring the measures to be extended to them.

BBI regulation should also provide for the possibility of adjusting the limitations according to the characteristics of the borrower and the lender, thus ensuring their effectiveness and that they do not impinge disproportionately on a specific group or hinder other public policy measures. These limitations through BBIs would be activated on an individual basis or jointly and will be in place alongside other macroprudential tools. Generally speaking, this instrument should be activated in the intermediate stages of the build-up of the systemic risk.

The reform of Circular 2/2016 thus expands the toolkit that has to date been available to the Banco de España, in its role as designated authority for the use of macroprudential instruments for the banking sector. These tools are specifically designed to control systemic risk and would therefore make it possible to limit, for example, the potential adverse effects that an overly lax

5 See J. Galán and M. Lamas (2019), "Beyond the LTV ratio: new macroprudential lessons from Spain", Working Paper No. 1931, Banco de España, for an empirical analysis of the impact of mortgage credit standards in Spain on default behaviour.

monetary policy could have on excessive risk-taking by agents. These tools can also be adapted to the financial cycle and to specific shocks in the Spanish banking sector. These features are very useful for building resilience and the capacity to absorb unexpected shocks, as evidenced by the current economic crisis arising from the COVID-19 pandemic. The fulfilment of these objectives of the new framework will need to be underpinned by the Banco de España's risk analysis capabilities and a measured application of this new wide-ranging toolkit.

Annex 1

CONSOLIDATED BALANCE SHEET (a)
DEPOSIT INSTITUTIONS

Assets	Dec-20	Change Dec-20/Dec-19	Relative weight Dec-19	Relative weight Dec-20
	€m	%	%	%
Cash and balances with central banks	405,933	68.1	6.6	10.5
Loans and advances to credit institutions	200,404	-7.9	5.9	5.2
General government	97,913	2.3	2.6	2.5
Other private sectors	2,109,340	-2.7	59.0	54.8
Debt securities	524,045	5.5	13.5	13.6
Other equity instruments	37,001	-10.3	1.1	1.0
Investments	25,545	-6.5	0.7	0.7
Derivatives	150,707	8.1	3.8	3.9
Tangible assets	60,253	-7.6	1.8	1.6
Other	236,842	30.5	4.9	6.2
TOTAL ASSETS	**3,847,983**	**4.7**	**100.0**	**100.0**
PRO MEMORIA				
Financing to private sector	2,189,202	-2.6	61.2	56.9
Financing to general government	508,725	4.8	13.2	13.2
Total NPLs	84,749	-2.5	2.4	2.2
Total NPL ratio	2.9	4 (c)		

Liabilities and equity	Dec-20	Change Dec-20/Dec-19	Relative weight Dec-19	Relative weight Dec-20
	€m	%	%	%
Balances from central banks	341,166	77.4	5.2	8.9
Deposits from credit institutions	223,245	-22.2	7.8	5.8
General government	103,240	-1.9	2.9	2.7
Other private sectors	2,153,317	3.5	56.6	56.0
Marketable debt securities	404,026	-7.3	11.9	10.5
Derivatives	143,341	8.1	3.6	3.7
Provisions for pensions, tax and other	25,992	-13.6	0.8	0.7
Other	209,775	50.6	3.8	5.5
TOTAL LIABILITIES	**3,604,101**	**5.9**	**92.6**	**93.7**
Memorandum items				
Eurosystem net lending (b)	260,971	96.6	0.0	0.0
Own funds	273,294	-1.9	7.6	7.1
Minority interests	18,307	-16.8	0.6	0.5
Valuation adjustments relating to total equity	-47,719	66.7	-0.8	-1.2
TOTAL EQUITY	**243,882**	**-10.3**	**7.4**	**6.3**
TOTAL LIABILITIES AND EQUITY	**3,847,983**	**4.7**	**100.0**	**100.0**

SOURCE: Banco de España.

a The figures for total assets, total liabilities and net equity, and for the components thereof, correspond directly to the consolidated accounting information reported to the Banco de España in confidential returns. As a result of a merger operation, the assets and liabilities of a significant institution are reclassified in the consolidated information to the assets and liabilities of disposable groups classified as held for sale, which would be included in other assets and liabilities. In this annex, the specific assets and liabilities items (e.g. other private sectors) are adjusted using subconsolidated information in order to reverse this reclassification. These adjustments allow the changes in each specific balance-sheet item since 2019 to be measured, without the distortions arising from the accounting requirements for this specific corporate operation.
b Difference between funds received in liquidity-providing operations and funds delivered in absorbing operations. December 2020 data.
c Difference calculated in basis points.

Annex 2

CONSOLIDATED INCOME STATEMENT DEPOSIT INSTITUTIONS (a)

	Dec-20		Dec-19	Dec-20
	€m	% Change Dec-20/Dec-19	% ATA	% ATA
Financial revenue	92,670	-17.95	3.13	2.46
Financial costs	26,780	-32.99	1.11	0.71
Net interest income	65,890	-9.71	2.02	1.75
Return from capital instruments	967	-23.35	0.03	0.03
Net financial income	66,857	-9.94	2.06	1.78
Share of profit or loss of entities accounted for using the equity method	2,801	-9.24	0.09	0.07
Net commissions	24,799	-9.19	0.76	0.66
Gains and losses on financial assets and liabilities	5,736	34.64	0.12	0.15
Other operating income (net)	257	–	-0.09	0.01
Gross income	100,449	-5.07	2.93	2.67
Operating expenses	49,266	-10.38	1.52	1.31
Net operating income	51,183	0.68	1.41	1.36
Asset impairment losses (specific and general provisions)	25,343	52.33	0.46	0.67
Provisioning expense (net)	4,117	-21.85	0.15	0.11
Income from disposals (net)	-21,930	–	-0.07	-0.58
Profit before tax (including discontinued operations)	-398	-101.50	0.73	-0.01
Net income	-7,927	-142.81	0.51	-0.21
Memorandum item				
Income attributable to the controlling entity	-7,734	-148.74	0.44	-0.21

SOURCE: Banco de España.

a The upper items of the income statement include sub-consolidated data for an institution in the process of merger, while the lower items (from other income downwards) include its consolidated data. The reason for including sub-consolidated data is so as not to lose information on the activity of that institution during the year, which is not reflected in the consolidated statement. This institution has recorded, as a result of the approval of its merger and in accordance with accounting policies, a correction to fair value of €-5,585 million.

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SYMBOLS AND ABBREVIATIONS

AMCESFI	Autoridad Macroprudencial Consejo de Estabilidad Financiera (Macroprudential Authority Financial Stability Council)
AT1	Additional Tier 1 capital
AT2	Additional Tier 2 capital
ATA	Average total assets
bp	Basis points
BBI	Borrower-based instrument
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BOE	Boletín oficial del estado (Official state gazette)
CBB	Central Balance Sheet
CBDC	Central bank digital currency
CBQ	Central Balance Sheet Data Office Quarterly Survey
CBSO	Banco de España Central Balance Sheet Data Office
CCP	Central clearing counterparty
CCR	Banco de España Central Credit Register
CCyB	Countercyclical capital buffer
CEPR	Centre for Economic Policy Research
CET1	Common equity Tier 1
CNAE	National Classification of Economic Activities
CNMV	Comisión Nacional del Mercado de Valores (National Securities Market Commission)
COVID-19	Coronavirus disease 2019
CRR	Capital requirements regulation
CRR2	Capital Requirements Regulation 2
CVA	Credit value adjustment
DGSFP	Directorate General of Insurance and Pension Funds
DI	Deposit institution
DTA	Deferred tax asset
EBA	European Banking Authority
ECB	European Central Bank
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EMCI	Emerging markets currency index
ERSB	European Systemic Risk Board
ERTE	Expendiente de regulación temporal de empleo (temporary layoff arrangements)
ESRB	European Systemic Risk Board<
EU	European Union
FLESB	Forward-looking exercise on Spanish banks
FRA	Forward rate agreements
FRED	Federal Reserve Economic Data
FROB	Fund for the Orderly Restructuring of the Banking Sector
FSB	Financial Stability Board
FSR	Financial Stability Report
GDI	Gross disposable income
GDP	Gross domestic product
G-SII	Globally systemically important institution
GVA	Gross value added
H	Half-year
ICE	Información comercial española
ICO	Instituto Oficial de Crédito (Official Credit Institute)
ID	Data obtained from individual financial statements
IF	Investment funds
IFRS	International financial reporting standard
IGAE	Intervenión General de la Intervención del Estado (General Intervention Board of the State Administration)
IIP	International investment position
IMF	International Monetary Fund
INE	Instituto Nacional de Estadística (National Statistics Institute)
INVERCO	Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones (Spanish Association of Investment and Pension Funds)
IRB	Internal ratings-based approach
IRS	Interest rate swap
LEI	Legal entity identifier
LTP	Loan-to-price
LTV	Loan to value
MMSR	Money Market Statistical Reporting
MREL	Minimum Requirement for own funds and Eligible Liabilities
MRO	Main refinancing operations
NBER	National Bureau of Economic Research
NBFS	Non-banking financial sector
NFC	Non-financial corporation
NGEU	Next Generation EU
NPL	Non-performing loan
OIS	Overnight interest swap
O-SII	Other systemically important institution
P2R	Pillar 2 requirement
P2G	Pillar 2 guidance
pp	Percentage points
PD	Probability of default
PELTRO	Pandemic Emergency Longer-Term Refinancing Operations
PEMEX	Petróleos Mexicanos (Mexican Petroleum)
PER	Price-to-earnings ratio
PEPP	Pandemic emergency purchase programme
PMI	Purchasing Managers' Index
Q	Quarter
RDL	Royal-Decree law
ROA	Return on assets
ROE	Return on equity
ROTE	Return on tangible equity
RWA	Risk-weighted asset
S1/S2/S3	Stage 1/Stage 2/Stage 3
SAREB	Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria (asset management company for trading assets arising from bank restructuring)
SCL	Sectoral concentration limit
SCR	Solvency capital requirement
SCoCCyB	Sectoral countercyclical capital buffer
SEPI	Sociedad Estatal de Participaciones Industriales (State Company of Industrial Participations)
SLI	Specialised lending institution
SME	Small and medium-sized enterprise
SMEs	Small and medium-sized enterprises
SRB	Single Resolution Board
SRI	Systemic risk indicator
SSM	Single supervisory mechanism
TARGET	Trans-European Automated Real-time Gross Settlement Express Transfer System
TLTRO	Targeted Longer-Term Refinancing Operations
USD	United States dollar
USMCA	United States-Mexico-Canada Agreement
WEO	World Economic Outlook
y-o-y	Year-on-year
€STR	Euro short-term rate

ISO COUNTRY CODES

AT	Austria	DE	Germany	IT	Italy	PL	Poland
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